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Anesthesia and Analgesia for Companion and Laboratory Animals

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Quick Bibliography Series: QB 94-18

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Animal Welfare Information Center

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Citations in this bibliography are from the National Agricultural Library's AGRICOLA database. An explanation of sample journal article, book, and audiovisual citations appears below.

JOURNAL ARTICLE:

Citation # NAL Call No.
Article title.
Author. Place of publication: Publisher. Journal Title.
Date. Volume (Issue). Pages. (NAL Call Number).

Example:

1 NAL Call No.: DNAL 389.8.SCH6
Morrison, S.B. Denver, Colo.: American School Food Service
Association. School foodservice journal. Sept 1987. v. 41
(8). p.48-50. ill.

BOOK:

Citation # NAL Call Number
Title.
Author. Place of publication: Publisher, date. Information
on pagination, indices, or bibliographies.

Example:

1 NAL Call No.: DNAL RM218.K36 1987
Exploring careers in dietetics and nutrition.
Kane, June Kozak. New York: Rosen Pub. Group, 1987.
Includes index. xii, 133 p.: ill.; 22 cm. Bibliography:
p. 126.

AUDIOVISUAL:

Citation # NAL Call Number

Title.
Author. Place of publication: Publisher, date.
Supplemental information such as funding. Media format
(i.e., videocassette): Description (sound, color, size).

Example:

1 NAL Call No.: DNAL FNCTX364.A425 F&N AV
All aboard the nutri-train.
Mayo, Cynthia. Richmond, Va.: Richmond Public Schools,
1981. NET funded. Activity packet prepared by Cynthia
Mayo. 1 videocassette (30 min.): sd., col.; 3/4 in. +
activity packet. Anesthesia and Analgesia for Companion and Laboratory Animals
January 1988 - January 1994

SEARCH STRATEGY

Set	Items	Description
1	20557	anesthe? or anasthe? or anaesthe? or analges? or pain? or distress? or stress? or tranquil? or anxiolytic?
2	2258	S1 and (rabbit? or dog? or cat? or puppy or puppies or kitten? or rat or rats or mouse or mice or guinea (W) pig? or hamster? or gerbil? or ferret? or vole?)
3	1809	S2/ti(title)
4	871	S3 and PY=1988:1994
5	861	S4 and LA=English
6	484	S5 not stress?

Anesthesia and Analgesia for Companion and Laboratory Animals

1 NAL Call. No.: 41.8 V641
Acupuncture analgesia: a review.
Janssens, L.A.A.; Rogers, P.A.M.; Schoen, A.M.
London : The Association; 1988 Apr09.
The Veterinary record : journal of the British Veterinary Association v. 122
(15): p. 355-358. ill; 1988 Apr09. Includes references.

Language: English

Descriptors: Dogs; Acupuncture; Pain; Analgesics

2 NAL Call. No.: SF601.P76
Acupuncture-produced surgical analgesia--physiology, indications, techniques, and limitations.
Klide, A.M.
Hagerstown, Md. : J.B. Lippincott Co; 1992 Mar.
Problems in veterinary medicine v. 4 (1): p. 200-206; 1992 Mar. In the series analytic: Veterinary acupuncture / edited by A. M. Schoen. Literature review. Includes references.

Language: English

Descriptors: Dogs; Domestic animals; Anesthesia; Surgery; Mode of action; Acupuncture; Restraint of animals

3 NAL Call. No.: 41.8 V641
Acute tubulo-interstitial nephritis in a dog after halothane anaesthesia and administration of flunixin meglumine and trimethoprim-sulphadiazine.
McNeil, P.E.
London : The Association; 1992 Aug15.
The Veterinary record : journal of the British Veterinary Association v. 131
(7): p. 148-151; 1992 Aug15. Includes references.

Language: English

Descriptors: Dogs; Postoperative complications; Nephritis; Renal failure; Halothane; Anesthesia; Flunixin; Trimethoprim; Sulfadiazine; Ischemia; Case reports

4

NAL Call. No.: 41.8 AM3A

Adaptation of human oscillometric blood pressure monitors for use in dogs. Hunter, J.S. Jr; McGrath, C.J.; Thatcher, C.D.; Remillard, R.L.; McCain, W.C. Schaumburg, Ill. : American Veterinary Medical Association; 1990 Sep. American journal of veterinary research v. 51 (9): p. 1439-1442; 1990 Sep. Includes references.

Language: English

Descriptors: Dogs; Monitors; Blood pressure; Measurement; Modification; Veterinary equipment

Abstract: Two digital oscillometric human blood pressure measuring devices were modified and evaluated as blood pressure monitors in 12 healthy anesthetized dogs. Direct arterial pressures were measured via cannulation of the dorsal pedal artery and were correlated with indirect measurements through an inflatable cuff placed over the dorsal pedal artery below the hock joint of the contralateral limb. Direct and indirect measurements were compared for systolic, diastolic, and calculated mean arterial pressures. Blood pressure ranges between 215/145 mm of Hg and 65/30 mm of Hg were obtained, using combinations of halothane, phenylephrine, calcium, and IV administered fluids. Machine A was found to be insufficient for clinical application, on the basis of correlation coefficients between direct and indirect pressures of 0.78, 0.65, and 0.74 for systolic, diastolic, and mean arterial pressures, respectively. Higher correlation coefficients between direct and indirect pressures (0.77, 0.87, and 0.87, respectively) were obtained with machine B. The results of the study reported here suggest machine B may be an effective blood pressure monitoring device in anesthetized dogs.

5

NAL Call. No.: 41.8 AM3

Adverse effects of administration of propofol with various preanesthetic regimens in dogs. Smith, J.A.; Gaynor, J.S.; Bednarski, R.M.; Muir, W.W. Schaumburg, Ill. : The Association; 1993 Apr01. Journal of the American Veterinary Medical Association v. 202 (7): p. 1111-1115; 1993 Apr01. Paper presented at the symposium on "Animals and the environment: Impacts on veterinary medicine," Boston, Massachusetts. Includes references.

Language: English

Descriptors: Dogs; Preanesthetic medication; Anesthetics; Adverse effects; Diazepam; Anesthesia

6

NAL Call. No.: 41.8 AM3A

alpha 2-Adrenergic receptor agonist effects on supraventricular and ventricular automaticity in dogs with complete atrioventricular block. Day, T.K.; Muir, W.W. III Schaumburg, Ill. : American Veterinary Medical Association; 1993 Jan. American journal of veterinary research v. 54 (1): p. 136-141; 1993 Jan. Includes references.

Language: English

Descriptors: Dogs; Alpha-adrenergic receptors; Agonists; Narcotic antagonists; Xylazine; Ventricles

Abstract: Complete atrioventricular block was induced in 26 pentobarbital-anesthetized dogs to determine the effects of the alpha 2-adrenergic receptor agonists, xylazine and medetomidine, on supraventricular and ventricular automaticity. Prazosin and atipamezole, alpha-adrenoceptor antagonists, were administered to isolate alpha 1- or alpha 2-adrenoceptor effects. Six dogs served as controls and were given glycopyrrolate (0.1 mg/kg of body weight, IV) and esmolol (50 to 75 microgram/kg/min, IV) to induce parasympathetic and beta 1-adrenergic blockade, respectively. Eight dogs were given sequentially increasing doses of xylazine (n = 5, 0.000257 mg (10(-9)M) to 25.7 mg (10(-4)M) and medetomidine (n = 3, 0.000237 mg (10(-9)M) to 2.37 mg (10(-5) < M) after parasympathetic and beta 1-adrenergic blockade. Twelve dogs were given xylazine (n = 6, 1.1 mg/kg, IV) or medetomidine (n = 6, 0.05 mg/kg, IV) after parasympathetic and beta 1-adrenergic blockade. Three dogs given xylazine and 3 dogs given medetomidine were administered prazosin (0.1 mg/kg, IV) followed by atipamezole (0.3 mg/kg, IV). The order of prazosin and atipamezole was reversed in the remaining 3 dogs given either xylazine or medetomidine. Complete atrioventricular block and administration of glycopyrrolate and esmolol resulted in stable supraventricular and ventricular rates over a 4-hour period. Increasing concentration of xylazine or medetomidine did not cause significant changes in supraventricular or ventricular rate. Xylazine and medetomidine, in the presence of the

alpha-adrenoceptor antagonists, prazosin (alpha(1)) and atipamezole (alpha(2)), did not cause significant changes in supraventricular or ventricular rate. alpha 2-Adrenoceptor agonists do not induce direct alpha 1- or alpha 2-adrenoceptor-mediated depression of supraventricular or ventricular rate in dogs with complete atrioventricular block.

7 NAL Call. No.: 41.8 AM3A
Alterations in epinephrine-induced arrhythmogenesis after xylazine and subsequent yohimbine administration in isoflurane-anesthetized dogs.
Tranquilli, W.J.; Thurmon, J.C.; Benson, G.J.
Schaumburg, Ill. : American Veterinary Medical Association; 1988 Jul.
American journal of veterinary research v. 49 (7): p. 1072-1075; 1988 Jul.
Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Adrenalin; Xylazine; Anesthetics; Heart rate; Blood pressure; Heart diseases

Abstract: Effects of xylazine (1.1 mg/kg of body weight, IV bolus, plus 1.1 mg/kg/h infusion) and subsequent yohimbine (0.125 mg/kg, IV bolus) administration on the arrhythmogenic dose of epinephrine (ADE) in isoflurane (1.8% endtidal)-anesthetized dogs were evaluated. The ADE was defined as the total dose of epinephrine that induced greater than or equal to 4 premature ventricular contractions within 15 seconds during a 3-minute infusion period or within 1 minute after the end of infusion. Total ADE values during isoflurane anesthesia, after xylazine administration, and after yohimbine injection were 36.6 +/- 8.45 micrograms/kg, 24.1 +/- 6.10 micrograms/kg, and 45.7 +/- 6.19 micrograms/kg, respectively. Intravenous xylazine administration significantly (P less than 0.05) increased blood pressure and decreased heart rate, whereas yohimbine administration induced a significant (P less than 0.05) decrease in blood pressure. After yohimbine administration, the ADE significantly (P less than 0.05) increased above that after isoflurane plus xylazine administration. After yohimbine administration, blood pressure measured immediately before epinephrine-induced arrhythmia was significantly (P less than 0.05) less than the value recorded during isoflurane plus xylazine anesthesia. Heart rate was unchanged among treatments immediately before epinephrine-induced arrhythmia. Seemingly, yohimbine possessed a protective action against catecholamine-induced arrhythmias in dogs anesthetized with isoflurane and xylazine.

8 NAL Call. No.: 41.8 V643
Anaesthesia and central nervous system disease in small animals. I. general considerations.
Court, M.H.; Dodman, N.H.; Norman, W.M.; Seeler, D.C.
London : Bailliere Tindall; 1990 Jul.
British veterinary journal v. 146 (4): p. 285-295; 1990 Jul. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Anesthetics; Central nervous system; Nervous system diseases; Hypertension; Surgical operations; Physiopathology; Blood flow; Treatment

9 NAL Call. No.: 41.8 V643
Anaesthesia and central nervous system disease in small animals. II. anaesthetic management for specific diseases and procedures.
Court, M.H.; Dodman, N.H.; Norman, W.M.; Seeler, D.C.
London : Bailliere Tindall; 1990 Jul.
British veterinary journal v. 146 (4): p. 296-308; 1990 Jul. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Anesthetics; Nervous system diseases; Central nervous system; Neoplasms; Head; Injuries; Spinal diseases; Diagnostic techniques

10 NAL Call. No.: SF991.A3
Anaesthesia: established principles and new developments.
Taylor, P.M.
Oxford : Blackwell Scientific Publications; 1988.
Advances in small animal practice v. 1: p. 87-119. ill; 1988. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Anesthetics; Respiration; Blood circulation; Monitoring

11 NAL Call. No.: 41.8 V643
Anaesthesia for small animal patients with disease of the hepatic, renal or gastrointestinal system.
Dodman, N.H.; Seeler, D.C.; Court, M.H.; Norman, W.M.
London : Bailliere Tindall; 1989 Jan.
British veterinary journal v. 145 (1): p. 3-22; 1989 Jan. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Anesthetics; Liver diseases; Kidney diseases; Digestive system diseases

12 NAL Call. No.: 41.8 V643
Anaesthesia for small animal patients with neuromuscular disease.
Fikes, L.L.; Dodman, N.H.; Court, M.H.
London : Bailliere Tindall; 1990 Nov.
British veterinary journal v. 146 (6): p. 487-499; 1990 Nov. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Neuromuscular diseases; Anesthetics; Neurophysiology; Physiopathology; Symptoms; Breeds; Diagnosis; Risk; Adverse effects

13 NAL Call. No.: QL55.A1L3
Anaesthetic effects of chloral hydrate, pentobarbitone and urethane in adult male rats.
Field, K.J.; White, W.J.; Lang, C.M.
London : Royal Society of Medicine Services; 1993 Jul.
Laboratory animals v. 27 (3): p. 258-269; 1993 Jul. Includes references.

Language: English

Descriptors: Rats; Anesthetics

Abstract: Chloral hydrate, pentobarbitone and urethane were evaluated and compared for onset, duration and depth of anaesthesia, cardiovascular and respiratory effects, nociception and mortality in adult male rats. Chloral hydrate (300 and 400 mg/kg) severely depressed the cardiovascular and respiratory systems. Duration of anaesthesia was linearly related to dose, and anaesthetic depth and analgesia were excellent. Pentobarbital (40 mg/kg) produced a short period light surgical anaesthesia. Moderate to severe respiratory and cardiovascular depression occurred. Duration of anaesthesia was not related to dose. Urethane (1.2 and 1.5 g/kg) caused moderate cardiovascular depression. In addition, mortality was high at the 1.5 g/kg dose. Duration of anaesthesia was greater than 24 h for most animals. Anaesthesia depth and analgesia were excellent.

14 NAL Call. No.: 41.8 V643
Anaesthetic management of the traumatized small animal patient.
Norman, W.M.; Dodman, N.H.; Court, M.H.; Seeler, D.C.
London : Bailliere Tindall; 1989 Sep.
British veterinary journal v. 145 (5): p. 410-425; 1989 Sep. Includes references.

Language: English

Descriptors: Dogs; Cat; Trauma; Anesthesia; Physiopathology; Respiratory system; Cardiovascular system; Central nervous system

15 NAL Call. No.: 41.8 J8292
Anaesthetic regimes for cataract removal in the dog.
Young, S.S.; Barnett, K.C.; Taylor, P.M.
London : British Small Animal Veterinary Association; 1991 May.
The Journal of small animal practice v. 32 (5): p. 236-240; 1991 May.
Includes references.

Language: English

Descriptors: Dogs; Cataract; Anesthesia; Anesthetics; Muscle relaxants; Halothane; Nitrous oxide; Thiopental; Preoperative care; Surgery

16 NAL Call. No.: SF911.V43
Analgesia after lateral thoracotomy in dogs: epidural morphine vs. intercostal bupivacaine.
Pascoe, P.J.; Dyson, D.H.
Hagerstown, Md. : J.B. Lippincott Company; 1993 Mar.
Veterinary surgery v. 22 (2): p. 141-147; 1993 Mar. Includes references.

Language: English

Descriptors: Dogs; Pain; Analgesics

17 NAL Call. No.: 41.8 AM3A
Analgesia and behavioral responses of dogs given oxymorphone-acepromazine and meperidine-acepromazine after methoxyflurane and halothane anesthesia.
Sawyer, D.C.; Rech, R.H.; Adams, T.; Durham, R.A.; Richter, M.A.; Striler, E.L.
Schaumburg, Ill. : American Veterinary Medical Association; 1992 Aug.
American journal of veterinary research v. 53 (8): p. 1361-1368; 1992 Aug.
Includes references.

Language: English

Descriptors: Dogs; Pethidine; Analgesics; Anesthesia; Halothane; Methoxyflurane; Pain; Drug effects; Blood pressure; Pulse rate

Abstract: This study was designed to test analgesia, duration, and cardiovascular changes induced by meperidine (MEP) and oxymorphone (OXY) following methoxyflurane (MOF) and halothane (HAL) anesthesia. Eight healthy dogs were given atropine and acepromazine, and anesthesia was induced with thiamylal and maintained with 1.5 minimal alveolar concentration of MOF or HAL for 1 hour during controlled ventilation. Eight treatments were given with each anesthetic: 3 with MEP (0.5, 1.0, and 2.0 mg/kg, IV), 3 with oxymorphone (OXY; 0.05, 0.1, and 0.2 mg/kg, IV), and 2 placebos with sterile water. Test drugs were given at the end of anesthesia when early signs of recovery were evident. Minimal threshold stimulus/response nociception was assessed by use of an inflatable soft plastic colonic balloon. Blood pressures and pulse rate were measured with a noninvasive monitor. Meperidine and OXY were found to be effective analgesics and could be reversed with naloxone. Intravenous administration of 2.0 mg of MEP/kg provided analgesia for 36 +/- 6 minutes and 39 +/- 15 minutes after MOF and HAL, respectively. In contrast, OXY was effective at all 3 doses with effects of IV administration of 0.2 mg of OXY/kg lasting 154 +/- 13 minutes and 152 +/- 12 minutes, after MOF and HAL, respectively. Analgesia could not be demonstrated after anesthesia for acepromazine, MOF, or HAL. Blood pressure was not changed by either anesthetic nor was it influenced by MEP or OXY. Pulse rate was significantly depressed by the higher doses of OXY following HAL, but was not changed by MEP following either anesthetic. This study demonstrated the longer duration of analgesia of OXY. In addition, we could not find that analgesia was provided by either MOF or HAL following recovery from anesthesia.

18 NAL Call. No.: SF911.V43
Analgesia in dogs after intercostal thoracotomy: a comparison of morphine, selective intercostal nerve block, and interpleural regional analgesia with bupivacaine.
Thompson, S.E.; Johnson, J.M.
Hagerstown, Md. : J.B. Lippincott Company; 1991 Jan.
Veterinary surgery v. 20 (1): p. 73-77; 1991 Jan. Includes references.

Language: English

Descriptors: Dogs; Analgesics; Postoperative care; Morphine; Pain; Blood; Ph; Gases

19 NAL Call. No.: SF991.A3
Analgesia in dogs and cats.
Waterman, A.E.
Oxford : Blackwell Scientific Publications; 1988.
Advances in small animal practice v. 1: p. 159-181; 1988. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Analgesics; Pain; Treatment; Surgery;
Pharmacology

20 NAL Call. No.: RS160.J6
Analgesic activity of certain flavone derivatives: a structure-activity study.
Thirugnanasambantham, P.; Viswanathan, S.; Mythirayee, C.; Krishnamurty, V.;
Ramachandran, S.; Kameswaran, L.
Limerick : Elsevier Scientific Publishers; 1990 Feb.
Journal of ethno-pharmacology v. 28 (2): p. 207-214; 1990 Feb. Includes
references.

Language: English

Descriptors: Flavonoids; Derivatives; Structure activity relationships;
Analgesics; Mice

21 NAL Call. No.: RS160.I47
Analgesic and antiinflammatory effects of chasmanthera dependens.
Onabanjo, A.O.; John, T.A.; Sokale, A.A.; Samuel, O.T.
Lisse, Netherlands : Swets & Zeitlinger; 1991 Feb.
International journal of pharmacognosy v. 29 (1): p. 24-28; 1991 Feb.
Includes references.

Language: English

Descriptors: Menispermaceae; Medicinal plants; Pharmaceutical products; Plant
extracts; Alkaloids; Tannins; Cardiac glycosides; Medicinal properties;
Analgesics; Antiinflammatory agents; Drug toxicity; Mice

22 NAL Call. No.: RS160.I47
Analgesic and antipyretic effects of Mucuna pruriens.
Iauk, L.; Galati, E.M.; Kirjavainen, S.; Forestieri, A.M.; Trovato, A.
Lisse, Netherlands : Swets & Zeitlinger; 1993 Aug.
International journal of pharmacognosy v. 31 (3): p. 213-216; 1993 Aug.
Includes references.

Language: English

Descriptors: Mucuna pruriens; Medicinal properties; Plant extracts; Leaves;
Fruits; Trichomes; Analgesics; Antipyretics; Pain; Fever; Inflammation; Rats;
Mice

23 NAL Call. No.: 450 P697
Analgesic and behavioural effects of Morinda citrifolia.
Younos, C.; Rolland, A.; Fleurentin, J.; Lanhers, M.C.; Misslin, R.; Mortier,
F.
Stuttgart, W. Ger. : Georg Thieme Verlag; 1990 Oct.
Planta medica v. 56 (5): p. 430-434; 1990 Oct. Includes references.

Language: English

Descriptors: Morinda citrifolia; Roots; Plant extracts; Analgesics;
Pharmaceutical products; Medicinal properties; Mice; Naloxone

24 NAL Call. No.: 450 P697
Analgesic, antipyretic and anti-inflammatory properties of Euphorbia hirta.
Lanhers, M.C.; Fleurentin, J.; Dorfman, P.; Mortier, F.; Pelt, J.M.
Stuttgart, W. Ger. : Georg Thieme Verlag; 1991 Jun.
Planta medica v. 57 (3): p. 225-231; 1991 Jun. Includes references.

Language: English

Descriptors: Euphorbia hirta; Plant extracts; Pharmaceutical products; Mice;
Rats; Analgesics; Antipyretics; Antiinflammatory agents

25 NAL Call. No.: RS160.J6
Analgesic effect of Momordica charantia seed extract in mice and rats.
Biswas, A.R.; Ramaswamy, S.; Bapna, J.S.
Limerick : Elsevier Scientific Publishers; 1991 Jan.
Journal of ethno-pharmacology v. 31 (1): p. 115-118; 1991 Jan. Includes
references.

Language: English

Descriptors: Momordica charantia; Medicinal plants; Plant extracts;
Analgesics; Mice; Rats

26 NAL Call. No.: 41.8 J8292
Analgesic effects of acupuncture in thoracolumbar disc disease in dogs.
Still, J.
London : British Small Animal Veterinary Association; 1989 May.
The Journal of small animal practice v. 30 (5): p. 298-301. ill; 1989 May.
Includes references.

Language: English

Descriptors: Dogs; Acupuncture; Spinal diseases; Pain

27 NAL Call. No.: QL55.A1L3
An analgesiometry system for use in rabbits with some preliminary data on the effects of buprenorphine and lofentanil.
Wootton, R.; Cross, G.; Wood, S.; West, C.D.
London : Royal Society of Medicine Services; 1988 Jul.
Laboratory animals v. 22 (3): p. 217-222. ill; 1988 Jul. Includes references.

Language: English

Descriptors: Rabbits; Anesthesia; Analgesics; Dosage effect; Measurement

Abstract: A low cost infrared skin heating system has been designed to measure the efficacy of analgesics in rabbits. Following construction of a prototype, it was used to assess the effect of buprenorphine given subcutaneously and per rectum. Buprenorphine administered subcutaneously has a rapid onset of action, but its duration (8-10 h) appears slightly shorter than has been suggested previously; rectal administration appears to prolong its effect. Preliminary data show that lofentanil has a longer duration of action than buprenorphine and it may prove, therefore, to be a valuable long-acting analgesic in the rabbit.

28 NAL Call. No.: QH301.M6
Analysis of the causes effecting facilitatory and inhibitory influences of the sympathetic nervous system on parasympathetic chronotropic effects in anesthetized cats.
Yashina, L.P.; Samonina, G.E.
New York, N.Y. : Allerton Press; 1988.
Moscow University biological sciences bulletin v. 43 (2): p. 13-19; 1988.
Translated from: Vestnik Moskovskogo Universiteta, Biologiya, v. 43 (2), 1988, p. 15-21. (QH301.M58). Includes references.

Language: English; Russian

Descriptors: Cat; Anesthetics; Heart rate; Inhibition; Stimulation;
Sympathetic nervous system; Physiology

29 NAL Call. No.: SF910.P34A55 1992
Anesthesia and control of pain responses during surgery of the eye.
Hartsfield, S.M.
New York : Churchill Livingstone; 1992.
Animal pain / edited by Charles E. Short, Alan Van Poznak. p. 338-347, 361; 1992. Includes references.

Language: English

Descriptors: Dogs; Cataract; Surgical operations; Anesthesia; Anesthetics;
Pain; Eyes; Analgesics; Opioids; Drugs; Dosage; Muscle relaxants;
Postoperative care; Postoperative complications; Inhaled anesthetics

30 NAL Call. No.: SF601.V523
Anesthesia and pain control.
Bednarski, R.M.
Philadelphia, Pa. : W.B. Saunders Company; 1989 Nov.
The Veterinary clinics of North America : Small animal practice v. 19 (6): p. 1223-1238; 1989 Nov. In the series analytic: Critical care / edited by R.B. Kirby and G.L. Stamp. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Anesthetics; Pain; Emergencies

31 NAL Call. No.: SF407.F39B56
Anesthesia and surgery.
Fox, J.G.
Philadelphia : Lea & Febiger; 1988.
Biology and diseases of the ferret / [edited by] James G. Fox. p. 289-302.
ill; 1988. Literature review. Includes references.

Language: English

Descriptors: Ferrets; Anesthesia; Injections; Anesthetics; Surgery;
Immunization

32 NAL Call. No.: SF992.C37C36
Anesthesia and the heart.
Mason, D.E.; Hubbell, J.A.E.
New York : Churchill Livingstone; 1988.
Canine and feline cardiology / edited by Philip R. Fox. p. 591-603; 1988.
Literature review. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Cardiovascular diseases; Anesthetics;
Risks; Monitoring

33 NAL Call. No.: SF601.P76
Anesthesia for head and neck surgery.
Hartsfield, S.M.; Jacobson, J.D.
Hagerstown, Md. : J.B. Lippincott Co; 1991 Jun.
Problems in veterinary medicine v. 3 (2): p. 123-141; 1991 Jun. In the series
analytic: Head and Neck Surgery / edited by C.S. Hedlund. Literature review.
Includes references.

Language: English

Descriptors: Dogs; Cats; Anesthesia; Surgical operations; Head; Neck;
Preoperative care; Fasting; Preanesthetic medication; Anesthetics; Analgesics;
Respiration; Air flow; Tubes; Postoperative care; Monitoring

34 NAL Call. No.: 41.8 AM3
Anesthesia of pups and kittens.
Grandy, J.L.; Dunlop, C.I.
Schaumburg, Ill. : The Association; 1991 Apr01.
Journal of the American Veterinary Medical Association v. 198 (7): p.
1244-1249; 1991 Apr01. Includes references.

Language: English

Descriptors: Pups; Kittens; Anesthesia; Anesthetics; Age differences;
Pharmacokinetics; Respiratory system; Cardiovascular system; Liver; Kidneys;
Thermoregulation

35 NAL Call. No.: 41.8 AM3
Anesthetic and medical management of acute hemorrhage during surgery.
Wagner, A.E.; Dunlop, C.I.
Schaumburg, Ill. : The Association; 1993 Jul01.
Journal of the American Veterinary Medical Association v. 203 (1): p. 40-45;
1993 Jul01. Includes references.

Language: English

Descriptors: Dogs; Cats; Horses; Hemorrhage; Surgery; Anesthesia; Medical
treatment; Blood volume; Losses; Hematocrit; Blood proteins

36 NAL Call. No.: 410.9 P94
Anesthetic and nephrotoxic effects of Telazol in New Zealand white rabbits.
Brammer, D.W.; Doerning, B.J.; Chrisp, C.E.; Rush, H.G.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1991 Oct.
Laboratory animal science v. 41 (5): p. 432-435; 1991 Oct. Includes
references.

Language: English

Descriptors: Rabbits; Injectable anesthetics; Intramuscular injection; Renal
failure; Toxicity; Anesthesia; Complications

Abstract: Telazol was evaluated as an anesthetic for rabbits. Two groups of five rabbits each were injected intramuscularly with 32 or 64 mg/kg of Telazol, and the depth and duration of anesthesia period monitored. At both doses, the righting reflex was lost within 2 minutes postinjection. Animals in both groups responded to noxious stimuli for the duration of the anesthesia. Hematology and urinalyses were performed daily for 7 days postinjection. Hematologic parameters remained unchanged in both groups. In the high-dose group, blood urea nitrogen and serum creatinine levels increased 1 day postinjection and continued steadily throughout the week. Elevations in urine protein and the presence of casts correlated with this increase. In the low-dose group, blood urea nitrogen and creatinine levels increased and protein was present in the urine of four of five rabbits beginning approximately 5 days postinjection. Histologically, severe renal tubular necrosis was evident 7 days postinjection in all high-dose rabbits and in three rabbits in the low-dose group. Our results indicate that Telazol does not produce analgesia in rabbits and is nephrotoxic at both 32 and 64 mg/kg. We conclude that Telazol is contraindicated for use in rabbits.

37 NAL Call. No.: SF601.A5
Anesthetic and surgical management of intrathoracic segmental tracheal stenosis utilizing high-frequency jet ventilation.
Whitfield, J.B.; Graves, G.M.; Lappin, M.R.; Toombs, J.P.; Crowe, D.T.; Bjorling, D.E.
Golden, Colo. : The Association; 1989 Jul.
The Journal of the American Animal Hospital Association v. 25 (4): p. 443-446. ill; 1989 Jul. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Trachea; Thorax; Abnormalities; Resection

38 NAL Call. No.: SF601.C66
Anesthetic breathing circuits for cats and small dogs.
Romatowski, J.
Trenton, N.J. : Veterinary Learning Systems Company; 1990 Feb.
The Compendium on continuing education for the practicing veterinarian v. 12 (2): p. 183-187, 190-193. ill; 1990 Feb. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Apparatus; Tubes; Circuits; Breathing; Resistance to air flow; Air flow; Heat loss

39 NAL Call. No.: SF601.V523
Anesthetic considerations for the geriatric patient.
Paddleford, R.R.
Philadelphia, Pa. : W.B. Saunders Company; 1989 Jan.
The Veterinary clinics of North America : Small animal practice v. 19 (1): p. 13-31; 1989 Jan. In the series analytic: Geriatrics and gerontology / edited by R.T. Goldston. Includes references.

Language: English

Descriptors: Dogs; Cat; Geriatrics; Anesthetics; Pharmacokinetics; Pharmacodynamics; Anesthesia

40 NAL Call. No.: 41.8 V643
Anesthetic management of small animal patients with endocrine disease.
Court, M.H.; Dodman, N.H.; Norman, W.M.; Seeler, D.C.
London : Bailliere Tindall; 1988 Jul.
British veterinary journal v. 144 (4): p. 323-342; 1988 Jul. Literature review. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Adrenal gland diseases; Adrenal medulla; Thyroid diseases; Treatment

41 NAL Call. No.: 410.9 P94
Anesthetic requirement of isoflurane is reduced in spontaneously hypertensive and Wistar-Kyoto rats.
Cole, D.J.; Marcantonio, S.; Drummond, J.C.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1990 Sep.
Laboratory animal science v. 40 (5): p. 506-509; 1990 Sep. Includes

references.

Language: English

Descriptors: Rats; Anesthetics; Anesthesia; Hypertension

Abstract: The isoflurane requirement to keep 50% of rats (*Rattus norvegicus*) unresponsive to noxious stimuli (MAC) was determined in age matched Sprague-Dawley (SD, n = 8), Spontaneously Hypertensive (SHR, n = 8) and Wistar-Kyoto (WKY, n = 8) strains. Following induction and orotracheal intubation, each rat received isoflurane (1.65% end-tidal) for 120 minutes. Physiologic parameters were similar except for expected differences in mean arterial pressure (148 +/- 13mmHg-SHR group, 101 +/- 10mmHg-SD group and 94 +/- 12mmHg-WKY group [mean +/- standard deviation]). Anesthetic equilibration was verified by infrared analysis of end-tidal gases. MAC was then determined in each rat by the tail clamp method and a group MAC calculated.

42 NAL Call. No.: 41.8 AM3

Anesthetic techniques for neutering 6- to 14-week-old kittens.

Faggella, A.M.; Aronsohn, M.G.

Schaumburg, Ill. : The Association; 1993 Jan01.

Journal of the American Veterinary Medical Association v. 202 (1): p. 56-62; 1993 Jan01. Includes references.

Language: English

Descriptors: Kittens; Castration; Ovariectomy; Anesthesia; Guidelines; Safety; Adverse effects; Anesthetics

43 NAL Call. No.: SF914.A53 1990

Anesthetics and analgesics in rabbits.

Hobbs, B.A.

Columbia, Md. : American College of Laboratory Animal Medicine, 1990? :; 1990.

Anesthesia and analgesia in laboratory animals : proceedings -- 1990 Forum, American College of Laboratory Animal Medicine, Columbia Inn, Columbia, Maryland, May 3-6, 1990. p. 64, 63, 62, 61; 1990. Includes references.

Language: English

Descriptors: Rabbits; Anesthetics; Analgesics

44 NAL Call. No.: 41.8 Am3A

Antagonism by flumazenil of midazolam-induced changes in quantitative electroencephalographic data from isoflurane-anesthetized dogs.

Keegan, R.D.; Greene, S.A.; Moore, M.P.; Gallagher, L.V.

Schaumburg, Ill. : American Veterinary Medical Association; 1993 May.

American journal of veterinary research v. 54 (5): p. 761-765; 1993 May. Includes references.

Language: English

Descriptors: Dogs; Benzodiazepines; Narcotic antagonists; Anesthetics; Electroencephalography

Abstract: Quantitative electroencephalography (QEEG) was assessed in 5 dogs anesthetized with 1.6% end-tidal concentration of isoflurane and after subsequent administration of the benzodiazepine midazolam (0.2 mg/kg of body weight, IV). Ventilation was controlled to maintain normocapnia. Effect of the benzodiazepine antagonist, flumazenil (0.04 mg/kg, IV), on QEEG in midazolam-isoflurane-anesthetized dogs was determined. Heart rate, arterial blood pressure, esophageal temperature, arterial pH and blood gas tensions, end-tidal CO₂ concentration, and end-tidal isoflurane concentration were monitored throughout the study. A 21-lead linked-ear montage was used for recording the EEG data. Quantitative EEG data were stored on an optical disk for later analysis. Values for absolute power of EEG were determined for delta, theta, alpha, and beta-frequencies. Cardiovascular variables remained stable throughout the study. Midazolam administration was associated with decreased absolute power in all frequencies of EEG at all electrode sites. Administration of flumazenil antagonized midazolam-induced decreased absolute power of EEG in all frequencies at all electrode sites. We conclude that QEEG provides a noninvasive, objective measure of midazolam- and flumazenil-induced changes in cortical activity during isoflurane anesthesia.

45 NAL Call. No.: 41.8 AM3A

Antagonism of ketamine-xylazine anesthesia in rats by administration of

yohimbine, tolazoline, or 4-aminopyridine.

Komulainen, A.; Olson, M.E.

Schaumburg, Ill. : American Veterinary Medical Association; 1991 Apr.

American journal of veterinary research v. 52 (4): p. 585-588; 1991 Apr.

Includes references.

Language: English

Descriptors: Rats; Anesthesia; Ketamine; Xylazine; Yohimbine; 4-aminopyridine; Drug antagonism; Dosage; Adverse effects

Abstract: Antagonism of ketamine-xylazine (85 mg of ketamine/kg of body weight and 15 mg of xylazine/kg, IM) anesthesia in rats by yohimbine (YOH; 1, 5, 10, and 20 mg/kg, IP), tolazoline (TOL; 10, 20, or 50 mg/kg, IP), 4-aminopyridine 4-AP; 1 or 5 mg/kg, IP), or a combination of yohimbine and 4-aminopyridine (YOH:4-AP, 1 mg/kg:1 mg/kg or 5 mg/kg:1 mg/kg, IP) was studied. All dosages of YOH, TOL, 4-AP, and YOH:4-AP reduced the time to appearance of corneal and pedal reflexes. Only TOL was effective in reducing time to appearance of the crawl reflex and recovery time. Yohimbine, 4-AP, YOH:4-AP, and TOL were effective in reversing respiratory depression caused by ketamine-xylazine anesthesia, but anesthetic-induced hypothermia was not antagonized. When given to non-anesthetized rats, the antagonists had little influence on respiratory rate, but all antagonists caused significant ($P < 0.05$) reduction in core body temperature for at least 90 minutes. When YOH was used as an anesthetic antagonist at dosage of 20 mg/kg, 20% mortality was observed and was attributable to acute respiratory arrest. The use of 4-AP and YOH:4-AP at the dosages studied induced moderate to severe muscular tremors. In conclusion, TOL at dosage of 20 mg/kg given IP, appears to be an appropriate antagonist for ketamine-xylazine anesthesia in rats.

46 NAL Call. No.: 41.8 V641

Antagonistic activities of atipamezole, 4-aminopyridine and yohimbine against medetomidine/ketamine-induced anaesthesia in cats.

Verstegen, J.; Fargetton, X.; Zanker, S.; Donnay, I.; Ectors, F.

London : The Association; 1991 Jan.

The Veterinary record : journal of the British Veterinary Association v. 128

(3): p. 57-60; 1991 Jan. Includes references.

Language: English

Descriptors: Cats; Anesthesia; Drug antagonism; Narcotic antagonists; Yohimbine; 4-aminopyridine; Anesthetics; Ketamine

47 NAL Call. No.: 450 P697

Anti-inflammatory and analgesic effects of an aqueous extract of Harpagophytum procumbens.

Lanhers, M.C.; Fleurentin, J.; Mortier, F.; Vinche, A.; Younos, C.

Stuttgart, W. Ger. : Georg Thieme Verlag; 1992 Apr.

Planta medica v. 58 (2): p. 117-123; 1992 Apr. Includes references.

Language: English

Descriptors: Harpagophytum procumbens; Plant extracts; Pharmaceutical products; Antiinflammatory agents; Analgesics; Rats; Mice

48 NAL Call. No.: 500 N484

Antinociceptive effects of pyridoxine, thiamine, and cyanocobalamin in rats.

Bartoszyk, G.D.; Wild, A.

New York, N.Y. : The Academy; 1990.

Annals of the New York Academy of Sciences v. 585: p. 473-476; 1990. In the

series analytic: Vitamin B6 / edited by K. Dakshinamurti. Includes references.

Language: English

Descriptors: Cyanocobalamin; Pyridoxine; Thiamin; Dosage effects; Pain; Rats

49 NAL Call. No.: RS160.J6

Anxiolytic activity of Panax ginseng roots: an experimental study.

Bhattacharya, S.K.; Mitra, S.K.

Limerick : Elsevier Scientific Publishers; 1991 Aug.

Journal of ethno-pharmacology v. 34 (1): p. 87-92; 1991 Aug. Includes references.

Language: English

Descriptors: Panax pseudoginseng; Roots; Diazepam; Anxiety; Behavior; Rats

Abstract: The putative anxiolytic activity of the white and red varieties of ginseng, the root of *Panax ginseng*, was investigated in rats and mice using a number of experimental paradigms of anxiety and compared with that of diazepam. Pilot studies indicated that single-dose administration of ginseng had little to no acute behavioral effects, hence the two varieties of ginseng were administered orally at two dose levels twice daily for 5 days, while diazepam (1 mg/kg, i.p.) was administered acutely. White and red varieties of ginseng (20 and 50 mg/kg) showed positive results when tested against several paradigms of experimental anxiety. Both were effective in the open-field and elevated plus-maze tests and reduced conflict behaviour in thirsty rats and footshock-induced fighting in paired mice. Ginseng also attenuated pentylentetrazole-induced decrease in rat brain MAO activity, confirming its anxiolytic activity since this has been proposed to be an endogenous marker for anxiety. The effects induced by white and red ginseng (50 mg/kg X 5 days) were comparable to those induced by diazepam (1 mg/kg).

50 NAL Call. No.: SF911.B56

Apnea associated with anesthesia.

Dyson, D.H.

Toronto : B.C. Decker, Inc; 1988.

Decision making in small animal soft tissue surgery / Allen G. Binnington, Joanne R. Cockshutt. p. 184-185; 1988. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Asphyxia; Respiration; Ventilation

51 NAL Call. No.: SF910.P34A55 1992

Assessment of analgesia by catecholamine analysis: response to onychectomy in cats.

Benson, G.J.; Lin, H.C.; Thurmon, J.C.; Olson, W.A.; Tranquilli, W.J.

New York : Churchill Livingstone; 1992.

Animal pain / edited by Charles E. Short, Alan Van Poznak. p. 436-439, 476-477; 1992. Includes references.

Language: English

Descriptors: Cats; Analgesics; Catecholamines; Postoperative care; Surgical operations; Drug effects

52 NAL Call. No.: QL55.A1L3

Assessment of discomfort in rats with hepatomegaly.

Beynen, A.C.; Baumans, V.; Bertens, A.P.M.G.; Haas, J.W.M.; Hellemond, K.K. van; Herck, H. van; Peters, M.A.W.; Stafleu, F.R.; Tintelen, G. van

London : Royal Society of Medicine Services; 1988 Oct.

Laboratory animals v. 22 (4): p. 320-325; 1988 Oct. Includes references.

Language: English

Descriptors: Rats; Hepatomegaly; Pain; Assessment; Cholesterol

Abstract: An attempt was made to assess discomfort in rats with hepatomegaly induced by feeding a high cholesterol, high cholate diet. After 8 weeks, the rats displayed a more than two-fold increase in liver weight when compared with controls fed a commercial diet. In a small open field test, behaviour of rats with hepatomegaly was similar to the controls. Of 9 parameters scored per rat, only the response to pressure on the right hypochondrium (tension of overlying muscles) scored higher than in control animals. There was considerable discomfort between-assessor variation in the assignment of scores. It is suggested, tentatively, that hepatomegaly in rats caused by cholesterol plus cholate feeding, may not cause extreme discomfort. Upon 'blind' palpation of control and test rats, an average of 60% of the rats with hepatomegaly were classified correctly.

53 NAL Call. No.: QL55.F43 1987

Assessment of discomfort induced by orbital puncture in rats.

Beynen, A.C.; Baumans, V.; Haas, J.W.M.; Hellemond, K.K. van; Stafleu, F.R.; Tintelen, G. van

Dordrecht : M. Nijhoff; 1988.

New developments in biosciences : their implications for laboratory animal science : proceedings of the Third Symposium, Amsterdam, The Netherlands, 1-5 June 1987 / edited by Anton C. Beyneen and Henk A. Solleveld. p. 431-436. ill; 1988. Includes references.

Language: English

Descriptors: Rats; Eyes (animal); Blood sampling; Sampling techniques; Pain; Assessment

54 NAL Call. No.: 410.9 P94

Atraumatic endotracheal intubation in small rabbits.

Conlon, K.C.; Corbally, M.T.; Bading, J.R.; Brennan, M.F.

Cordova, Tenn. : American Association for Laboratory Animal Science; 1990 Mar.

Laboratory animal science v. 40 (2): p. 221-222. ill; 1990 Mar. Includes references.

Language: English

Descriptors: Rabbits; Trachea; Tubes; Inhaled anesthetics; Anesthesia; Laboratory methods

55 NAL Call. No.: 41.8 AM3A

Atrial fibrillation in halothane- and isoflurane-anesthetized dogs.

Freeman, L.C.; Ack, J.A.; Fligner, M.A.; Muir, W.W. III

Schaumburg, Ill. : American Veterinary Medical Association; 1990 Jan.

American journal of veterinary research v. 51 (1): p. 174-177; 1990 Jan. Includes references.

Language: English

Descriptors: Dogs; Halothane; Anesthetics; Anesthesia; Heart diseases

Abstract: Programmed electrical stimulation techniques were used to evaluate the effects of halothane and isoflurane on induction of atrial fibrillation in anesthetized dogs. Experiments were performed in 16 dogs anesthetized with alpha-chloralose. Critically timed premature stimuli were applied to the right atrial appendage and Bachmann bundle to determine the atrial fibrillation threshold, defined as the minimal current required to induce rapid, irregular atrial electrical activity of at least 8 seconds' duration. Atrial fibrillation thresholds were determined at baseline (0.0% inhalational anesthetic), 0.5 minimal alveolar concentration (MAC), and 1.0 MAC of halothane (n = 8) and isoflurane (n = 8). In the absence of inhalation anesthetic, it was significantly ($P < 0.01$) easier to induce atrial fibrillation at the Bachmann bundle vs the right atrial appendage. Atrial fibrillation threshold at the Bachmann bundle was not affected by increasing concentrations of halothane, but was increased by 1.0 MAC of isoflurane ($P < 0.05$). It was concluded that at 1.0 MAC isoflurane, but not halothane, has antifibrillatory effects in atrial tissue.

56 NAL Call. No.: RB127.P34

Attempts to gauge the relative importance of pre- and postsynaptic effects of morphine on the transmission of noxious messages in the dorsal horn of the rat spinal cord.

Lombard, M.C.; Besson, J.M.

Amsterdam : Elsevier Science Publishers; 1989 Jun.

Pain : the journal of the International Association for the Study of Pain v.

37 (3): p. 335-345. ill; 1989 Jun. Includes references.

Language: English

Descriptors: Rats; Spinal cord; Morphine; Neurophysiology; Neurons; Pain

57 NAL Call. No.: SF911.V43

Autonomic and cardiovascular effects of neuromuscular blockade antagonism in the dog.

Clutton, R.E.; Boyd, C.; Flora, R.; Payne, J.; McGrath, C.J.

Hagerstown, Md. : J.B. Lippincott Company; 1992 Jan.

Veterinary surgery v. 21 (1): p. 68-75; 1992 Jan. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Nervous system; Drug combinations; Cardiovascular system; Drug effects

58 NAL Call. No.: 410.9 P94

Azaperone and azaperone-ketamine as a neuroleptic sedative and anesthetic in rats and mice.

Olson, M.E.; Renchko, P.

Cordova, Tenn. : American Association for Laboratory Animal Science; 1988 Jun.

Laboratory animal science v. 38 (3): p. 299-304; 1988 Jun. Includes references.

Language: English

Descriptors: Mice; Rats; Anesthesia; Ketamine; Azaperone; Drug combinations

Abstract: Azaperone alone and combined with ketamine were evaluated as sedative and anesthetic agents in outbred rats and mice. Using azaperone alone the duration of immobility was 1.9 to 10.8 hours for mice and 0.9 to 2.4 hours for rats. The withdrawal reflex was not eliminated from mice receiving azaperone alone; however, the withdrawal reflex was eliminated from 0.9 to 2.4 hours in rats receiving azaperone. Azaperone produced a tachypnea in rats and male mice while a depressed respiratory rate was observed in female mice. Using azaperone combined with ketamine, the duration of immobilization was 1.1 to 8.8 hours for mice and 1.3 to 6.0 hours for rats. The duration loss of the withdrawal reflex, which was used as an indication of surgical anesthesia, was 0.9 to 1.8 hours for mice and 1.0 to 6.0 hours for rats. An increase in respiratory rate was observed in rats given the combination while mice given the combination showed transient tachypnea followed by bradypnea. Overall, azaperone alone was shown to provide sedation in mice as compared to a dose dependent anesthesia in rats. The azaperone-ketamine combination produced a surgical plane of anesthesia in both rats and mice. Azaperone and the azaperone-ketamine combination appear to be a suitable alternative to sedatives and anesthetics currently used in rats and mice.

59 NAL Call. No.: 450 P697

Behavioural effects of the American traditional plant *Eschscholzia californica*: sedative and anxiolytic properties.

Rolland, A.; Fleurentin, J.; Lanhers, M.C.; Younos, C.; Misslin, R.; Mortier, F.; Pelt, J.M.

Stuttgart, W. Ger. : Georg Thieme Verlag; 1991 Jun.

Planta medica v. 57 (3): p. 212-216; 1991 Jun. Includes references.

Language: English

Descriptors: *Eschscholzia californica*; Plant extracts; Pharmaceutical products; Mice; Locomotion; Sleep

60 NAL Call. No.: QL55.A1L3

Carbon dioxide as a short-term restraint anaesthetic in rats with subclinical respiratory disease.

Fenwick, D.C.; Blackshaw, J.K.

London : Royal Society of Medicine Services; 1989 Jul.

Laboratory animals v. 23 (3): p. 220-228; 1989 Jul. Includes references.

Language: English

Descriptors: Rats; Inhaled anesthetics; Oxygen; Anesthesia; Carbon dioxide; Respiratory diseases; Safety; Restraint of animals

Abstract: The use of carbon dioxide (CO₂) with, and without, oxygen (O₂) as a short-term restraint anaesthetic for Wistar rats in which subclinical respiratory disease was endemic, was assessed in 3 separate experiments. In the first, rats were placed in a CO₂ atmosphere generated from solid CO₂ chips in a 70 l plastic bin, and removed at time intervals ranging from 0 to 120 s after disappearance of the pedal reflex. Eight of 25 rats died, including 2 which were removed immediately the pedal reflex disappeared; it was concluded that CO₂ without O₂ was not a suitable short-term anaesthetic for rats. In a second study, rats were anaesthetized in atmospheres of 50:50 and 80:20 (CO₂:O₂) provided from commercially available cylinders, in 2 different environments--a 3.4 l glass jar and a 17 l plastic bin. Rats became excited in the plastic bin but not the glass jar. Rats in the glass jar displayed visible depression and cessation of whiskers movement significantly more quickly in the 80:20 (CO₂:O₂) than in the 50:50 mixture (4.2 +/- 0.98 s, n = 6, and 66.0 +/- 4.9 s, n = 6 vs 13.8 +/- 2.77 s, n = 5 and 152.0 +/- 20.8 s, n = 5, respectively). Rats in the 17 l plastic bin lost their pedal reflexes in a mean 41.5 +/- 4.55 s (n = 11) in the 50:50 mixture and in a mean 30.9 +/- 6.38 s (n = 11) in the 80:20 (CO₂:O₂) group. Those left in the 50:50 mixture for 60 s and 180 s after disappearance of their pedal reflexes, recovered these reflexes in 20.2 +/- 0.44 s and 21.5 +/- 7.23 s respectively after removal from the gas. Respiration and heart beat ceased in one rat remaining in the 50:50 mixture after 13 min 10 s. No untoward effects occurred in rats left in the 50:50 mixture for 180 s after disappearance of the pedal reflex, but 2 died when left for an equivalent period in the 80:20 mixture. In the third study, examples of the practical use of a 50:50 mixture as a short term restraint anaesthetic are described. It was concluded that this mixture was a cheap, safe, and effective means of sh

61 NAL Call. No.: 41.8 AM3A
Cardiac dysrhythmias during anesthesia for cervical decompression in the dog.
Stauffer, J.L.; Gleed, R.D.; Short, C.E.; Erb, H.N.; Schukken, Y.H.
Schaumburg, Ill. : American Veterinary Medical Association; 1988 Jul.
American journal of veterinary research v. 49 (7): p. 1143-1146; 1988 Jul.
Includes references.

Language: English

Descriptors: Dogs; Heart diseases; Anesthesia; Spinal cord; Surgery

Abstract: In a retrospective study, the risk for cardiac dysrhythmias was evaluated in dogs undergoing ventral decompression and/or fenestration of the cervical spine (CERV) and compared with that for dogs undergoing dorsal laminectomy for decompression of the thoracic or lumbar spine (TL). The dogs in the CERV subset (48 dogs) tended to be heavier and older than the dogs in the TL subset (111 dogs). There was no apparent bias detected in treatment before anesthesia and surgery. The risk for dysrhythmias was 2.5 times greater in the CERV subset, compared with that in the TL subset (P less than 0.01). The risk for ventricular premature contraction was 3.5 times higher in the CERV group (P less than 0.05). Bradycardia was found in any dogs from the CERV subset and was not found in any dogs from the TL subset. A logistic model was derived from the data and may be used to evaluate the risk for dysrhythmias in similar patients undergoing similar surgery and anesthesia. This model uses age, preoperative heart rate, and site of surgery (CERV or TL) to estimate the risk.

62 NAL Call. No.: 41.8 AM3A
Cardiopulmonary and anesthetic effects of ketamine and its enantiomers in dogs.
Muir, W.W. III; Hubbell, J.A.E.
Schaumburg, Ill. : American Veterinary Medical Association; 1988 Apr.
American journal of veterinary research v. 49 (4): p. 530-534; 1988 Apr.
Includes references.

Language: English

Descriptors: Dogs; Ketamine; Anesthesia; Blood pressure; Heart output; Blood chemistry; Cardiovascular system; Respiratory system

63 NAL Call. No.: 41.8 AM3
Cardiopulmonary and behavioral effects of combinations of acepromazine/butorphanol and acepromazine/oxymorphone in dogs.
Cornick, J.L.; Hartsfield, S.M.
Schaumburg, Ill. : The Association; 1992 Jun15.
Journal of the American Veterinary Medical Association v. 200 (12): p. 1952-1956; 1992 Jun15. Includes references.

Language: English

Descriptors: Dogs; Opioids; Neuroleptics; Intravenous injection; Intramuscular injection; Drug combinations; Anesthesia; Heart rate; Respiration rate; Blood pressure; Body temperature; Blood; Ph; Bicarbonates; Oxygen; Carbon dioxide

64 NAL Call. No.: 41.8 AM3A
Cardiopulmonary, anesthetic, and postanesthetic effects of intravenous infusions of propofol in Greyhounds and non-Greyhounds.
Robertson, S.A.; Johnston, S.; Beemsterboer, J.
Schaumburg, Ill. : American Veterinary Medical Association; 1992 Jun.
American journal of veterinary research v. 53 (6): p. 1027-1032; 1992 Jun.
Includes references.

Language: English

Descriptors: Dogs; Injectable anesthetics; Breeds; Crossbreds; Intravenous injection; Cardiovascular system; Recovery; Anesthesia; Adverse effects

Abstract: The cardiopulmonary, anesthetic, and postanesthetic effects of an iv infusion of the hypnotic agent propofol were assessed in 6 Greyhounds and 7 non-Greyhounds. After IM injection of acepromazine and atropine, a bolus injection of propofol sufficient to allow endotracheal intubation (mean +/- SEM = 4.0 +/- 0.3 mg/kg of body weight in Greyhounds; 3.2 +/- 0.1 mg/kg in non-Greyhounds) was administered, followed by continuous infusion at a rate of 0.4 mg/kg/min for 60 minutes, during which time dogs breathed 100% oxygen. In 23% of all dogs (3 of 13), apnea developed after initial bolus administration

of propofol. Arterial blood pressure was well maintained in all dogs, but heart and respiratory rates were decreased significantly ($P < 0.05$) during the infusion in Greyhounds. In Greyhounds, mild respiratory acidosis developed after 45 minutes, whereas arterial carbon dioxide tension was increased at all times after propofol administration in non-Greyhounds. In all dogs, PCV and total plasma proteins were unaffected by propofol. Rectal temperature decreased during treatment. Muscle tremors were observed in approximately 50% of dogs (in 3 of 6 Greyhounds and 3 of 7 non-Greyhounds) during and after infusion of propofol. Non-Greyhounds lifted their heads, assumed sternal recumbency, and stood 10 ± 1 , 15 ± 3 , and 28 ± 5 minutes, respectively, after the end of the infusion; in Greyhounds, the corresponding times were 36 ± 4 , 43 ± 6 , and 63 ± 7 minutes.

65 NAL Call. No.: SF601.C24
Cardiopulmonary effects of a halothane/oxygen combination in healthy cats.
Ingwersen, W.; Allen, D.G.; Dyson, D.H.; Pascoe, P.J.; O'Grady, M.R.
Ottawa : Canadian Veterinary Medical Association; 1988 Jul.
Canadian journal of veterinary research; Revue canadienne de recherche
veterinaire v. 52 (3): p. 386-391; 1988 Jul. Includes references.

Language: English

Descriptors: Cat; Anesthesia; Halothane; Oxygen; Pharmacodynamics; Respiration rate; Cardiovascular system

66 NAL Call. No.: SF601.C24
Cardiopulmonary effects of a halothane/oxygen combination in hypovolemic cats.
Ingwersen, W.; Allan, D.G.; Dyson, D.H.; Black, W.D.; Goldberg, M.T.;
Valliant, A.E.
Ottawa : Canadian Veterinary Medical Association; 1988 Oct.
Canadian journal of veterinary research; Revue canadienne de recherche
veterinaire v. 52 (4): p. 428-433; 1988 Oct. Includes references.

Language: English

Descriptors: Cat; Anesthesia; Halothane; Oxygen; Hypovolemia; Heart output; Respiration rate

67 NAL Call. No.: SF601.C24
Cardiopulmonary effects of a ketamine hydrochloride/acepromazine combination in healthy cats.
Ingwersen, W.; Allen, D.G.; Dyson, D.H.; Pascoe, P.J.; O'Grady, M.R.
Ottawa : Canadian Veterinary Medical Association; 1988 Jan.
Canadian journal of veterinary research; Revue canadienne de recherche
veterinaire v. 52 (1): p. 1-4; 1988 Jan. Includes references.

Language: English

Descriptors: Cat; Ketamine; Anesthetics; Drug combinations; Drug effects; Stroke; Respiration rate; Heart output; Heart rate

68 NAL Call. No.: 41.8 AM3A
Cardiopulmonary effects of halothane anesthesia in cats.
Grandy, J.L.; Hodgson, D.S.; Dunlop, C.I.; Curtis, C.R.; Heath, R.B.
Schaumburg, Ill. : American Veterinary Medical Association; 1989 Oct.
American journal of veterinary research v. 50 (10): p. 1729-1732. ill; 1989
Oct. Includes references.

Language: English

Descriptors: Cat; Anesthesia; Halothane; Ventilation; Respiration rate; Cardiovascular system

Abstract: The cardiopulmonary effects of 2 planes of halothane anesthesia (halothane end-tidal concentrations of 1.78% [light anesthesia] and 2.75% [deep anesthesia]) and 2 ventilatory modes (spontaneous ventilation [SV] or mechanically controlled ventilation [CV]) were studied in 8 cats. Anesthesia was induced and maintained with halothane in O₂ only, and each cat was administered each treatment according to a Latin square design. Cardiac output, arterial blood pressure, pulmonary arterial pressure, heart rate, respiratory frequency, and PaO₂, PaCO₂, and pH were measured during each treatment. Stroke volume, cardiac index, and total peripheral resistance were calculated. A probability value of less than 5% was accepted as significant. In the cats, cardiac output, cardiac index, and stroke volume were reduced by deep anesthesia and CV, although only the reduction attributable to CV was significant. Systemic arterial pressure was significantly reduced by use of

deep anesthesia and CV. Respiratory frequency was significantly lower during CV than during SV. Arterial P(O₂) was significantly decreased at the deeper plane of anesthesia, compared with the lighter plane. At the deeper plane of anesthesia, arterial P(CO₂) and pulmonary arterial pressure were significantly lower during CV than during SV. The deeper plane of halothane anesthesia depressed cardiopulmonary function in these cats, resulting in hypotension and considerable hypercapnia. Compared with SV, CV significantly reduced circulatory variables and should be used with care in cats. Arterial blood pressure was judged to be more useful for assessing anesthetic depth than was heart rate or respiratory frequency.

69 NAL Call. No.: 41.8 AM3A
Cardiopulmonary responses to experimentally induced gastric dilatation in isoflurane-anesthetized dogs.
Hodgson, D.S.; Dunlop, C.I.; Chapman, P.L.; Grandy, J.L.
Schaumburg, Ill. : American Veterinary Medical Association; 1992 Jun.
American journal of veterinary research v. 53 (6): p. 938-943; 1992 Jun.
Includes references.

Language: English

Descriptors: Dogs; Inhaled anesthetics; Stomach diseases; Cardiovascular system; Heart rate; Blood pressure; Respiration

Abstract: Gastric dilatation was experimentally induced in 6 anesthetized dogs maintained with constant-dose isoflurane in oxygen. An intragastric balloon was used to distend the stomach with a constant 30 mm of Hg for 3.5 hours. The PaCO₂ was maintained between 35 and 45 mm of Hg, using intermittent positive-pressure ventilation. Cardiopulmonary measurements prior to stomach distension (baseline) were compared with measurements taken during 0.1, 0.5, 1.0, 1.5, 2.5, and 3.5 hours of stomach distension by analyzing the change from baseline in a randomized-block analysis with each dog as a block. After distending the stomach, cardiac index increased ($P < 0.01$) from 1.5 to 3.5 hours. Stroke volume did not change, thus the increase in the cardiac index was attributable to an increase in heart rate. During inflation, increases were observed in systemic arterial, pulmonary arterial, and right atrial pressure. Respiratory frequency was unchanged; however, to maintain PaCO₂ constant, it was necessary to progressively increase peak airway pressure. Although PaO₂ tended to decrease during gastric dilation, the dogs were never hypoxemic. These results indicate that when our methods are used to maintain a constant anesthetic dose of isoflurane in oxygen, an observed increase in cardiovascular performance is expected. This differs from other studies in anesthetized dogs that have shown reduction in cardiovascular performance following gastric dilatation.

70 NAL Call. No.: SF911.V43
Cardiorespiratory effects of combined midazolam and butorphanol in isoflurane-anesthetized cats.
Gross, M.E.; Smith, J.A.; Tranquilli, W.J.
Hagerstown, Md. : J.B. Lippincott Company; 1993 Mar.
Veterinary surgery v. 22 (2): p. 159-162; 1993 Mar. Includes references.

Language: English

Descriptors: Cats; Neuroleptics; Drug combinations; Anesthesia

71 NAL Call. No.: SF911.V43
Cardiorespiratory effects of the intravenous administration of tiletamine-zolazepam to cats.
Hellyer, P.; Muir, W.W. III; Hubbell, J.A.E.; Sally, J.
Philadelphia, Pa. : J.B. Lippincott Co; 1988 Mar.
Veterinary surgery v. 17 (2): p. 105-110. ill; 1988 Mar. Includes references.

Language: English

Descriptors: Cat; Injections; Anesthetics; Respiration rate; Blood pressure; Drug combinations

72 NAL Call. No.: SF911.V43
Cardiorespiratory effects of the intravenous administration of Tiletamine-zolazepam to dogs.
Hellyer, P.; Muir, W.W. III; Hubbell, J.A.E.; Sally, J.
Philadelphia, Pa. : J.B. Lippincott Company; 1989 Mar.
Veterinary surgery v. 18 (2): p. 160-165; 1989 Mar. Includes references.

Language: English

Descriptors: Dogs; Respiration; Heart rate; Benzodiazepine; Cycloheximide; Anesthetics; Drug combinations

73 NAL Call. No.: 41.8 AM3A
Cardiovascular and respiratory effects of propofol administration in hypovolemic dogs.
Ilkiw, J.E.; Pascoe, P.J.; Haskins, S.C.; Patz, J.D.
Schaumburg, Ill. : American Veterinary Medical Association; 1992 Dec.
American journal of veterinary research v. 53 (12): p. 2323-2327; 1992 Dec.
Includes references.

Language: English

Descriptors: Dogs; Anesthetics; Dosage effects

Abstract: Cardiopulmonary effects of propofol were studied in hypovolemic dogs from completion of, until 1 hour after administration. Hypovolemia was induced by withdrawal of blood from dogs until mean arterial pressure of 60 mm of Hg was achieved. After stabilization at this pressure for 1 hour, 6 mg of propofol/kg of body weight was administered IV to 7 dogs, and cardiopulmonary effects were measured. After blood withdrawal and prior to propofol administration, oxygen utilization ratio increased, whereas mean arterial pressure, mean pulmonary arterial pressure, central venous pressure, pulmonary capillary wedge pressure, cardiac index, oxygen delivery, mixed venous oxygen tension, and mixed venous oxygen content decreased from baseline. Three minutes after propofol administration, mean pulmonary arterial pressure, pulmonary vascular resistance, oxygen utilization ratio, venous admixture, and arterial and mixed venous carbon dioxide tensions increased, whereas mean arterial pressure, arterial oxygen tension, mixed venous oxygen content, arterial and mixed venous pH decreased from values measured prior to propofol administration. Fifteen minutes after propofol administration, mixed venous carbon dioxide tension was still increased; however by 30 minutes after propofol administration, all measurements had returned to values similar to those measured prior to propofol administration.

74 NAL Call. No.: 410.9 P94
Cardiovascular changes in unanesthetized and ketamine-anesthetized Sprague-Dawley rats exposed to 2.8-GHz radiofrequency radiation.
Jauchem, J.R.; Frei, M.R.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1991 Jan.
Laboratory animal science v. 41 (1): p. 70-75; 1991 Jan. Includes references.

Language: English

Descriptors: Rats; Radiation; Ketamine; Anesthesia; Body temperature; Heart rate; Blood pressure; Strain differences

Abstract: Sprague-Dawley rats were exposed to 2.8-GHz radiofrequency radiation, first while unanesthetized and then while anesthetized with ketamine (150 mg/kg, I.M.). Irradiation at a power density of 60 mW/cm² (whole-body average specific absorption rate of approximately 14 W/kg) was conducted for sufficient duration to increase colonic temperature from 38.5 to 39.5 degrees C. The time required for the temperature increase was significantly longer in the anesthetized state. During irradiation, heart rate increased significantly both with and without anesthesia, while mean arterial blood pressure increased only when the rats were unanesthetized. The heart rate increase in the anesthetized state contrasts with a lack of change in a previous study of Fischer rats. This difference between anesthetized Sprague-Dawley and Fischer rats should be considered when comparing cardiovascular data obtained from these two strains of rats.

75 NAL Call. No.: 41.8 AM3A
Cardiovascular effects of butorphanol administration in isoflurane-O₂ anesthetized healthy dogs.
Tyner, C.L.; Greene, S.A.; Hartsfield, S.M.
Schaumburg, Ill. : American Veterinary Medical Association; 1989 Sep.
American journal of veterinary research v. 50 (8): p. 1340-1342; 1989 Sep.
Includes references.

Language: English

Descriptors: Dogs; Analgesics; Cardiovascular system; Drug effects; Anesthetics

Abstract: Cardiovascular consequences of butorphanol tartrate (0.2 mg/kg of body weight, IV) administration during isoflurane (1.7% end-tidal

concentration) anesthesia were determined in mechanically ventilated healthy dogs. Butorphanol administration caused significant (P less than or equal to 0.05) reductions in mean, systolic, and diastolic arterial blood pressures; cardiac output; and rate-pressure product.

76 NAL Call. No.: 41.8 AM3A
Cardiovascular effects of butorphanol in halothane-anesthetized dogs.
Greene, S.A.; Hartsfield, S.M.; Tyner, C.L.
Schaumburg, Ill. : American Veterinary Medical Association; 1990 Aug.
American journal of veterinary research v. 51 (8): p. 1276-1279; 1990 Aug.
Includes references.

Language: English

Descriptors: Dogs; Analgesics; Halothane; Anesthesia; Cardiovascular system; Detoxicants

Abstract: Cardiovascular effects of butorphanol (0.2 mg/kg of body weight, IV) and responses associated with subsequent administration of naloxone (0.04 mg/kg, IV) were studied in halothane (1.2% end-tidal concentration)-anesthetized dogs. Transient, but statistically significant ($P < 0.05$), decreases in heart rate, mean and diastolic arterial blood pressures, and rate-pressure product were observed after butorphanol administration. Cardiac index, stroke volume, and systemic vascular resistance did not change significantly. Except for the decrease in heart rate, changes in the values of the cardiovascular variables measured after butorphanol administration did not appear to be clinically relevant. Sixty minutes after butorphanol administration, naloxone was given. Statistically significant ($P < 0.05$) increases in heart rate, arterial blood pressures, cardiac index, and rate-pressure product, along with dysrhythmias were observed. Stroke volume and systemic vascular resistance remained unchanged after administration of naloxone. Naloxone administration was associated with changes indicative of increased myocardial oxygen consumption.

77 NAL Call. No.: SF911.V43
Cardiovascular function and serum catecholamine concentrations after anesthesia and surgery in the dog.
Rawlings, C.A.; Tackett, R.L.; Bjorling, D.E.; Arnold, T.H. Jr
Philadelphia, Pa. : J.B. Lippincott Company; 1989 Jul.
Veterinary surgery v. 18 (4): p. 255-260; 1989 Jul. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Surgical operations; Pain; Thermoregulation; Cardiovascular system; Catecholamines; Blood serum; Blood flow; Body temperature

78 NAL Call. No.: 41.8 V6456
Children's pets (excluding the rabbit).
Taylor, N.R.
London : Wright; 1990.
The Veterinary annual (30): p. 335-341; 1990.

Language: English

Descriptors: Hamsters; Golden hamsters; Cricetulus; Phodopus; Gerbils; Meriones libycus; Meriones unguiculatus; Guinea pigs; Mice; Mus musculus; Rats; Rattus norvegicus; Pet care; Anesthesia; Antibiotics; Dosage; Water intake; Antifungal agents; Antiparasitic agents

79 NAL Call. No.: SF915.J63
Cisternal CSF and serum concentrations of morphine following epidural administration in the dog.
Valverde, A.; Conlon, P.D.; Dyson, D.H.; Burger, J.P.
Oxford : Blackwell Scientific Publications; 1992 Mar.
Journal of veterinary pharmacology and therapeutics v. 15 (1): p. 91-95; 1992 Mar. Includes references.

Language: English

Descriptors: Dogs; Morphine; Conduction anesthesia; Blood serum; Cerebrospinal fluid

80 NAL Call. No.: 41.8 J8292
Clinical effectiveness of atipamezole as a medetomidine antagonist in cats.

Vaha-Vahe, A.T.
London : British Small Animal Veterinary Association; 1990 Apr.
The Journal of small animal practice v. 31 (4): p. 193-197; 1990 Apr.
Includes references.

Language: English

Descriptors: Cat; Analgesics; Detoxicants; Drug antagonism; Drug effects;
Adverse effects; Dosage effect

81 NAL Call. No.: SF915.J63
The clinical effectiveness of atipamezole as a medetomidine antagonist in the dog.
Vaha-Vahe, A.T.
Oxford : Blackwell Scientific Publications; 1990 Jun.
Journal of veterinary pharmacology and therapeutics v. 13 (2): p. 198-205;
1990 Jun. Includes references.

Language: English

Descriptors: Dogs; Analgesics; Narcotic antagonists; Dosage; Drug antagonism;
Adverse effects

82 NAL Call. No.: 41.8 V641
Clinical evaluation of propofol as an intravenous anaesthetic agent in cats and dogs.
Morgan, D.W.T.; Legge, K.
London : The Association; 1989 Jan14.
The Veterinary record : journal of the British Veterinary Association v. 124 (2): p. 31-33; 1989 Jan14. Includes references.

Language: English

Descriptors: Cat; Dogs; Anesthetics; Anesthesia; Safety; Adverse effects;
Pharmacology

83 NAL Call. No.: 41.8 J8292
Clinical observations on medetomidine/ketamine anaesthesia and its antagonism by atipamezole in the cat.
Young, L.E.; Jones, R.S.
London : British Small Animal Veterinary Association; 1990 May.
The Journal of small animal practice v. 31 (5): p. 221-224; 1990 May.
Includes references.

Language: English

Descriptors: Cats; Anesthesia; Anesthetics; Ketamine; Drug antagonism;
Antagonists

84 NAL Call. No.: SF981.C64
Clinical observations on the simultaneous administration of xylazine and ketamine for anesthesia in the cat.
Duke, T.; Hale, G.J.; Jones, R.S.
Santa Barbara, Calif. : Veterinary Practice Publishing Company; 1988 Aug.
Companion animal practice v. 2 (8): p. 3-6; 1988 Aug. Includes references.

Language: English

Descriptors: Cat; Anesthesia; Xylazine; Ketamine; Dosage effect

85 NAL Call. No.: 41.8 V643
The clinical pharmacology of agents used to manage cardiovascular instability during general anaesthesia in small animals.
Norman, W.N.; Dodman, N.H.; Seeler, D.C.; Court, M.H.
London : Bailliere Tindall; 1988 Jan.
British veterinary journal v. 144 (1): p. 5-20. ill; 1988 Jan. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Adverse effects; Cardiovascular agents;
Heart rate; Blood pressure; Regulation; Pharmacology

86 NAL Call. No.: SF915.J6 1988

Clinical stages of general anesthesia., 6th ed.
Booth, N.H.
Ames, Iowa : Iowa State University Press; 1988.
Veterinary pharmacology and therapeutics / edited by Nicholas H. Booth, Leslie
E. McDonald. p. 171-180. ill; 1988. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Anesthetics; Analgesics

87 NAL Call. No.: SF911.V43
Closed system delivery of halothane and isoflurane with a vaporizer in the
anesthetic circle.
Bednarski, R.M.; Muir, W.W. III
Hagerstown, Md. : J.B. Lippincott Company; 1991 Sep.
Veterinary surgery v. 20 (5): p. 353-356; 1991 Sep. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Halothane; Surgical equipment

88 NAL Call. No.: 41.8 J8292
Coaxial anaesthetic circuits in small animals.
Cullen, L.K.
London : British Small Animal Veterinary Association; 1989 May.
The Journal of small animal practice v. 30 (5): p. 294-297; 1989 May.
Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Circuits; Values; Gases; Flow

89 NAL Call. No.: SF601.C24
Comparative hemodynamic effects of halothane and halothane-acepromazne at
equipotent doses in dogs.
Boyd, C.J.; McDonell, W.N.; Valliant, A.
Ottawa : Canadian Veterinary Medical Association; 1991 Apr.
Canadian journal of veterinary research; Revue canadienne de recherche
veterinaire v. 55 (2): p. 107-112; 1991 Apr. Includes references.

Language: English

Descriptors: Dogs; Halothane; Cardiovascular agents; Hemodynamics; Anesthesia;
Phenothiazines; Neuroleptics; Dosage effects

90 NAL Call. No.: SF601.C24
Comparative pharmacokinetics of Yohimbine in steers, horses and dogs.
Jernigan, A.D.; Wilson, R.C.; Booth, N.H.; Hatch, R.C.; Akbari, A.
Ottawa : Canadian Veterinary Medical Association; 1988 Apr.
Canadian journal of veterinary research; Revue canadienne de recherche
veterinaire v. 52 (2): p. 172-176; 1988 Apr. Includes references.

Language: English

Descriptors: Dogs; Horses; Steers; Anesthetics; Indoles; Pharmacokinetics

91 NAL Call. No.: 41.8 V641
A comparative study of medetomidine/ketamine and xylazine/ketamine anaesthesia
in dogs.
Moens, Y.; Fargetton, X.
London : The Association; 1990 Dec08.
The Veterinary record : journal of the British Veterinary Association v. 127
(23): p. 567-571; 1990 Dec08. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Ketamine; Drug combinations; Xylazine;
Agonists; Safety; Adverse effects; Dosage effects

92 NAL Call. No.: 41.8 AM3A
Comparative study of the pharmacokinetics of alfentanil in rabbits, sheep, and
dogs.
Ilkiw, J.E.; Benthuyssen, J.A.; McNeal, D.
Schaumburg, Ill. : American Veterinary Medical Association; 1991 Apr.

American journal of veterinary research v. 52 (4): p. 581-584; 1991 Apr.
Includes references.

Language: English

Descriptors: Dogs; Sheep; Rabbits; Analgesics; Pharmacokinetics; Species differences; Anesthesia

Abstract: The central arterial pharmacokinetics of alfentanil, a short-acting opioid agonist, were studied in rabbits, sheep, and dogs after short-duration infusion of the drug. Alfentanil was infused until a set end point (high-amplitude, slow-wave activity on the EEG) was reached. This required a larger alfentanil dose and a higher alfentanil arterial concentration in sheep, compared with rabbits and dogs. The plasma concentration-time data for each animal were fitted, using nonlinear regression, and in all animals, were best described by use of a triexponential function. In this study, differences in the disposition kinetics of alfentanil among the 3 species were found for only distribution clearance and initial distribution half-life. In dogs, compared with rabbits and sheep, the first distribution half-life was longer, probably because of pronounced drug-induced bradycardia (mean \pm SD, 48 \pm 21 beats/min). Distribution clearance was faster in sheep, compared with dogs, also probably because of better blood flow in sheep. Elimination half-life was similar in all species (rabbits, 62.4 \pm 11.3 minutes; sheep, 65.1 \pm 27.1 minutes; dogs, 58.3 \pm 10.3 minutes). This rapid half-life resulted from a small steady-state volume of distribution (rabbits, 908.3 \pm 269.0 ml/kg; sheep, 720.0 \pm 306.7 ml/kg; dogs, 597.7 \pm 290.2 ml/kg) and rapid systemic clearance (rabbits, 19.4 \pm 5.3 ml/min/kg; sheep, 13.3 \pm 3.0 ml/min/kg; dogs, 18.7 \pm 7.5 ml/min/kg). On the basis of these pharmacokinetic variables, alfentanil should have short duration of action in rabbits, sheep, and dogs. This may be beneficial in veterinary practice where rapid recovery would be expected after bolus administration for short procedures or after infusion for longer procedures.

93 NAL Call. No.: SF911.V43

Comparison of cerebrospinal fluid pressure in propofol- and thiopental-anesthetized eucapnic dogs.

Wooten, T.L.; Lowrie, C.T.

Hagerstown, Md. : J.B. Lippincott Company; 1993 Mar.

Veterinary surgery v. 22 (2): p. 148-150; 1993 Mar. Includes references.

Language: English

Descriptors: Dogs; Cerebrospinal fluid; Anesthesia

94 NAL Call. No.: 410.9 P94

Comparison of direct and indirect blood pressure measurement in anesthetized dogs.

Sawyer, D.C.; Brown, M.; Striler, E.L.; Durham, R.A.; Langham, M.A.; Rech, R.H.

Cordova, Tenn. : American Association for Laboratory Animal Science; 1991 Apr.

Laboratory animal science v. 41 (2): p. 134-138; 1991 Apr. Includes references.

Language: English

Descriptors: Dogs; Blood pressure; Pulse rate; Measurement; Tarsus; Carpus; Monitors; Catheters; Aorta

Abstract: This study was conducted to determine whether blood pressures and pulse rate could be determined accurately by indirect measurements from the front and hind legs of 15- to 40-kg dogs anesthetized with isoflurane. Indirect measurements from each animal were compared to direct measurements obtained from a catheter placed into the abdominal aorta via the femoral artery at four ranges of systolic pressure. When systolic pressure was above 80 mm Hg, indirect measurements were either the same as direct measurements or slightly lower. However, when systolic pressures were below 80 mm Hg, indirect systolic pressure measurements were 6 to 15% higher than direct measurements. Larger differences in diastolic pressures were found, which resulted in differences in mean pressure. The most accurate measurements were found when the cuff width-to-limb circumference ratio was between 0.4 and 0.6 and when systolic pressure was between 80 and 100 mm Hg.

95 NAL Call. No.: 41.8 J8292

A comparison of endotracheal and intravenous routes for atropine administration in anaesthetised dogs.

Bor, A.; Jones, R.S.; Richards, D.L.S.

London : British Small Animal Veterinary Association; 1991 Apr.

The Journal of small animal practice v. 32 (4): p. 180-182; 1991 Apr.
Includes references.

Language: English

Descriptors: Dogs; Atropine; Intravenous injection; Trachea; Application methods; Heart rate; Dosage

96 NAL Call. No.: 41.8 AM3A
Comparison of histamine release induced by morphine and oxymorphone administration in dogs.
Robinson, E.P.; Faggella, A.M.; Henry, D.P.; Russell, W.L.
Schaumburg, Ill. : American Veterinary Medical Association; 1988 Oct.
American journal of veterinary research v. 49 (10): p. 1699-1701; 1988 Oct.
Includes references.

Language: English

Descriptors: Dogs; Histamine; Morphine; Analgesics; Intravenous feeding; Animal behavior

Abstract: Cardiovascular effects (vasodilatation, hypotension) of morphine administration have been attributed to central actions and peripheral histamine release. In the study reported here, we compared plasma histamine (Hm) concentrations after morphine sulfate and oxymorphone HCl administration in conscious dogs. Five healthy adult dogs (mean body weight, 10.1 kg) were randomly administered morphine (2 mg/kg of body weight, IV) or oxymorphone (0.2 mg/kg, IV) by a 5-second bolus injection at weekly intervals. Venous blood samples (5 ml) were collected from jugular veins before and at 1, 2, 5, 15, 30, and 60 minutes after drug administration. Behavioral changes were recorded. Plasma was analyzed by a radioenzymatic technique, using purified histamine N-methyltransferase as an enzyme catalyst (sensitivity of assay, 40 pg Hm/ml). Mean base-line Hm value for all dogs was 0.55 ng/ml. The mean Hm value was significantly higher ($P < 0.05$) than the base-line value at 1, 2, 5, 15, and 60 minutes after morphine administration (531.4, 251.0, 113.0, 31.5 and 1.0 ng of Hm/ml, respectively), but there were no significant increases in histamine values from base-line values at any time after oxymorphone administration. All dogs given morphine and 1 dog given oxymorphone showed excitatory behavior; 2 dogs given morphine and 3 dogs given oxymorphone salivated profusely.

97 NAL Call. No.: SF914.A53 1990
Comparison of indirect and direct blood pressure measurement in the anesthetized dog.
Sawyer, D.C.; Brown, M.; Striler, E.L.; Durham, R.A.
Columbia, Md. : American College of Laboratory Animal Medicine, 1990? :.; 1990.
Anesthesia and analgesia in laboratory animals : proceedings -- 1990 Forum, American College of Laboratory Animal Medicine, Columbia Inn, Columbia, Maryland, May 3-6, 1990. p. 27-30; 1990. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Blood pressure

98 NAL Call. No.: 41.8 AM3A
Comparison of inhalation-to-perfusion ratio in anesthetized dogs with barrel-shaped thorax vs dogs with deep thorax.
Clercx, C.; Brom, W.E. van den; Vries, H.W. de
Schaumburg, Ill. : American Veterinary Medical Association; 1991 Jul.
American journal of veterinary research v. 52 (7): p. 1097-1103; 1991 Jul.
Includes references.

Language: English

Descriptors: Dogs; Thorax; Conformation; Anesthesia; Ratios; Lungs; Gravity; Lung ventilation

Abstract: Interregional, as well as intraregional (local), distributions of the inhalation-to-perfusion ratio were analyzed in the lungs of 20 prone anesthetized healthy dogs--10 dogs with barrel-shaped thorax (Beagles) and 10 dogs with deep thorax (Greyhound-type dogs)--using ^{99m}Tc inhalation-perfusion lung scintigraphy. Dorsoventral and lateral views were analyzed. In both types of dogs, the ratio between the mean inhalation and perfusion values (interregional mismatching factor) decreased from craniad to caudad and the decrease was more sustained in the right than in the left lung. However, the total decrease was less in Greyhound-type dogs than in Beagles

(cranial-to-caudal decrease of 14 and 27%, respectively, in the left lung, and 62 and 56%, respectively, in the right lung). The dorsal-to-ventral distribution of interregional mismatching factor was different in the 2 types of dogs. In Beagles, it increased from dorsal to ventral zones by about 50% of the initial dorsal zone value, whereas in Greyhound-type dogs, only a slight dorsal-to-ventral decrease was evident, with the exception of the more ventral zone. Differences in the intraregional mismatching factor (ρ) indicated that the intraregional inhalation-to-perfusion inequalities were more pronounced within the caudal regions and within the ventral zones of the lungs in both types of dogs, and in the more cranial zones in the lungs of Beagles. However, the degree of intraregional mismatching was generally lower in Greyhound-type dogs. Thus, the gravitational force is not the dominating determinant of interregional or intraregional inhalation-to-perfusion ratio distributions in the lungs of anesthetized prone dogs. Its influence is modulated by other factors morphologic characteristics, such as the shape and size of the thorax, and body weight of the dog. In particular, the height of the thorax in Greyhound-type dogs could permit the gravitational force to exert a more determinant influence than it does in Beagle

99 NAL Call. No.: 410.9 P94
A comparison of ketamine/xylazine and ketamine/xylazine/acepromazine anesthesia in the rabbit.
Lipman, N.S.; Marini, R.P.; Erdman, S.E.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1990 Jul. Laboratory animal science v. 40 (4): p. 395-398; 1990 Jul. Includes references.

Language: English

Descriptors: Rabbits; Anesthesia; Drug combinations; Ketamine; Xylazine; Preanesthetic medication; Neuroleptics

Abstract: Parenteral anesthetic combinations such as ketamine and xylazine have become the agents of choice for anesthesia in the rabbit, because they are effective, easily administered and inexpensive. A number of recent reports have recommended including acepromazine in this combination, but a critical evaluation of this combination in the rabbit has not been reported. Five adult New Zealand white rabbits were anesthetized intramuscularly with ketamine (35 mg/kg) and xylazine (5 mg/kg) with or without acepromazine (0.75 mg/kg). The study was conducted in a double blind fashion, where each rabbit was administered both combinations at a minimum of 7 day intervals. Physiologic parameters were evaluated including heart rate, respiratory rate, central arterial blood pressure, pedal, palpebral and postural reflex activity. The duration of general anesthesia, estimated by the time elapsed between the loss and return of the palpebral reflex, was greater (mean = 99 +/- 20 minutes) when acepromazine was employed in the combination compared to (mean = 77 +/- 5 minutes) when ketamine/xylazine were used alone. Mean central arterial blood pressure reached a lower level when acepromazine was utilized (mean = 46 +/- 8 mm/Hg) than when it was not (mean = 57 +/- 12 mm/Hg.) The addition of acepromazine in a ketamine/xylazine combination resulted in a 28% longer period of anesthesia, a 19% lower mean central arterial blood pressure and a 32% longer recovery of postural reflexes. The ketamine/xylazine/acepromazine combination is a useful regimen for normovolemic animals when anesthetic duration greater than that produced by ketamine/xylazine alone is required.

100 NAL Call. No.: SF601.C24
Comparison of medetomidine and fentanyl-droperidol in dogs: sedation, analgesia, arterial blood gases and lactate levels.
Pettifer, G.R.; Dyson, D.H.
Ottawa : Canadian Veterinary Medical Association; 1993 Apr. Canadian journal of veterinary research; Revue canadienne de recherche veterinaire v. 57 (2): p. 99-105; 1993 Apr. Includes references.

Language: English

Descriptors: Dogs; Medetomidine; Fentanyl; Droperidol; Analgesics; Restraint of animals; Nontarget effects; Body temperature; Respiration rate; Heart rate; Blood chemistry; Respiratory gases; Lactic acid

101 NAL Call. No.: 410.9 P94
A comparison of medetomidine-propofol and medetomidine-midazolam-propofol anesthesia in rabbits.
Ko, J.C.H.; Thurmon, J.C.; Tranquili, W.J.; Benson, G.J.; Olson, W.A.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1992 Oct. Laboratory animal science v. 42 (5): p. 503-507; 1992 Oct. Includes references.

Language: English

Descriptors: Rabbits; Anesthesia; Drug combinations

102 NAL Call. No.: 41.8 AM3A
Comparison of several combinations for anesthesia in rabbits.
Hobbs, B.A.; Rolhall, T.G.; Sprengel, T.L.; Anthony, K.L.
Schaumburg, Ill. : American Veterinary Medical Association; 1991 May.
American journal of veterinary research v. 52 (5): p. 669-674; 1991 May.
Includes references.

Language: English

Descriptors: Rabbits; Anesthesia; Drug combinations; Injectable anesthetics;
Heart rate; Respiration rate; Body temperature; Reflexes; Safety

Abstract: Few safe and effective anesthesia regimens have been described for use in rabbits, partially because of the susceptibility of this species to sometimes fatal respiratory depression. Although inhalant anesthetics are generally safer than injectable anesthetics, their use may be limited by lack of equipment or facilities. This study was conducted to compare effects of several injectable anesthetics in rabbits on response to noxious stimuli, heart rate, respiratory rate, and rectal temperature. Six injectable anesthetic combinations were administered to rabbits: xylazine-ethyl-(1-methyl-propyl) malonyl-thio-urea salt (EMTU), ketamine-EMTU, xylazine-pentobarbital, xylazine-acepromazine-ketamine (XAK), ketamine-chloral hydrate, and ketamine-xylazine. All combinations induced a depression of respiratory rate. Although rectal temperature values were reduced to some degree in each group, the most profound hypothermia was induced by XAK. The combination that induced the longest duration of anesthesia was XAK. It was concluded that XAK was preferable for longer periods of anesthesia (60 to 120 minutes), although it induces severe hypothermia. For short periods of anesthesia, xylazine-pentobarbital, xylazine-EMTU, or ketamine-xylazine were deemed adequate; however, xylazine-EMTU induced the best survivability and consistency.

103 NAL Call. No.: SF911.V43
A comparison of surgical training with live anesthetized dogs and cadavers.
Carpenter, L.G.; Piermattei, D.L.; Salman, N.D.; Orton, E.C.; Nelson, A.W.;
Smeak, D.D.; Jennings, P.B. Jr; Taylor, R.A.
Hagerstown, Md. : J.B. Lippincott Company; 1991 Nov.
Veterinary surgery v. 20 (6): p. 373-378; 1991 Nov. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Surgical operations; Training; Cadavers

104 NAL Call. No.: 41.8 V641
Comparison of the clinical utility of medetomidine/ketamine and
xylazine/ketamine combinations for the ovarioectomy of cats.
Verstegen, J.; Fargetton, X.; Donnay, I.; Ectors, F.
London : The Association; 1990 Oct27.
The Veterinary record : journal of the British Veterinary Association v. 127
(17): p. 424-426; 1990 Oct27. Includes references.

Language: English

Descriptors: Cats; Ovarioectomy; Ketamine; Xylazine; Analgesics; Anesthesia;
Drug combinations; Adverse effects; Duration; Dosage

105 NAL Call. No.: 41.8 R3224
Comparison of the efficacy of three premedicants administered to cats.
Dyson, D.H.; Pascoe, P.J.; Honeyman, V.; Rahn, J.E.
Ottawa : Canadian Veterinary Medical Association; 1992 Jul.
The Canadian veterinary journal v. 33 (7): p. 462-464; 1992 Jul. Includes
references.

Language: English

Descriptors: Cats; Preanesthetic medication; Drug combinations; Drug effects;
Anesthesia; Heart rate; Respiration rate; Catheters

106 NAL Call. No.: 41.8 AM3A
Comparison of the hemodynamic effects of halothane alone and halothane
combined with epidurally administered morphine for anesthesia in ventilated

dogs.

Valverde, A.; Dyson, D.H.; Cockshutt, J.R.; McDonell, W.N.; Valliant, A.E.
Schaumburg, Ill. : American Veterinary Medical Association; 1991 Mar.
American journal of veterinary research v. 52 (3): p. 505-509; 1991 Mar.
Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Halothane; Morphine; Hemodynamics; Drug combinations

Abstract: The hemodynamic effects of 1.5 minimal alveolar concentration of halothane alone (1.6% end-tidal) and 1.5 minimal alveolar concentration of halothane (1.1% end-tidal concentration) combined with epidurally administered morphine were compared during controlled ventilation in 10 dogs used on 2 occasions and randomly allocated to 2 groups. Arterial blood pressure, cardiac index, stroke volume, left ventricular work, and pulmonary arterial pressure were significantly ($P < 0.05$) higher in dogs of the morphine-treated group before administration of morphine. After epidural administration of morphine (0.1 mg/kg of body weight diluted in 0.26 ml of saline solution/kg), hemodynamic changes were not observed, and the aforementioned variables remained significantly ($P < 0.05$) higher than values in dogs of the halothane only group. Compared with halothane (1.6%) alone, the reduction in halothane end-tidal concentration (1.1%) associated with epidurally administered morphine is beneficial in maintaining hemodynamic function.

107 NAL Call. No.: 41.8 V641
Comparison of the postoperative analgesic and sedative effects of carprofen and papaveretum in the dog.
Nolan, A.; Reid, J.
London : The British Veterinary Association; 1993 Sep04.
The Veterinary record : journal of the British Veterinary Association v. 133 (10): p. 240-242; 1993 Sep04. Includes references.

Language: English

Descriptors: Dogs; Non-steroidal antiinflammatory agents; Opioids

108 NAL Call. No.: 41.8 J8292
A comparison of the postoperative analgesic and sedative effects of flunixin and papaveretum in the dog.
Reid, J.; Nolan, A.M.
London : British Small Animal Veterinary Association; 1991 Dec.
The Journal of small animal practice v. 32 (12): p. 603-608; 1991 Dec.
Includes references.

Language: English

Descriptors: Dogs; Flunixin; Analgesics; Anesthesia; Pain; Drug effects

109 NAL Call. No.: SF901.V47
A comparison of three local anaesthetic techniques for skin biopsy in dogs.
Henfrey, J.I.; Thoday, K.L.; Head, K.W.
Elmsford, N.Y. : Pergamon Press, Inc; 1991.
Veterinary dermatology v. 2 (1): p. 21-27; 1991. Includes references.

Language: English

Descriptors: Dogs; Local anesthesia; Lidocaine; Epinephrine; Cutaneous application; Local anesthetics; Skin; Biopsy; Adverse effects; Artefacts

110 NAL Call. No.: 410.9 P94
Comparison of xylazine with tiletamine-zolazepam (Telazol) and xylazine-ketamine anesthesia in rabbits.
Popilskis, S.J.; Oz, M.C.; Gorman, P.; Florestal, A.; Kohn, D.F.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1991 Jan.
Laboratory animal science v. 41 (1): p. 51-53; 1991 Jan. Includes references.

Language: English

Descriptors: Rabbits; Anesthesia; Xylazine; Anesthetics; Drug combinations; Ketamine

Abstract: Although widely used to provide short term anesthesia, ketamine-xylazine does not always produce satisfactory anesthesia. We compared the efficacy of ketamine-xylazine to tiletamine-zolazepam-xylazine for

producing surgical anesthesia in rabbits. Four of six rabbits receiving ketamine-xylazine and all of the 12 animals given tiletamine-zolazepam-xylazine were anesthetized successfully. The mean surgical anesthesia time in the ketamine-xylazine group was 35 +/- 6 minutes as compared to the tiletamine-zolazepam-xylazine group, 72 +/- 8 minutes ($p < 0.05$). There was no significant difference in the interval between the injection of the different anesthetic mixtures and the loss of either the righting reflex, the jaw reflex or the toe web pinch reflex. Respiratory rates and arterial oxygen partial pressure were higher in the ketamine-xylazine group ($p < 0.05$). However, in both groups arterial blood pressure and arterial PO₂ were lowered, while arterial PCO₂ was elevated. No nephrotoxicity occurred. Tiletamine-zolazepam-xylazine provides effective surgical anesthesia in rabbits and in many cases may be preferable to conventional ketamine-xylazine regimen.

111 NAL Call. No.: QL785.A725
Conditioned inhibition of analgesia.
Wiertelak, E.P.; Watkins, L.R.; Maier, S.F.
Austin, Tex. : Psychonomic Society; 1992 Nov.
Animal learning & behavior v. 20 (4): p. 339-349; 1992 Nov. Includes references.

Language: English

Descriptors: Pain; Rats

Abstract: Stimuli that predict the occurrence of aversive events come to elicit conditioned analgesia. Experiments 1A and 1B examined the possibility that conditioning can inhibit analgesia when stimuli are paired in a backward fashion with a shock US (Pavlovian CS-s). Analgesia conditioned in response to shock context exposure was reversed during the CS- (light) presentation after four sessions. The ability of the CS- to function as a conditioned inhibitor of analgesia was then evaluated in both summation (Experiment 1A) and retardation-of-acquisition testing (Experiments 1A and 1B). The results support the conclusion that a stimulus presented after shock in a backward fashion comes to be a conditioned inhibitor of analgesia. Experiments 2A and 2B examined the assumption that the results obtained with our pain sensitivity measure (tailflicking in response to radiant heat) reflect changes in responsiveness to painful input, rather than a general motor inhibition or general insensitivity to sensory input. In Experiment 2A, tailflick responding to painful and nonpainful input was compared in animals receiving either morphine or saline. In Experiment 2B, tailflick responding to painful and nonpainful input to the tail was compared in both the shock and a neutral context. In both experiments, only the painful input yielded changes in responsivity. The results support the conclusion that the alterations in pain sensitivity produced by the CS- for shock represents a conditioned inhibition specific to pain.

112 NAL Call. No.: 41.8 V641
Development of an opiate-based anaesthetic technique for use in dogs with cardiomyopathy.
Williamson, H.A.; Cumming, D.V.E.; Cobb, M.A.; Pattison, C.W.; Yacoub, M.H.; Clayton Jones, D.G.
London : The Association; 1991 Nov02.
The Veterinary record : journal of the British Veterinary Association v. 129 (18): p. 398-400; 1991 Nov02. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Fentanyl; Halothane; Nitrous oxide; Cardiomyopathy; Safety

113 NAL Call. No.: RB127.P34
Differentiating analgesic and non-analgesic drug activities on rat hot plate: effect of behavioral endpoint.
Carter, R.B.
Amsterdam : Elsevier Science Publishers; 1991 Nov.
Pain : the journal of the International Association for the Study of Pain v. 47 (2): p. 211-220; 1991 Nov. Includes references.

Language: English

Descriptors: Rats; Analgesics; Assays; Animal behavior

114 NAL Call. No.: QD415.A1X4
Distribution in female rats of an anaesthetic intravenous dose of

14C-propofol.
Simons, P.J.; Cockshott, I.D.; Douglas, E.J.; Gordon, E.A.; Knott, S.; Ruane, R.J.
London : Taylor & Francis; 1991 Oct.
Xenobiotica v. 21 (10): p. 1325-1335; 1991 Oct. Includes references.

Language: English

Descriptors: Intravenous injection; Pharmacokinetics; Animal tissues; Distribution; Females; Rats

Abstract: 1. Bolus i.v. doses of 14C-propofol (9 mg/kg) were administered to female rats for measurement of tissue levels of total 14C and propofol from 2 min to 24 h post-dose; wholebody autoradiography was studied at 6 min, 2 h and 24 h post-dose, and also involved 15-day pregnant rats. 2. The blood propofol concentration-time profile was fitted by a tri-exponential function corresponding to a three-compartment open model. Data show rapid distribution during the mixing period into highly perfused tissues and muscle, comprising the central compartment, and slower uptake into less well-perfused skin and adipose tissues comprising the deeper compartments. 3. The initial decline in blood propofol concentration was associated with redistribution ($t(1/2)$ 4 min), the second decline (15-240 min post-dose) was associated with metabolism ($t(1/2)$ 33 min) and the third decline reflected slow depletion of drug from deep tissue compartments ($t(1/2)$ 6.4 h). 4. Blood and brain propofol concentrations on waking (at 7 min post-dose) were 4 micrograms/ml and 9 micrograms/g respectively; the model shows that, at this time, 30% of the dose was lost from the central compartment by redistribution and a similar amount by metabolism. 5. Tissue profiles of total 14C and propofol diverged for highly perfused tissues (other than brain) because of slow clearance of metabolites, accentuated by enterohepatic recirculation.

115 NAL Call. No.: 41.8 AM3A
Distribution of material injected intramuscularly in dogs.
Autefage, A.; Fayolle, P.; Toutain, P.L.
Schaumburg, Ill. : American Veterinary Medical Association; 1990 Jun.
American journal of veterinary research v. 51 (6): p. 901-904. ill; 1990 Jun.
Includes references.

Language: English

Descriptors: Dogs; Radioactive iodine; Intramuscular injection; Muscles; Distribution; Pharmacokinetics

Abstract: A radiopaque marker was injected, using needles of various lengths, into the cervical musculature, the lumbar epaxial musculature, and the cranial and caudal muscular masses of the thighs of anesthetized dogs. After this procedure, the dogs were euthanized and deep-frozen. The bodies were then sectioned, and the slices were radiographed to determine the fate of the injected material. Material that was injected into the neck or caudal region of the thigh was determined to be located in the muscle bellies or dispensed throughout the intermuscular fascial sheaths. In contrast, material injected into the lumbar area and cranial region of the thigh was located entirely in the muscle bellies. It was concluded that the best sites for injection in dogs are the lumbar epaxial musculature or the quadriceps femoris muscle when IM administration is imperative.

116 NAL Call. No.: QL55.A1L33
Dorsal metatarsal, penile, and sublingual vein injections of anesthetized rats using a simplified inhalation anesthetic.
Martinic, G.; Taylor, J.
New York, N.Y. : Nature Publishing Company; 1993 Jan.
Lab animal v. 22 (1): p. 38-44; 1993 Jan. Includes references.

Language: English

Descriptors: Rats; Anesthesia

117 NAL Call. No.: 41.8 AM3A
Dose response to butorphanol administered subcutaneously to increase visceral nociceptive threshold in dogs.
Sawyer, D.C.; Rech, R.H.; Durham, R.A.; Adams, T.; Richter, M.A.; Striler, E.L.
Schaumburg, Ill. : American Veterinary Medical Association; 1991 Nov.
American journal of veterinary research v. 52 (11): p. 1826-1830; 1991 Nov.
Includes references.

Language: English

Descriptors: Dogs; Analgesics; Pain; Subcutaneous injection; Dosage; Dosage effects

Abstract: Butorphanol (0.025, 0.05, 0.1, 0.2, 0.4, and 0.8 mg/kg of body weight, and placebo) was given sc to 8 healthy unmedicated dogs to determine its efficacy for visceral analgesia, using a colonic balloon for minimal threshold nociceptor stimulation. Degree of sedation; systolic, diastolic, and mean arterial pressure; and pulse rate were recorded. The highest 3 dosages, 0.2, 0.4, and 0.8 mg/kg, were found to be most effective, with 0.8 mg/kg the only dosage that was significantly different from control responses at the 45-minute interval. Duration of analgesia ranged from 23 to 53 minutes for all 6 dosages and dosing durations were not significantly different from one another. Blood pressures did not change, but pulse rate was significantly decreased by 0.8 mg of butorphanol/kg. We concluded that butorphanol is an effective visceral analgesic of relatively short duration in the dog.

118 NAL Call. No.: 442.9 SO1
Dose-response of intravenous butorphanol to increase visceral nociceptive threshold in dogs.
Houghton, K.J.; Rech, R.H.; Sawyer, D.C.; Durham, R.A.; Adams, T.; Langham, M.A.; Striler, E.L.
Baltimore, Md. : Williams & Wilkins; 1991 Jul.
Proceedings of the Society for Experimental Biology and Medicine v. 197 (3): p. 290-296; 1991 Jul. Includes references.

Language: English

Descriptors: Dogs; Analgesics; Dosage; Dosage effects; Duration; Blood pressure; Pulse rate; Intravenous injection

Abstract: This study was designed to determine the effective analgesic dose of butorphanol administered intravenously to obtund visceral nociception, as well as to determine duration of this effect. Additionally, cardiovascular changes and sedative effects were defined. Eight healthy dogs were each given five doses of butorphanol (0.025, 0.05, 0.1, 0.2, and 0.4 mg/kg) plus a sterile water placebo intravenously in a randomized blinded format. Antinociception was assessed using an inflatable Silastic balloon inserted into the colon. Blood pressures and pulse rates were measured with a noninvasive monitor. The greatest efficacy and longest duration of antinociception were produced by 0.4 mg/kg of butorphanol, with a duration of 38 +/- 9 min. Arterial blood pressure and pulse rate did not vary at antinociceptive doses. Mild sedation was observed at all doses, which generally lasted longer than the antinociceptive effects. These data suggest that butorphanol can be given alone intravenously to provide visceral antinociception lasting 30-45 min without significant side effects.

119 NAL Call. No.: 41.8 AM3
Drug therapy in cats: a therapeutic category approach.
Boothe, D.M.
Schaumburg, Ill. : The Association; 1990 May15.
Journal of the American Veterinary Medical Association v. 196 (10): p. 1659-1669; 1990 May15. Third of a series. Literature review. Includes references.

Language: English

Descriptors: Cat; Drug therapy; Antiinfective agents; Analgesics; Antihistaminics; Antiinflammatory agents; Hormones; Anthelmintics; Drugs

120 NAL Call. No.: 41.8 AM3A
Duration of etomidate-induced adrenocortical suppression during surgery in dogs.
Dodam, J.R.; Kruse-Elliott, K.T.; Aucoin, D.P.; Swanson, C.R.
Schaumburg, Ill. : American Veterinary Medical Association; 1990 May.
American journal of veterinary research v. 51 (5): p. 786-788; 1990 May.
Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Anesthetics; Surgical operations; Corticotrophin

Abstract: Plasma cortisol concentrations were compared in canine surgical patients given etomidate (2 mg/kg of body weight, IV) or thiopental sodium (12 mg/kg, IV) for anesthetic induction. Blood samples to determine plasma concentrations of etomidate were obtained at 0, 5, 10, 15, and 30 minutes and

1, 2, 3, 4, 5, 6, 8, 12, and 24 hours after induction. Adrenocortical function was evaluated before surgery by use of adrenocorticotropic hormone stimulation tests. Dogs in both induction groups had high plasma cortisol concentrations after induction. Dogs given thiopental had a significant increase ($P < 0.05$) in plasma cortisol concentration from baseline at 2, 3, 4, 5, 6, 8, and 12 hours after induction. Dogs given etomidate had a significant increase ($P < 0.05$) in plasma cortisol concentration from baseline at 5, 6, and 8 hours after induction. A comparison of plasma cortisol concentrations determined at 2, 3, 4, 5, and 6 hours after induction with thiopental or etomidate revealed a higher ($P < 0.05$) concentration in dogs given thiopental. The disposition of etomidate was best described by a 2-compartment model, with a redistribution half-life of 0.12 ± 0.04 minute and a terminal half-life of 1.70 ± 0.27 minute. Plasma cortisol concentrations did not correlate with plasma etomidate concentrations. We conclude that, compared with thiopental, a single bolus injection of etomidate reduces the adrenocortical response to anesthesia and surgery from 2 to 6 hours after induction. Because cortisol concentrations were significantly higher than baseline, and because cardiopulmonary function is maintained after a single bolus injection of etomidate, it can be considered a safe induction agent in dogs.

121 NAL Call. No.: QP1.P4
Effect of a high-fat diet on firing rate of sympathetic nerves innervating brown adipose tissue in anesthetized rats.
Sakaguchi, T.; Arase, K.; Fidler, J.S.; Bray, G.A.
Elmsford, N.Y. : Pergamon Press; 1989 Jun.
Physiology & behavior v. 45 (6): p. 1177-1182; 1989 Jun. Includes references.

Language: English

Descriptors: Rats; Anesthesia; Source fat; Sympathetic nervous system; Brown fat; Obesity

122 NAL Call. No.: SF601.A5
The effect of acepromazine maleate on the anesthetic potency of halothane and isoflurane.
Webb, A.I.; O'Brien, J.M.
Golden, Colo. : The Association; 1988 Nov.
The Journal of the American Animal Hospital Association v. 24 (6): p. 609-613; 1988 Nov. Includes references.

Language: English

Descriptors: Dogs; Promazine; Halothane; Anesthetics; Dosage effect; Intramuscular injection

123 NAL Call. No.: 41.9 AM37
The effect of anesthesia on the radiographic appearance of the coxofemoral joints.
Aronson, E.; Kraus, K.H.; Smith, J.
Raleigh, N.C. : American College of Veterinary Radiology; 1991 Jan.
Veterinary radiology v. 32 (1): p. 2-5. ill; 1991 Jan. Includes references.

Language: English

Descriptors: Dogs; Radiography; Hips; Hip dysplasia; Anesthesia; Joints (animal); Classification

124 NAL Call. No.: 410.9 P94
Effect of bleeding site on clinical laboratory testing of rats: orbital venous plexus versus posterior vena cava.
Dameron, G.W.; Weingand, K.W.; Duderstadt, J.M.; Odioso, L.W.; Dierkman, T.A.; Schwewe, W.; Baran, K.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1992 Jun.
Laboratory animal science v. 42 (3): p. 299-301; 1992 Jun. Includes references.

Language: English

Descriptors: Rats; Blood sampling; Vena cava; Veins; Laboratory tests; Blood chemistry; Hematology; Blood coagulation

Abstract: We sought to determine if there were any differences in the results of clinical laboratory tests between blood samples collected from the orbital venous plexus and the posterior vena cava of adult male rats. Thirty healthy adult male Sprague Dawley rats were anesthetized by ether inhalation, and blood samples were collected successively from the orbital venous plexus

(OVP) and the posterior vena cava (PVC) for hematologic (n = 10), serum chemistry (n = 10), and coagulation (n = 10) analyses. The prothrombin and partial thromboplastin times of samples from the OVP were prolonged (17% and 288%, respectively) when compared with samples from the PVC. Respective hematologic biases were as follows: red blood cell count (7%), hemoglobin (6%), hematocrit (5%), mean corpuscular volume (-3%), mean corpuscular hemoglobin (-1%), mean corpuscular hemoglobin content (1%), white blood cell count (13%), and platelet count (-7%). Respective serum chemistry biases were as follows: sorbitol dehydrogenase (-7%), glucose (-7%), blood urea nitrogen (-10%), creatinine (-2%), total protein (4%), albumin (2%), globulin (9%), alkaline phosphatase (5%), lactate dehydrogenase (-6%), aspartate aminotransferase (-5%), alanine aminotransferase (-2%), total bilirubin (0%), direct bilirubin (0%), magnesium (-17%), sodium (4%), potassium (0), chloride (4%), calcium (-2%), phosphorous (-17%), cholesterol (3%), triglycerides (24%), creatinine kinase (-8%), 5'nucleotidase (0%), and total bile acids (4%). For hematologic testing, there were no biologically significant differences between samples collected from the OVP and PVC. The coagulation times and serum Mg and P showed biologically significant differences between samples collected from the OVP and PVC. We recommend that coagulation times not be measured on plasma samples collected from the OVP.

125 NAL Call. No.: SF724.T72
Effect of chloramphenicol on duration of xylazine/pentobarbitone anaesthesia in dogs.
Adetunji, A.; Adewumi, J.O.A.
Ibadan, Nigeria : Faculty of Veterinary Medicine, University of Ibadan; 1990.
Tropical veterinarian v. 8 (3/4): p. 149-155; 1990. Includes references.

Language: English

Descriptors: Dogs; Anesthesia

126 NAL Call. No.: 41.8 AM3A
Effect of gentamicin administration on the neuromuscular blockade induced by atracurium in cats.
Forsyth, S.F.; Ilkiw, J.E.; Hildebrand, S.V.
Schaumburg, Ill. : American Veterinary Medical Association; 1990 Oct.
American journal of veterinary research v. 51 (10): p. 1675-1678; 1990 Oct.
Includes references.

Language: English

Descriptors: Cats; Gentamicin; Muscle relaxants; Anesthetics; Recovery; Drug combinations

Abstract: Atracurium besylate, a nondepolarizing neuromuscular blocking agent, was administered as an infusion to 8 anesthetized cats in which neuromuscular blockade was assessed, using the train-of-four response. Once 50% depression of the first-twitch (T1) response was achieved, the infusion was held constant for 60 minutes before being discontinued and the recovery time was determined. The time for recovery was recorded as the time for the train-of-four ratio (T4 ratio) to increase from 50% to 75%. After recovery, atracurium infusion was reinstated and the cats were again maintained for 60 minutes at 50% depression. A single bolus of gentamicin sulfate (2.0 mg/kg of body weight) was administered IV, and the infusion was continued for another 60 minutes before it was discontinued and the time for recovery was recorded. Within 1 minute of gentamicin administration, the mean \pm SD T1 response decreased from 49 \pm 5% to 33 \pm 8% of baseline and the T4 ratio decreased from 28 \pm 19% to 14 \pm 11%. Peak effect occurred at 5 minutes, with a T1 response of 29 \pm 6% of baseline and a T4 ratio of 13 \pm 12%. By 60 minutes after gentamicin administration, the T1 response had increased to 38 \pm 7% of baseline and the T4 ratio had increased to 21 \pm 13%. The time for recovery significantly (P less than 0.03) increased from 9.9 \pm 3.4 minutes during the control study to 18.1 \pm 10.7 minutes during the gentamicin study. In this study, gentamicin potentiated the neuromuscular blockade induced by atracurium and increased the recovery time. Residual blockade, observed after gentamicin administration was reversed with edrophonium.

127 NAL Call. No.: 41.8 AM3A
Effect of midazolam preanesthetic administration on thiamylal induction requirement in dogs.
Tranquilli, W.J.; Graning, L.M.; Thurmon, J.C.; Benson, G.J.; Moum, S.G.; Lentz, E.L.
Schaumburg, Ill. : American Veterinary Medical Association; 1991 May.
American journal of veterinary research v. 52 (5): p. 662-664; 1991 May.
Includes references.

Language: English

Descriptors: Dogs; Preanesthetic medication; Anesthetics; Dosage; Requirements; Tubes; Trachea

Abstract: The thiamylal sparing effect of midazolam was studied in 30 healthy Beagle and mixed-breed dogs. Using a replicated Latin square design, all dogs were given placebo (saline solution) and 0.025, 0.05, 0.1, and 0.2 mg of midazolam/kg of body weight prior to IV administration of thiamylal sodium. The 0.1 and 0.2 mg/kg dosages significantly decreased the amount of thiamylal required to obtund swallowing reflex and easily achieve endotracheal intubation. Midazolam at 0.1 and 0.2 mg/kg reduced thiamylal requirement by 16.4% and 18.9%, respectively, whereas the 0.05 mg/kg dosage decreased thiamylal requirement by only 6.8%. The 0.2 mg/kg dosage did not further decrease thiamylal requirement beyond that achieved with the 0.1 mg/kg dosage of midazolam. This study demonstrates that the preanesthetic IV administration of midazolam reduces the thiamylal dose necessary to accomplish intubation. The optimal preanesthetic dosage (lowest dosage with significant effect) was 0.1 mg/kg.

128 NAL Call. No.: QL55.F43 1987

Effect of morphinomimetics in different pain tests.

Dhasmana, K.M.; Banerjee, A.K.; Rating, W.

Dordrecht : M. Nijhoff; 1988.

New developments in biosciences : their implications for laboratory animal science : proceedings of the Third Symposium, Amsterdam, The Netherlands, 1-5 June 1987 / edited by Anton C. Beyneen and Henk A. Solleveld. p. 437-442; 1988. Includes references.

Language: English

Descriptors: Rats; Pain; Tests; Morphine; Drug effects

129 NAL Call. No.: 410.9 P94

The effect of mouse euthanasia technique on subsequent lymphocyte proliferation and cell mediated lympholysis assays.

Howard, H.L.; McLaughlin-Taylor, E.; Hill, R.L.

Cordova, Tenn. : American Association for Laboratory Animal Science; 1990 Sep. Laboratory animal science v. 40 (5): p. 510-514; 1990 Sep. Includes references.

Language: English

Descriptors: Mice; Euthanasia; Lymphocyte transformation; Cytotoxic T lymphocytes; Methoxyflurane; Pentobarbital; Carbon dioxide; Halothane; Dislocations

Abstract: The purpose of this study was to determine the effects that specific euthanasia methods have on mitogen induced lymphocyte proliferation (LP) and the induction of alloantigen specific cytolytic T-lymphocytes (CTL). Mice were euthanatized by cervical dislocation (CD), or anesthesia with methoxyflurane or pentobarbital followed by CD (M-CD or P-CD respectively), CO₂ overexposure (CO₂-OD) or halothane overexposure (H-OD). Mitogenic lymphoproliferation was increased in cells derived from mice euthanatized by M-CD and P-CD. In contrast, the cytolytic profile of CTL derived from mice euthanatized by P-CD, CO₂-OD and H-OD was decreased. The results of this study show that euthanasia techniques involving the use of methoxyflurane, pentobarbital, CO₂ and halothane affect in vitro lymphoproliferation and CTL function. We conclude that the method of euthanasia influences certain immunologic parameters and selection of a particular technique should be given careful consideration.

130 NAL Call. No.: 41.8 R312

Effect of posture and anaesthesia on the distribution of pulmonary perfusion and lung configuration in beagle dogs.

Clercx, C.; Brom, W.E. van den; Vries, H.W. de

London : British Veterinary Association; 1989 Nov.

Research in veterinary science v. 47 (3): p. 359-366. ill; 1989 Nov. Includes references.

Language: English

Descriptors: Dogs; Posture; Anesthesia; Lungs; Ratios; Blood flow

131 NAL Call. No.: SF774.C5

Effect of posture and anesthesia on the distribution of pulmonary perfusion

and the lung configuration in dogs.

Clercx, C.; Brom, W.E. van den; Vries, H.W. de

S.l. : s.n., 1988? :.; 1988.

Scintigraphical analyses of pulmonary function in dogs; Scintigrafische longfunctie analyse bij de hond; Analyses scintigraphiques de la fonction pulmonaire chez le chien / door Cecile Clercx. p. 52-66. ill; 1988. Dutch and French Summaries on pages 141-149. Includes references.

Language: English

Descriptors: Dogs; Radiorespirometry; Blood circulation; Radiography; Posture; Anesthesia; Lungs

132 NAL Call. No.: 442.8 J8222

The effect of pre-ovulatory anaesthesia on ovulation in laparoscopically inseminated domestic cats.

Howard, J.G.; Barone, M.A.; Donoghue, A.M.; Wildt, D.E.

Colchester : The Journal; 1992 Sep.

Journal of reproduction and fertility v. 96 (1): p. 175-186; 1992 Sep.

Includes references.

Language: English

Descriptors: Cats; Intrauterine insemination; Ovulation; Laparoscopy; Anesthesia; Preovulatory period; Pmsg; Hcg; Pregnancy; Conception rate; Embryonic development

133 NAL Call. No.: 41.8 J8292

Effect of thiopentone and propofol on lower oesophageal sphincter and barrier pressure in the dog.

Waterman, A.E.; Hashim, M.A.

London : British Veterinary Association; 1992 Nov.

The Journal of small animal practice v. 33 (11): p. 530-533; 1992 Nov.

Includes references.

Language: English

Descriptors: Dogs; Thiopental; Injectable anesthetics; Anesthesia; Esophageal sphincter; Internal pressure; Preanesthetic medication

134 NAL Call. No.: SF901.V47

The effect of tiletamine-zolazepam anesthesia on the response to intradermally injected histamine in cats.

Mueller, R.S.; Ihrke, P.J.; Kass, P.H.; Bettenay, S.V.

Oxford, U.K. : Pergamon Press, Inc; 1991.

Veterinary dermatology v. 2 (3/4): p. 119-123; 1991. Includes references.

Language: English

Descriptors: Cats; Anesthesia; Histamine; Injection

135 NAL Call. No.: SF601.A47

Effect of yohimbine on xylazine-induced diuresis in rats.

Mohammad, F.K.; Ahmed, F.A.; Al-Kassim, N.A.H.

Manhattan, Kan. : American Academy of Veterinary and Comparative Toxicology; 1989 Feb.

Veterinary and human toxicology v. 31 (1): p. 13-15; 1989 Feb. Includes references.

Language: English

Descriptors: Xylazine; Diuresis; Drug antagonism; Anesthetics; Rats

136 NAL Call. No.: QL55.A1L3

An effective combination of anaesthetics for 6-h experimentation in the golden Syrian hamster.

Reid, W.D.; Davies, C.; Pare, P.D.; Pardy, R.L.

London : Royal Society of Medicine Services; 1989 Apr.

Laboratory animals v. 23 (2): p. 156-162; 1989 Apr. Includes references.

Language: English

Descriptors: Golden hamster; Anesthetics; Drug combinations; Pentobarbital; Urethane; Chloralose; Anesthesia

Abstract: The anaesthetics described for use in hamsters to date are suitable for the performance of short-term experimentation. However, an anaesthetic regimen was required which would provide a stable preparation for 6 h and hence, a suitable combination was developed. In the first set of experiments, the effect of anaesthetics (chloralose, urethane, and pentobarbital) were examined alone and in combination on arterial blood measurements. In the second set of experiments the effect of the combination of anaesthetics on arterial blood measurements and minute ventilation was examined for up to 6 h. Chloralose, urethane and pentobarbital when used alone in the hamster were considered inadequate for our needs. Chloralose did not produce adequate surgical anaesthesia whereas urethane and pentobarbital resulted in marked respiratory depression. Urethane also produced a trend toward metabolic acidosis. In contrast, the combination of agents resulted in surgical anaesthesia and the arterial blood measurements were adequate. Further, the use of the combination of anaesthetics in hamsters resulted in a stable preparation where arterial blood measurements and minute ventilation were maintained in a good range for up to 6 h. The combination of chloralose, urethane and sodium pentobarbital in hamsters should prove useful in long-term non-recovery experimentation which requires early surgical intervention, minimal respiratory depression and an even depth of anaesthesia.

137 NAL Call. No.: 41.8 V641
Effects of acepromazine, pethidine and atropine premedication on lower oesophageal sphincter pressure and barrier pressure in anaesthetised cats.
Hashim, M.A.; Waterman, A.E.
London : The British Veterinary Association; 1993 Aug14.
The Veterinary record : journal of the British Veterinary Association v. 133 (7): p. 158-160; 1993 Aug14. Includes references.

Language: English

Descriptors: Cats; Preanesthetic medication; Esophageal sphincter

138 NAL Call. No.: 450 P697
Effects of agarwood extracts on the central nervous system in mice.
Okugawa, H.; Ueda, R.; Matsumoto, K.; Kawanishi, K.; Kato, A.
Stuttgart, W. Ger. : Georg Thieme Verlag; 1993 Feb.
Planta medica v. 59 (1): p. 32-36; 1993 Feb. Includes references.

Language: English

Descriptors: Aquilaria; Plant extracts; Mice; Central nervous system; Analgesics

139 NAL Call. No.: 41.8 R312
Effects of amitraz on nerve conduction and neuromuscular transmission in anaesthetised dogs.
Cullen, L.K.; Reynoldson, J.A.
London : British Veterinary Association; 1990 Mar.
Research in veterinary science v. 48 (2): p. 162-164; 1990 Mar. Includes references.

Language: English

Descriptors: Dogs; Amitraz; Ataxia; Adverse effects; Neurons; Conductivity; Velocity; Transmission

140 NAL Call. No.: SF911.V43
Effects of atropine and glycopyrrolate on esophageal, gastric, and tracheal pH in anesthetized dogs.
Roush, J.K.; Keene, B.W.; Eicker, S.W.; Bjorling, D.E.
Hagerstown, Md. : J.B. Lippincott Company; 1990 Jan.
Veterinary surgery v. 19 (1): p. 88-92. ill; 1990 Jan. Includes references.

Language: English

Descriptors: Dogs; Preanesthetic medication; Atropine; Ph; Esophagus; Stomach; Trachea; Heart rate; Anesthesia; Respiration rate

141 NAL Call. No.: QL55.A1L3
The effects of buprenorphine, nalbuphine and butorphanol alone or following halothane anaesthesia on food and water consumption and locomotor movement in rats.
Liles, J.H.; Flecknell, P.A.
London : Royal Society of Medicine Services; 1992 Jul.

Laboratory animals v. 26 (3): p. 180-189; 1992 Jul. Includes references.

Language: English

Descriptors: Rats; Anesthesia; Halothane; Analgesics; Locomotion; Food consumption; Water intake; Pain

Abstract: Locomotor activity and food and water consumption are potentially indices of post-operative pain in laboratory rodents, but it is important to establish whether these variables are directly affected by opioid analgesics or by halothane anaesthesia in normal rats. The effects of three opioids, buprenorphine, nalbuphine and butorphanol administered alone or following halothane anaesthesia, were studied in groups of normal non-operated adult Wistar rats. All 3 analgesics affected food intake and activity levels, but had little or no effect on water intake. Buprenorphine caused a significant elevation of activity levels and a reduction in food intake at clinical doses (0.01 and 0.05 mg/kg s/c. Nalbuphine (0.5, 1 and 2 mg/kg s/c) caused a reduction in food intake but had a smaller stimulatory effect on locomotion. Butorphanol (0.4 mg/kg s/c) caused a reduction in food intake and elevation in activity. These results suggest that water consumption is likely to be a more reliable variable to use when assessing post-operative pain and the efficacy of analgesics in rats.

142 NAL Call. No.: SF601.A47
Effects of chloramphenicol, cimetidine and phenobarbital on and tolerance to xylazine-ketamine anesthesia in dogs.
Nossaman, B.C.; Amouzadeh, H.R.; Sangiah, S.
Manhattan, Kan. : American Academy of Veterinary and Comparative Toxicology; 1990 Jun.
Veterinary and human toxicology v. 32 (3): p. 216-219; 1990 Jun. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Xylazine; Ketamine; Chloramphenicol; Cimetidine; Phenobarbital; Tolerances

143 NAL Call. No.: QL55.A1L3
The effects of different anaesthetic agents on the estimation of uterine vascular permeability in mice.
Milligan, S.R.; Edwards, C.
London : Royal Society of Medicine Services; 1988 Oct.
Laboratory animals v. 22 (4): p. 343-346; 1988 Oct. Includes references.

Language: English

Descriptors: Mice; Uterus; Anesthetics; Injections; Permeability; Blood vessels

Abstract: Vascular permeability in the uterus and other tissues of mice was assessed using the accumulation of 125I-human serum albumin 30 min after its intravenous injection. The anaesthetic agent employed for the 125I-albumin injection differentially affected the estimates of vascular permeability: intraperitoneal (i.p.) tribromoethanol of pentobarbitone sodium produced significantly higher values for the uterus and body wall than ether. The i.p. administration of either Saffan or pentobarbitone sodium reduced estimates of vascular permeability in the duodenum. These results emphasize the importance of the choosing a suitable anaesthetic agent in vascular studies of the uterus and other abdominal tissues.

144 NAL Call. No.: 410.9 P94
Effects of isoflurane anesthesia on glucose tolerance and insulin secretion in Yucatan minipigs.
Laber-Laird, K.; Smith, A.; Swindle, M.M.; Colwell, J.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1992 Dec.
Laboratory animal science v. 42 (6): p. 579-581; 1992 Dec. Includes references.

Language: English

Descriptors: Miniature pigs; Inhaled anesthetics

Abstract: Isoflurane's effect on intravenous glucose tolerance and insulin secretion was studied in six Yucatan minipigs. Unanesthetized animals, with previously placed indwelling venous catheters, were tested while resting comfortably in slings. The same animals were then retested during isoflurane anesthesia. Serum glucose and insulin concentrations were measured at

predetermined times in response to an intravenous bolus of dextrose. The glucose disappearance rate (k), baseline plasma insulin concentration, the area under the insulin response curve, and the insulinogenic index were significantly lower in the anesthetized animals than in controls. The results of this study indicate that anesthesia with isoflurane significantly alters the glucose/insulin response to an intravenous glucose tolerance test and, therefore, is unsuitable for studies when glucose tolerance is to be assessed.

145 NAL Call. No.: 450 Q22
Effects of *Jasminum officinale* flowers on the central nervous system of the mouse.
Elisha, E.E.; Al-Maliki, S.J.; Ibrahim, D.K.
Lisse : Swets & Zeitlinger; 1988 Dec.
International journal of crude drug research v. 26 (4): p. 221-227; 1988 Dec.
Includes references.

Language: English

Descriptors: Iraq; *Jasminum officinale*; Medicinal plants; Flowers; Plant extracts; Medicinal properties; Neurophysiology; Central nervous system; Aggressive behavior; Toxicity; Anesthesia; Convulsions; Inhibition; Mice

146 NAL Call. No.: 41.8 AM3A
Effects of mechanical and pharmacologic manipulations on portal pressure, central venous pressure, and heart rate in dogs.
Swalec, K.M.; Smeak, D.D.; Brown, J.
Schaumburg, Ill. : American Veterinary Medical Association; 1991 Aug.
American journal of veterinary research v. 52 (8): p. 1327-1335; 1991 Aug.
Includes references.

Language: English

Descriptors: Dogs; Internal pressure; Cardiovascular system; Heart rate; Surgery; Catheters; Portal vein; Blockage; Anesthesia; Bandages; Consciousness; Correlation; Propranolol

Abstract: Central venous pressure (CVP), portal pressure (PP), and heart rate (HR) were monitored in 6 female, sexually intact, middle-age Beagles during temporary portal vein obstruction, anesthetic recovery, abdominal bandaging, and propranolol administration. Intraoperative baseline PP was 7.3 mm of Hg (+/- 1.7 SD). Portal pressure was significantly increased throughout portal vein occlusion, but returned to baseline values 2 minutes after release of the ligature. Central venous pressure was significantly decreased throughout portal vein occlusion, but did not differ significantly from baseline values 3 minutes after release of the portal vein ligature. Portal pressure increased significantly (8 +/- 3.3 mm of Hg) over baseline values after application of an abdominal bandage; however, CVP did not change significantly. During postoperative monitoring, CVP and PP did not change significantly from respective 18-hour mean postoperative values in resting dogs. At 60 and 75 minutes after surgery, heart rate was significantly increased over the 18-hour mean. Portal pressure and CVP, respectively, were significantly increased over intraoperative baseline values in the first hour and the first 8 hours after surgery. Postoperative CVP and HR were significantly correlated. Individual measurements of PP in dogs that were abdominal pressing during barking or defecation were significantly increased (9 +/- 3 mm of Hg) above measurements taken after cessation of abdominal press. Portal pressure measurements in standing dogs decreased 7.5 +/- 2 mm of Hg, compared with measurements of the same dog in lateral recumbency. Central venous pressure was inaccurate in dogs performing abdominal press. Portal pressure did not decrease significantly from baseline after injection of propranolol (2 mg/kg, IV). Central venous pressure was significantly decreased at 2.5 and 3.0 hours after propranolol injection, and HR was significantly decreased from 1 to 3.5 hours after injection. Heart rate quickly

147 NAL Call. No.: QL55.A1L3
Effects of pentobarbital and ketamine-xylazine anaesthesia on somatosensory, brainstem auditory and peripheral sensory-motor responses in the rat.
Goss-Sampson, M.A.; Kriss, A.
London : Royal Society of Medicine Services; 1991 Oct.
Laboratory animals v. 25 (4): p. 360-366; 1991 Oct. Includes references.

Language: English

Descriptors: Rats; Anesthesia; Pentobarbital; Ketamine; Xylazine; Drug combinations; Bioelectric potential; Brain stem; Peripheral nerves; Electrophysiology

Abstract: Somatosensory, brainstem auditory evoked and peripheral sensory-motor responses were recorded in rats anaesthetized with either pentobarbital or a ketamine-xylazine combination. This was carried out in order to assess which of these agents degraded responses to a lesser extent and thus would be more suitable for monitoring experimental effects. Neither of the anaesthetic agents affected peripheral sensory or motor conduction, nor were there any interpeak latency changes of the early components of the brainstem auditory response. However, pentobarbital anaesthesia resulted in an increase in latency of the initial positive component of the somatosensory cortical evoked potential and attenuation of the following negative component. During the recovery stages of ketamine-xylazine anaesthesia the longer latency evoked potential components were observed to emerge.

148 NAL Call. No.: 410.9 P94
The effects of prolonged ketamine-xylazine intravenous infusion on arterial blood pH, blood gases, mean arterial blood pressure, heart and respiratory rates, rectal temperature and reflexes in the rabbit.
Wyatt, J.D.; Scott, R.A.W.; Richardson, M.E.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1989 Sep. Laboratory animal science v. 39 (5): p. 411-416; 1989 Sep. Includes references.

Language: English

Descriptors: Rabbits; Veins; Injections; Ketamine; Xylazine; Arteries; Blood ph; Gases; Blood pressure; Heart rate; Rectum; Temperatures; Reflexes

Abstract: The prolonged and safe maintenance of general anesthesia in rabbits with commonly used injectable agents is difficult. Protracted, stable anesthesia with short recovery time has been described in humans using continuous intravenous infusion of ketamine with or without sedatives, muscle relaxants and paralytics. This study evaluated the anesthetic plane achieved and respiratory and cardiovascular effects produced with a ketamine-xylazine intravenous infusion in New Zealand White rabbits. Ten female rabbits were anesthetized with intramuscularly administered ketamine hydrochloride (35 mg/kg) and xylazine hydrochloride (5 mg/kg) after the preanesthetic, baseline measurements of arterial blood pO₂, pCO₂ and pH and heart and respiratory rates were recorded. The above parameters as well as mean arterial blood pressure, righting, palpebral, pedal, and jaw reflexes were monitored ten minutes after the intramuscularly administered dosage and throughout 4 hours of infusion. Results showed moderate hypotension (21.2% deviation from normal, p less than 0.008) and profound hypoxemia (45% deviation from baseline, p less than 0.001) 10 minutes after the intramuscularly administered induction dosage. Then, the 4 hour infusion of ketamine (1 mg/minute) and xylazine (0.1 mg/minute) was started. Hypotension progressed (49.1% deviation from normal, p less than 0.008), but hypoxemia and hypercarbemia gradually improved with no resultant change (p greater than 0.1) in arterial pH. There was no significant change (p greater than 0.1) in respiratory rate but varying qualities of respiration were observed. Both mean arterial pO₂ and pCO₂ values returned to baseline within 20 minutes after completion of infusion. Heart rate and rectal temperature remained stable during the trial. The righting reflex was abolished in all rabbits throughout the study. The other reflexes that were lost initially slowly returned to most rabbits by the end of infusion. It was concluded that ketamine-xylazine co

149 NAL Call. No.: 41.8 AM3
Effects of sedation of intradermal skin testing in flea-allergic dogs.
Beale, K.M.; Kunkle, G.A.; Chalker, L.; Cannon, R.
Schaumburg, Ill. : The Association; 1990 Jan01.
Journal of the American Veterinary Medical Association v. 197 (7): p. 861-864; 1990 Jan01. Includes references.

Language: English

Descriptors: Dogs; Xylazine; Ketamine; Neuroleptics; Analgesics; Skin tests; Histamine; Allergies; Siphonaptera; Hypersensitivity

150 NAL Call. No.: SF601.A47
Effects of some hepatic microsomal enzyme inducers and inhibitors on xylazine-ketamine anesthesia.
Amouzadeh, H.R.; Sangiah, S.; Qualls, C.W. Jr
Manhattan, Kan. : American Academy of Veterinary and Comparative Toxicology; 1989 Dec.
Veterinary and human toxicology v. 31 (6): p. 532-534. ill; 1989 Dec. Includes references.

Language: English

Descriptors: Anesthesia; Xylazine; Ketamine; Enzymes; Inhibitors; Rats; Adverse effects

151 NAL Call. No.: SF601.A47
Effects of streptozotocin-induced diabetes on xylazine-ketamine anesthesia.
Amouzadeh, H.R.; Sangiah, S.
Manhattan, Kan. : American Academy of Veterinary and Comparative Toxicology; 1990 Feb.
Veterinary and human toxicology v. 32 (1): p. 19-22; 1990 Feb. Includes references.

Language: English

Descriptors: Xylazine; Ketamine; Anesthesia; Diabetes; Insulin; Rats; Blood glucose

152 NAL Call. No.: QL55.A1L3
The effects of surgical procedures, halothane anaesthesia and nalbuphine on locomotor activity and food and water consumption in rats.
Flecknell, P.A.; Liles, J.H.
London : Royal Society of Medicine Services; 1991 Jan.
Laboratory animals v. 25 (1): p. 50-60; 1991 Jan. Includes references.

Language: English

Descriptors: Rats; Surgery; Anesthesia; Halothane; Opium; Feed intake; Water intake; Locomotion

Abstract: A study was undertaken to investigate the effects of surgical procedures on food and water intake and spontaneous locomotor activity in laboratory rats. The influence of anaesthesia with halothane and administration of the opioid analgesic nalbuphine was investigated in normal rats and in animals which underwent either unilateral nephrectomy or jugular vein cannulation. Both nephrectomy and jugular cannulation were associated with a significant reduction in food and water consumption and a depression in locomotor activity levels. The reduction in activity following nephrectomy was reversed by administration of 6 doses of nalbuphine at 4 hourly intervals. Administration of nalbuphine at the same dose rate following halothane anaesthesia in normal rats resulted in a stimulation of activity. The prevention of the depressant effects of surgery by this opioid appears to be due to its stimulatory effect rather than a specific analgesic action. The degree of depression of food and water consumption after nephrectomy was significantly reduced following 6 doses of nalbuphine. This beneficial effect of repeated administration of an opioid may be related to the compound's analgesic action.

153 NAL Call. No.: SF911.V43
Effects of thiopental, ketamine, diazepam, xylazine, and nitrous oxide on EEG spike activity and convulsive behavior during enflurane anesthesia in atropinized cats: effect of increasing inhalant concentrations.
Hikasa, Y.; Kubota, M.; Takase, K.; Kakuta, T.; Ogasawara, S.
Hagerstown, Md. : J.B. Lippincott Company; 1993 Jul.
Veterinary surgery v. 22 (4): p. 311-317; 1993 Jul. Includes references.

Language: English

Descriptors: Cats; Anesthesia

154 NAL Call. No.: SF911.V43
Effects of thiopental, ketamine, diazepam, xylazine, and nitrous oxide on EEG spike activity and convulsive behavior during enflurane anesthesia in spontaneously breathing atropinized cats: effect of surgical depth.
Hikasa, Y.; Kojima, N.; Takase, K.; Ogasawara, S.
Hagerstown, Md. : J.B. Lippincott Company; 1993 Jul.
Veterinary surgery v. 22 (4): p. 318-325; 1993 Jul. Includes references.

Language: English

Descriptors: Cats; Anesthesia

155 NAL Call. No.: 41.8 V641
Effects of thiopentone, propofol, alphaxalone-alphadolone, ketamine and xylazine-ketamine on lower oesophageal sphincter pressure and barrier pressure in cats.

Hashim, M.A.; Waterman, A.E.
London : The Association; 1991 Aug17.
The Veterinary record : journal of the British Veterinary Association v. 129
(7): p. 137-139; 1991 Aug17. Includes references.

Language: English

Descriptors: Cats; Esophageal sphincter; Internal pressure; Thiopental;
Injectable anesthetics; Ketamine; Xylazine; Adverse effects

156 NAL Call. No.: QP1.P4
Effects of undernutrition during suckling on novelty-induced analgesia in
young and adult rats.
Vendite, D.; Rocha, J.B.T.; Souza, D.O.
Elmsford, N.Y. : Pergamon Press; 1990 Feb.
Physiology & behavior v. 47 (2): p. 393-395; 1990 Feb. Includes references.

Language: English

Descriptors: Rats; Suckling; Undernutrition; Analgesics; Protein energy
malnutrition

157 NAL Call. No.: QL55.A1L3
Effects of urethane, alphaxolone/alphadolone, or halothane with or without
neuromuscular blockade on survival during repeated episodes of global cerebral
ischaemia in the rat.
Holder, D.S.
London : Royal Society of Medicine Services; 1992 Apr.
Laboratory animals v. 26 (2): p. 107-113; 1992 Apr. Includes references.

Language: English

Descriptors: Rats; Urethane; Halothane; Anesthetics; Anesthesia; Blood
pressure; Survival; Ischemia; Muscle relaxants; Lung ventilation

Abstract: The effect of 4 anaesthetic regimes on blood pressure and survival
was investigated during repeated episodes of cerebral ischaemia in the rat
induced by diathermy of the vertebral arteries and reversible occlusion of the
carotid arteries. The best results were obtained with inspired halothane with
neuromuscular blockade and artificial ventilation, followed in order by
halothane, intravenous alphaxolone/alphadolone, and intraperitoneal urethane
with spontaneous ventilation.

158 NAL Call. No.: 410.9 P94
The effects of various anesthetics on tissue levels of
fructose-2,6-bisphosphate in rats.
Kasten, T.; Colliver, J.A.; Montrey, R.D.; Dunaway, G.A.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1990 Jul.
Laboratory animal science v. 40 (4): p. 399-401; 1990 Jul. Includes
references.

Language: English

Descriptors: Rats; Anesthetics; Fructose-bisphosphatase; Kidneys; Brain;
Heart; Muscles; Liver; Euthanasia

Abstract: We report that the short-term use of various anesthetic agents
prior to decapitation causes alteration of the levels of
fructose-2,6-bisphosphate in kidney, brain, heart, muscle, and liver. These
data indicate that even light anesthesia can not be used when levels of this
metabolite are to be determined. Also, it appears that the use of any of these
anesthetics can profoundly alter glucose utilization in many tissues.

159 NAL Call. No.: 41.8 AM3A
Effects of various sedatives on air cystometry in dogs.
Johnson, C.A.; Beemsterboer, J.M.; Gray, P.R.; Slusser, P.G.; Goullaud, E.J.
Schaumburg, Ill. : American Veterinary Medical Association; 1988 Sep.
American journal of veterinary research v. 49 (9): p. 1525-1528. ill; 1988
Sep. Includes references.

Language: English

Descriptors: Dogs; Drug combinations; Anesthetics; Diagnostic techniques;
Muscles; Adverse effects; Restraint of animals

Abstract: The effects of various sedatives on air cystometry in dogs were

investigated. Oxymorphone plus acepromazine, xylazine alone, atropine plus xylazine, and diazepam plus ketamine were compared for interference with the detrusor reflex, adequacy of patient restraint, and development of adverse side effects. Atropine plus xylazine was the best of the 4 drug combinations tested, because it had the least interference with the detrusor reflex, bradycardia did not develop, and excellent restraint was obtained. Pain and hematuria were common whenever intravesicular pressure exceeded 40 cm of H₂O, yet pressures that high were rarely necessary to stimulate the detrusor reflex.

160 NAL Call. No.: 410.9 P94
Effects of yohimbine on bradycardia and duration of recumbency in ketamine/xylazine anesthetized ferrets.
Sylvina, T.J.; Berman, N.G.; Fox, J.G.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1990 Mar. Laboratory animal science v. 40 (2): p. 178-182; 1990 Mar. Includes references.

Language: English

Descriptors: Ferrets; Ketamine; Xylazine; Yohimbine; Anesthesia; Heart rate; Duration; Intramuscular injection; Drug antagonism

Abstract: Eleven adult ferrets (*Mustela putorius furo*) were anesthetized with ketamine hydrochloride (25 mg/kg, IM) and xylazine hydrochloride (2 mg/kg, IM). Fifteen minutes post-ketamine/xylazine injection, ferrets were treated with yohimbine hydrochloride at a dose of 0.5 mg/kg, or an equal volume of physiologic saline, intramuscularly. Each ferret served as its own control by randomly receiving both treatments with a minimum interval of 2 weeks between treatments on any one ferret. At 15 minutes post-ketamine/xylazine injection, mean heart rate measurements for both treatment groups were 27% less than the mean heart rate measurement reported for unanesthetized ferrets. Intramuscular administration of yohimbine antagonized the ketamine/xylazine induced bradycardia in 10 of the 11 ferrets, ($p = 0.0001$). In yohimbine treated ferrets, an increase in mean heart rate measurement was noted 5 minutes after the intramuscular administration of yohimbine, and followed, over the next 15 minutes, by a progressive increase in mean heart rate. However, a corresponding decrease in mean heart rate measurement was observed in saline treated controls. Fifteen minutes after the injection of yohimbine, the mean heart rate measurement of yohimbine treated animals had increased to 194 beats per minute. This mean heart rate measurement is nearly 30% greater than the mean heart rate of 150 beats per minute measured at 15 minutes post-saline injection in saline treated controls. Also, yohimbine treatment significantly reduced duration of recumbency in 10 of 11 ferrets ($p = 0.0001$). Mean duration of recumbency for yohimbine treated ferrets was 41 +/- 9.7 minutes, whereas mean duration of recumbency for saline treated ferrets was determined to be 80 +/- 11.4 minutes. Intramuscular administration of yohimbine effectively reverses ketamine/xylazine induced bradycardia and significantly reduces duration of recumbency in ketamine/xylazine anesthetized ferrets.

161 NAL Call. No.: 410.9 P94
Efficacy of tribromoethanol anesthesia in mice.
Papaioannou, V.E.; Fox, J.G.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1993 Apr. Laboratory animal science v. 43 (2): p. 189-192; 1993 Apr. Paper presented at a conference entitled "The Scid Mouse in Biomedical and Agricultural Research," August 5-7, 1992, Guelph, Canada. Includes references.

Language: English

Descriptors: Mice; Anesthetics; Adverse effects

Abstract: We undertook a retrospective study to evaluate the efficacy, safety, and suitability of tribromoethanol (0.2 ml/10 g body weight of a 1.2% solution) as a surgical anesthetic in mice. We compiled records of embryo transfer during a 2.5-year period (1989-1991) and examined mice subjected to several other procedures requiring anesthesia. We documented a low rate of mortality and morbidity (< 1%) and the absence of any significant abdominal adhesions or inflammatory response. The rapid induction and recovery, adequate surgical plane of anesthesia, and lack of complications make this anesthetic effective and simple to use. Precautions necessary to prevent decomposition of the anesthetic, storage in the dark at 4 degrees C, were minimal.

162 NAL Call. No.: 41.8 AM3
Elective gonadectomy in dogs: A review.
Salmeri, K.R.; Olson, P.N.; Bloomberg, M.S.
Schaumburg, Ill. : The Association; 1991 Apr01.

Journal of the American Veterinary Medical Association v. 198 (7): p. 1183-1192; 1991 Apr01. Includes references.

Language: English

Descriptors: Dogs; Bitches; Castration; Ovariectomy; Age; Sex hormones; Biological development; Skeleton; Obesity; Animal behavior; Secondary sexual traits; Urinary tract; Anesthesia; Disease resistance

163 NAL Call. No.: SF915.J63
Enantioselectivity in the anaesthetic effect of ketamine in dogs.
Deleforge, J.; Davot, J.L.; Boisrame, B.; Delatour, P.
Oxford : Blackwell Scientific Publications; 1991 Dec.
Journal of veterinary pharmacology and therapeutics v. 14 (4): p. 418-420; 1991 Dec. Includes references.

Language: English

Descriptors: Dogs; Ketamine; Enantiomers; Anesthesia; Intravenous injection; Tolerance; Metabolites; Drug effects; Dosage

164 NAL Call. No.: SF910.P34A55 1992
Epidural opioid administration for postoperative pain relief in the dog.
Dodman, N.H.; Clark, G.H.; Court, M.H.; Fikes, L.L.; Boudrieau, R.J.
New York : Churchill Livingstone; 1992.
Animal pain / edited by Charles E. Short, Alan Van Poznak. p. 274-277, 310-311; 1992. Includes references.

Language: English

Descriptors: Dogs; Postoperative care; Pain; Analgesics; Local anesthesia; Morphine; Opioids; Clinical experience

165 NAL Call. No.: SF911.V43
Epidural vs. intramuscular oxymorphone analgesia after thoracotomy in dogs.
Popilskis, S.; Kohn, D.; Sanchez, J.A.; Gorman, P.
Hagerstown, Md. : J.B. Lippincott Company; 1991 Nov.
Veterinary surgery v. 20 (6): p. 462-467; 1991 Nov. Includes references.

Language: English

Descriptors: Dogs; Thorax; Surgical operations; Pain; Analgesics; Conduction anesthesia; Intramuscular injection

166 NAL Call. No.: 410.9 P94
Evaluation of a combination of tiletamine and zolazepam as an anesthetic for ferrets.
Payton, A.J.; Pick, J.R.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1989 May.
Laboratory animal science v. 39 (3): p. 243-246; 1989 May. Includes references.

Language: English

Descriptors: Ferrets; Anesthesia; Anesthetics; Drug combinations; Evaluation; Safety

Abstract: A combination of equal parts by weight of tiletamine hydrochloride and zolazepam hydrochloride was evaluated clinically in 12 adult male ferrets. Two dosage levels of 12 mg/kg and 22 mg/kg were evaluated. Both doses produced excellent immobilization, the length of which was dose dependent. However, only the higher dose consistently produced good muscle relaxation. Excessive pain upon injection was not noted nor was residual lameness evident. Electrocardiographically, notching of the QRS complex was noted on both doses. Anesthesia with poor analgesia occurred at the lower dose, while ferrets receiving the higher dose showed more variability in the degree of analgesia. It was concluded that this combination administered intramuscularly provided excellent immobilization, variable muscle relaxation and a generally smooth induction and recovery. At the higher dose, analgesia was adequate for minor surgical procedures of short duration.

167 NAL Call. No.: 41.8 AM3A
Evaluation of accuracy of pulse oximetry in dogs.
Jacobson, J.D.; Miller, M.W.; Matthews, N.S.; Hartsfield, S.M.; Knauer, K.W.
Schaumburg, Ill. : American Veterinary Medical Association; 1992 Apr.

American journal of veterinary research v. 53 (4): p. 537-540; 1992 Apr.
Includes references.

Language: English

Descriptors: Dogs; Blood; Hemoglobin; Oxygen; Estimation; Meters; Probes;
Accuracy; Carbon dioxide

Abstract: The accuracy of a pulse oximeter was evaluated over a wide range of arterial oxygen and carbon dioxide tensions, using 2 probes (finger probe and ear probe) and 2 monitoring sites (tongue and tail) in anesthetized dogs. The arterial oxygen saturation of hemoglobin (SaO₂) measured directly with a multiwavelength spectrophotometer was compared with saturation estimated by pulse oximetry (SpO₂). Linear regression analysis of the pooled data from 399 simultaneous measurements of SpO₂ and SaO₂ indicated a highly significant correlation of SpO₂ with SaO₂ ($r = 0.97$; P less than or equal to 0.0001). Although the mean difference (\pm SD) between SpO₂ and SaO₂ for pooled data was small ($-0.06 \pm 6.8\%$), SpO₂ tended to underestimate high SaO₂ values (greater than or equal to 70%) and to overestimate low SaO₂ values ($< 70\%$). When SaO₂ values were greater than or equal to 70%, the ear probe applied to the tail was less accurate (produced a significantly greater SpO₂-SaO₂ difference) than the ear probe on the tongue, or the finger probe at either site. When SaO₂ values were less than or equal to 50%, the finger probe applied at the tail was more accurate (produced significantly smaller SpO₂-SaO₂ differences) than the ear probe at either site. When SaO₂ values were less than or equal to 70%, high arterial carbon dioxide tension (greater than or equal to 60 mm of Hg) was associated with greater overestimation of SaO₂.

168 NAL Call. No.: SF601.C24
Evaluation of acepromazine/meperidine/atropine predication followed by thiopental anesthesia in the cat.
Dyson, D.H.; Allen, D.G.; Ingwersen, W.; Pascoe, P.J.
Ottawa : Canadian Veterinary Medical Association; 1988 Oct.
Canadian journal of veterinary research; Revue canadienne de recherche veterinaire v. 52 (4): p. 419-422; 1988 Oct. Includes references.

Language: English

Descriptors: Cat; Anesthesia; Atropine; Drug combinations; Injections;
Thiopental; Blood pressure; Heart rate; Gases

169 NAL Call. No.: 410.9 P94
An evaluation of analgesia associated with the immobility response in laboratory rabbits.
Danneman, P.J.; White, W.J.; Marshall, W.K.; Lang, C.M.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1988 Feb.
Laboratory animal science v. 38 (1): p. 51-57; 1988 Feb. Literature review.
Includes references.

Language: English

Descriptors: Rabbits; Analgesics; Restraint of animals; Immobilization

Abstract: The immobility response (IR) was studied in rabbits to evaluate its analgesic properties and reliability as a method of restraint. The participation of the endogenous opioid system in IR was studied indirectly by evaluating the effects of the narcotic antagonist naloxone on this phenomenon. Twenty-four adult New Zealand White rabbits were subjected to six noxious stimuli while restrained by IR and while restrained under control conditions. Testing on each animal was repeated under both conditions following the administration of naloxone. The noxious stimuli consisted of three levels of electric shock (10 volts, 30 volts, and 50 volts) applied to the shaved forearm, and mechanical pressure applied to the pinna, front toe, and hind toe. Withdrawal and changes in blood pressure, heart rate, and respiration were used as indicators of pain perception. Distress associated with noxious electrical and pressure stimulation was significantly reduced by IR, which suggested that the phenomenon does have a significant analgesic component. However, the rabbits showed wide variability in their susceptibility to IR induction, and even animals which did not withdraw in response to noxious stimulation under IR sometimes exhibited physiological changes suggestive of distress. Therefore, IR should not be considered as a reliable or humane alternative to analgesic/anesthetic drugs for laboratory rabbits. Naloxone had little effect on IR or IR-associated analgesia.

170 NAL Call. No.: 41.8 AM3A
Evaluation of atropine, glucagon, and metoclopramide for facilitation of

endoscopic intubation of the duodenum in dogs.
Matz, M.E.; Leib, M.S.; Monroe, W.E.; Davenport, D.J.; Nelson, L.P.; Kenny, J.E.
Schaumburg, Ill. : American Veterinary Medical Association; 1991 Dec.
American journal of veterinary research v. 52 (12): p. 1948-1950; 1991 Dec.
Includes references.

Language: English

Descriptors: Dogs; Duodenum; Endoscopy; Atropine; Glucagon; Drugs; Intestinal motility

Abstract: Modification of gastroduodenal motility has been proposed to aid endoscopic examination of the duodenum in dogs. The objective of this study was to evaluate the use of the following pharmacologic agents for facilitation of endoscopic intubation of the duodenum in 6 clinically normal dogs: metoclopramide HCl (0.2 mg/kg of body weight), atropine sulfate (0.045 mg/kg), glucagon (0.06 mg/kg), and isotonic saline solution. In a randomized, blinded, crossover design, the ease of endoscopic duodenal intubation was qualitatively scored by 3 endoscopists (in random order), using the following scale: immediate entry; rapid entry-moderate manipulation; difficult entry-multiple attempts; and no entry after 2 minutes. Anesthesia was induced with thiopental and maintained with halothane. The 4 agents were diluted to a fixed volume and randomly administered. Duodenal intubation was attempted 2 minutes after IV injection of 1 of the agents. Four endoscopic procedures (1 for each agent) were performed on each dog with a minimum of 5 days between each procedure. In this study, no agent facilitated endoscopic duodenal intubation at the dose used. Instead, atropine and metoclopramide made duodenal intubation significantly more difficult, compared with use of saline solution. Difference between intubation after administration of glucagon and saline solution was not seen. On the basis of our findings, the use of these agents for facilitating endoscopic duodenal intubation is not recommended. In addition, in this study, we found that experience in endoscopic intubation is an important factor in determining the ease of duodenal intubation.

171 NAL Call. No.: SF895.P76
An evaluation of five different sedative/anaesthetic regimens for H-reflex recording in the dog.
Malik, R.; Pearson, M.R.B.; Ho, S.
Santa Barbara, CA : Brillig Hill, Inc; 1992.
Progress in veterinary neurology v. 3 (3): p. 87-90; 1992. Includes references.

Language: English

Descriptors: Australia; Dogs; Reflexes; Anesthesia; Greyhounds; Fentanyl; Droperidol; Xylazine; Ketamine; Halothane

172 NAL Call. No.: 410.9 P94
Evaluation of Greyhound susceptibility to malignant hyperthermia using halothane-succinylcholine anesthesia and caffeine-halothane muscle contractures.
Cosgrove, S.B.; Eisele, P.H.; Martucci, R.W.; Gronert, G.A.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1992 Oct.
Laboratory animal science v. 42 (5): p. 482-485; 1992 Oct. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Susceptibility; Adverse effects

173 NAL Call. No.: 41.8 C81
Evaluation of ketamine-xylazine in Syrian hamsters.
Payton, A.J.; Forsythe, D.B.; Dixon, D.; Myers, P.H.; Clark, J.A.; Snipe, J.R.
Ithaca, N.Y. : Cornell Veterinarian, Inc; 1993 Apr.
Cornell veterinarian v. 83 (2): p. 153-161; 1993 Apr. Includes references.

Language: English

Descriptors: Hamsters; Anesthesia

174 NAL Call. No.: 41.8 V641
An evaluation of medetomidine/ketamine and other drug combinations for anaesthesia in cats.
Verstegen, J.; Fagetton, X.; Donnay, I.; Ectors, F.
London : The Association; 1991 Jan12.

The Veterinary record : journal of the British Veterinary Association v. 128 (2): p. 32-35; 1991 Jan12. Includes references.

Language: English

Descriptors: Cats; Anesthesia; Analgesics; Ketamine; Anesthetics; Drug combinations; Adverse effects

175 NAL Call. No.: SF895.P76
Evaluation of periosteal nociception in the cat.
Mandsager, R.E.; Raffe, M.R.
Santa Barbara, CA : Brillig Hill, Inc; 1991.
Progress in veterinary neurology v. 2 (4): p. 237-242; 1991. Includes references.

Language: English

Descriptors: Cats; Pain; Bone fractures; Experiments; Bones; Periosteum; Models; Analgesics

176 NAL Call. No.: 410.9 P94
Evaluation of telazol-xylazine as an anesthetic combination for use in Syrian hamsters.
Forsythe, D.B.; Payton, A.J.; Dixon, D.; Myers, P.H.; Clark, J.A.; Snipe, J.R.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1992 Oct.
Laboratory animal science v. 42 (5): p. 497-502; 1992 Oct. Includes references.

Language: English

Descriptors: Hamsters; Anesthesia; Anesthetics

177 NAL Call. No.: SF915.J63
Evaluation of the anti-inflammatory effects of a low dose of acetaminophen following surgery in dogs.
Mburu, D.N.
Oxford : Blackwell Scientific Publications; 1991 Mar.
Journal of veterinary pharmacology and therapeutics v. 14 (1): p. 109-111; 1991 Mar. Includes references.

Language: English

Descriptors: Dogs; Acetaminophen; Antiinflammatory agents; Postoperative care; Dosage; Swelling; Pain

178 NAL Call. No.: 41.8 AM3A
Evaluation of the Doppler ultrasonic method of measuring systolic arterial blood pressure in cats.
Grandy, J.L.; Dunlop, C.I.; Hodgson, D.S.; Curtis, C.R.; Chapman, P.L.
Schaumburg, Ill. : American Veterinary Medical Association; 1992 Jul.
American journal of veterinary research v. 53 (7): p. 1166-1169; 1992 Jul. Includes references.

Language: English

Descriptors: Cats; Blood pressure; Ultrasonic devices; Ultrasound; Arteries

Abstract: The accuracy of the Doppler technique for indirect systolic blood pressure measurement was assessed in 16 anesthetized cats. Eight cats were anesthetized with isoflurane and 8 were anesthetized with halothane. Anesthetic depth and mode of ventilation were varied to obtain a wide range of arterial blood pressure. A Doppler transducer was placed on the palmar surface of the left fore-limb over the common digital branch of the radial artery to detect blood flow, and a blood pressure monitoring cuff with a width 37% the limb circumference was placed half way between the elbow and the carpus. To enable direct arterial pressure measurements, the left femoral artery was catheterized and the blood pressure waveforms recorded simultaneously. Systolic blood pressure measured by use of the Doppler ultrasonic technique was significantly lower than that obtained from the femoral artery catheter. Using linear regression, we determined a clinically useful calibration adjustment for Doppler indirect blood pressure measurement in cats: femoral systolic pressure = Doppler systolic pressure + 14 mm of Hg.

179 NAL Call. No.: 410.9 P94
An evaluation of three intravenous anesthetic regimens in New Zealand rabbits.

Borkowski, G.L.; Danneman, P.J.; Russell, G.B.; Lang, C.M.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1990 May.
Laboratory animal science v. 40 (3): p. 270-276; 1990 May. Includes
references.

Language: English

Descriptors: Rabbits; Injectable anesthetics; Ears; Anesthesia; Intravenous
injection; Heart rate; Respiration rate; Blood pressure; Body temperature;
Responses; Blood; Gases

Abstract: Intravenous anesthetics can be readily administered to rabbits
through the marginal ear vein. In this study, three intravenous anesthetic
protocols were evaluated in New Zealand White rabbits. The three anesthetic
regimens were: (a) pentobarbital (40 mg/kg); (b) ketamine-xylazine (25-5
mg/kg); (c) midazolam-xylazine-alfentanil (1-1-0.1 mg/kg). The anesthetics
were injected slowly over defined time intervals. Reactions to noxious stimuli
were determined before and after administration of the anesthetics.
Additionally, the effects of the anesthetic agents on the rabbit's
cardiopulmonary system were evaluated. Rabbits anesthetized with
midazolam-xylazine-alfentanil did not have a pedal withdrawal or ear pinch
reflex throughout the testing period. The ketamine-xylazine combination
produced a shorter duration of non-responsiveness to noxious stimuli. Rabbits
anesthetized with pentobarbital had the greatest variability in response to
noxious stimuli. Apnea occurred in at least one rabbit in each group. A side
effect unique to the midazolam-xylazine-alfentanil group was the occurrence of
opisthotonus or seizure activity during or shortly after the administration of
alfentanil. Hypotension, hypercapnia and respiratory acidosis were
characteristic of the cardiopulmonary effects of the anesthetics. When
choosing an anesthetic regimen for rabbits, intravenous infusion should be
considered as an option. Advantages include ease of administration,
possibility of redosing as required, and minimal requirements for equipment.
Disadvantages of intravenous anesthetic infusion in rabbits include potential
for lethal overdose and metabolic alterations after administration.

180 NAL Call. No.: SF911.V43
Evaluation of three midazolam-xylazine mixtures preliminary trials in dogs.
Tranquilli, W.J.; Gross, M.E.; Thurmon, J.C.; Benson, G.J.
Hagerstown, Md. : J.B. Lippincott Company; 1990 Mar.
Veterinary surgery v. 19 (2): p. 168-172; 1990 Mar. Includes references.

Language: English

Descriptors: Dogs; Benzodiazepines; Xylazine; Drug combinations; Yohimbine;
Drug antagonism; Narcotic antagonists; Anesthesia; Central nervous system

181 NAL Call. No.: SB298.J66
Evidence of the sedative effect of neroli oil, citronellal and phenylethyl
acetate on mice.
Jager, W.; Buchbauer, G.; Jirovetz, L.; Dietrich, H.; Plank, C.
Wheaton, Ill. : Allured Publishing Company; 1992 Jul.
Journal of essential oil research : JEOR v. 4 (4): p. 387-394; 1992 Jul.
Includes references.

Language: English

Descriptors: Citrus aurantium; Essential oils; Acetates; Linalool; Perfumery;
Inhalation; Blood serum; Mice; Volatile compounds; Anesthetics; Medicinal
properties

Abstract: The sedative effects of neroli oil, Citrus aurantium (L.) subsp.
aurantium, citronellal and phenylethyl acetate on mice were investigated in a
series of experimental procedures. Under standardized experimental conditions
the motility of female mice was reduced from arbitrarily graded 100% for
untreated animals to 34.73% by neroli oil, to 50.18% by citronellal and 54.94%
by phenylethyl acetate, respectively. In the serum of animals exposed for one
hour, the concentration of the fragrances was analyzed by GC/FID and found to
be 0.85 ng/mL for neroli oil, 2.53 ng/mL for citronellal and 5.35 ng/mL for
phenylethyl acetate.

182 NAL Call. No.: SF601.C24
Failure of sodium pentobarbital anesthesia to alter 1-desamino-8-D-arginine
vasopressin-induced elevations of plasma Factor VIII/von Willebrand factor in
normal dogs.
Johnstone, I.B.; Crane, S.
Ottawa : Canadian Veterinary Medical Association; 1988 Oct.
Canadian journal of veterinary research; Revue canadienne de recherche

veterinaire v. 52 (4): p. 416-418; 1988 Oct. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Pentobarbital; Vasopressins; Blood plasma

183

NAL Call. No.: QL55.A1L3

Fentanyl and medetomidine anaesthesia in the rat and its reversal using atipamazole and either nalbuphine or butorphanol.

Hu, C.; Flecknell, P.A.; Liles, J.H.

London : Royal Society of Medicine Services; 1992 Jan.

Laboratory animals v. 26 (1): p. 15-22; 1992 Jan. Includes references.

Language: English

Descriptors: Rats; Anesthesia; Fentanyl; Agonists; Antagonists; Opioids; Drug combinations

Abstract: The intraperitoneal injection of anaesthetic agents is a simple and convenient method of anaesthetizing rats. However, all of the anaesthetic combinations in current use which are administered by intraperitoneal injection produce prolonged sedation, and full recovery of consciousness may take several hours. Fentanyl, a micro agonist opioid, and medetomidine, an alpha 2-adrenoceptor agonist were mixed and administered as a single intraperitoneal injection. Combinations of 300 microgram/300 microgram/kg and 300 microgram/200 microgram/kg of fentanyl/medetomidine were shown to produce surgical anaesthesia in the rat. This anaesthetic regimen produced significant respiratory depression ($P < 0.01$) and animals did not regain their righting reflex until 193 ± 21 min (mean \pm 1 SD) after injection. Administration by intraperitoneal injection of atipamezole, a specific alpha 2-adrenoceptor antagonist (1 mg/kg) mixed with a micro antagonist/k agonist opioid (nalbuphine, 2 mg/kg or butorphanol 0.4 mg/kg), resulted in a rapid (< 8 min) reversal of anaesthesia and the associated respiratory depression, and apparent full recovery of consciousness.

184

NAL Call. No.: QL55.A1L3

Four methods for general anaesthesia in the rabbit: a comparative study.

Peeters, M.E.; Gil, D.; Teske, E.; Eyzenbach, V.; Brom, W.E. v.d.; Lumeij, J.T.

London : Royal Society of Medicine Services; 1988 Oct.

Laboratory animals v. 22 (4): p. 355-360; 1988 Oct. Includes references.

Language: English

Descriptors: Rabbits; Anesthesia; Anesthetics; Metabolism; Physiology

Abstract: The efficacy and safety of pentobarbitone, ketamine/xylazine, fentanyl/fluanisone/diazepam, and halothane/nitrous oxide anaesthesia were compared in 4 groups of six New Zealand White rabbits. Heart and respiratory rates, body temperature, reflexes, blood pressure and blood gases were measured. Pentobarbitone appeared to be unsuitable for anaesthesia in rabbits, as 5 of the 6 rabbits to whom it was administered, required artificial respiration or died. The combinations of ketamine/xylazine and fentanyl-fluanisone/diazepam both produced unpredictable levels of anaesthesia together with a substantial decline in arterial blood pressure and PO₂. Despite a severe drop in blood pressure (up to 37.5%), anaesthesia with halothane and nitrous oxide was found to be superior to the other anaesthetic agents.

185

NAL Call. No.: RS160.J6

From ethnobotanical uses of *Strychnos henningsii* to antiinflammatories, analgesics and antispasmodics.

Tits, M.; Damas, J.; Quetin-Leclercq, J.; Angenot, L.

Limerick : Elsevier Scientific Publishers; 1991 Sep.

Journal of ethno-pharmacology v. 34 (2/3): p. 261-267; 1991 Sep. Includes references.

Language: English

Descriptors: Africa; *Strychnos henningsii*; Traditional medicines; Ethnobotany; Antiinflammatory agents; Analgesics; Spasms; Pharmacology; Bark; Rats

Abstract: *Strychnos henningsii* Gilg is used in African traditional medicine for the treatment of various ailments, including rheumatism, gastrointestinal complaints and snake bites. Different preliminary pharmacological experiments are described. The results show that some of the reported folk medicinal applications of *S. henningsii* can be at least partially explained by the

presence of retuline-like alkaloids, whose use could lead to new antinociceptive (antiinflammatory and analgesic) and antispasmodic drugs.

186 NAL Call. No.: QP1.P4
Glycemic control of pain threshold in diabetic and control rats.
Lee, J.H.; McCarty, R.
Elmsford, N.Y. : Pergamon Press; 1990 Feb.
Physiology & behavior v. 47 (2): p. 225-230; 1990 Feb. Includes references.

Language: English

Descriptors: Glycemia; Pain; Rats; Experimental diabetes; Blood glucose; Alloxan; Nervous system diseases

187 NAL Call. No.: SF911.V43
Hemodynamic effects of atropine and glycopyrrolate in isoflurane-xylazine-anesthetized dogs.
Lemke, K.A.; Tranquilli, W.J.; Thurmon, J.C.; Benson, G.J.; Olson, W.A.
Hagerstown, Md. : J.B. Lippincott Company; 1993 Mar.
Veterinary surgery v. 22 (2): p. 163-169; 1993 Mar. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Drugs; Hemodynamics

188 NAL Call. No.: 41.8 AM3A
Hemodynamic effects of high-frequency oscillatory ventilation in halothane-anesthetized dogs.
Bednarski, R.M.; Muir, W.W. III
Schaumburg, Ill. : American Veterinary Medical Association; 1989 Jul.
American journal of veterinary research v. 50 (7): p. 1106-1109. ill; 1989 Jul. Includes references.

Language: English

Descriptors: Dogs; Male animals; Anesthesia; Halothane; Ventilation; Drug effects; Blood pressure; Heart output; Heart rate

Abstract: Hemodynamic effects of spontaneous ventilation, intermittent positive-pressure ventilation (IPPV), and high-frequency oscillatory ventilation (HFOV) were compared in 6 dogs during halothane anesthesia. Anesthesia was induced with IV thiamylal Na and was maintained with halothane (end-tidal concentration, 1.09%). During placement of catheters, dogs breathed spontaneously through a conventional semiclosed anesthesia circuit. Data were collected, and dogs were mechanically ventilated, using IPPV or HFOV in random order. Ventilation was adjusted to maintain PaCO₂ between 38 and 43 mm of Hg during IPPV and HFOV. Cardiac index, aortic blood pressure, and maximum rate of increase of left ventricular pressure were significantly (P less than 0.05) less during HFOV than during spontaneous ventilation, whereas right atrial and pulmonary artery pressure were significantly greater during HFOV than during spontaneous ventilation. During IPPV, only the maximum rate of increase of left ventricular pressure was significantly less than that during spontaneous ventilation.

189 NAL Call. No.: SF911.V43
Hemodynamic effects of intravenous midazolam-xylazine-butorphanol in dogs.
Gross, M.E.; Thurmon, J.C.; Benson, G.J.; Olson, W.A.
Hagerstown, Md. : J.B. Lippincott Company; 1990 Mar.
Veterinary surgery v. 19 (2): p. 173-180; 1990 Mar. Includes references.

Language: English

Descriptors: Dogs; Benzodiazepines; Xylazine; Drug combinations; Hemodynamics; Anesthesia

190 NAL Call. No.: SF778.J68
High-frequency jet ventilation in anesthetized, paralyzed dogs and cats via transtracheal and endotracheal tube routes.
Haskins, S.C.; Orima, H.; Yamamoto, Y.; Patz, J.D.
Santa Barbara, Calif. : Veterinary Practice Pub; 1991 Jul.
Journal of veterinary emergency and critical care v. 1 (2): p. 55-60; 1991 Jul. Includes references.

Language: English

Descriptors: Dogs; Cats; Lung ventilation; Veterinary equipment

191 NAL Call. No.: 41.8 AM3
Impedance cardiography by use of a spot-electrode array to track changes in cardiac output in anesthetized dogs.
Kiesler, T.W.; Voorhees III, W.D.; Wessale, J.L.; Pham, C.K.
Schaumburg, Ill. : The Association; 1990 Jun01.
Journal of the American Veterinary Medical Association v. 196 (11): p. 1804-1810. ill; 1990 Jun01. Includes references.

Language: English

Descriptors: Dogs; Electrocardiography; Heart output; Anesthesia; Thorax; Electrodes

192 NAL Call. No.: 410.9 P94
An improved method of endotracheal intubation in rabbits.
Bechtold, S.V.; Abrutyn, D.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1991 Dec.
Laboratory animal science v. 41 (6): p. 630-631; 1991 Dec. Includes references.

Language: English

Descriptors: Rabbits; Trachea; Tubes; Laboratory methods; Preanesthetic medication; Anesthesia

193 NAL Call. No.: 41.8 AM3
Increasing halothane concentration abolishes anesthesia-associated arrhythmias in cats and dogs.
Muir, W.W. III; Hubbell, J.A.E.; Flaherty, S.
Schaumburg, Ill. : The Association; 1988 Jun15.
Journal of the American Veterinary Medical Association v. 192 (12): p. 1730-1735. ill; 1988 Jun15. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Halothane; Heart diseases; Ventricles

194 NAL Call. No.: SF914.A53 1990
Induction techniques and maintenance systems for isoflurane in cats.
Sawyer, D.C.; Durham, R.A.; Striler, E.L.; Langham, M.
Columbia, Md. : American College of Laboratory Animal Medicine, 1990? :; 1990.
Anesthesia and analgesia in laboratory animals : proceedings -- 1990 Forum, American College of Laboratory Animal Medicine, Columbia Inn, Columbia, Maryland, May 3-6, 1990. p. 21-25; 1990. Includes references.

Language: English

Descriptors: Cats; Inhaled anesthetics

195 NAL Call. No.: 41.8 AM3A
Influence of sedative and anesthetic agents on intradermal skin test reactions in dogs.
Moriello, K.A.; Eicker, S.W.
Schaumburg, Ill. : American Veterinary Medical Association; 1991 Sep.
American journal of veterinary research v. 52 (9): p. 1484-1488; 1991 Sep. Includes references.

Language: English

Descriptors: Dogs; Anesthetics; Neuroleptics; Skin tests; Drug effects

Abstract: To determine the effects of 9 sedative/anesthetic drug protocols on intradermal skin testing, an experimental state of type-I hypersensitivity was created. Intradermal skin tests were performed on 6 dogs, using positive and negative controls and a series of tenfold dilutions of ASC-1 allergen prior to drug administration. Approximately 4 hours later, the dogs were given 1 of the following drugs: acepromazine (low dose and high dose); ketamine hydrochloride with diazepam; thiamylal; oxymorphone; halothane; methoxyflurane; or isoflurane. The intradermal skin test then was repeated, and was scored objectively and subjectively. Objective scores were unaffected by any of the drugs. Subjective scores were affected in that acepromazine decreased wheal size and the induration of the intradermal skin test reaction sites.

196 NAL Call. No.: SF910.5.V4
Injectable anaesthetic agents for cats.
Dyson, D.H.; Allen, D.G.
Stuttgart : F.K. Schattauer Publishers; 1992 Aug.
Veterinary and comparative orthopaedics and traumatology : V.C.O.T. v. 5 (3):
p. 128-130; 1992 Aug. Includes references.

Language: English

Descriptors: Cats; Anesthetics; Injectable anesthetics; Xylazine; Ketamine;
Thiopental; Pethidine; Diazepam; Benzodiazepines

197 NAL Call. No.: 41.8 R3224
Injectable anesthetic agents for cats.
Dyson, D.H.; Allen, D.G.
Ottawa : Canadian Veterinary Medical Association; 1991 May.
The Canadian veterinary journal v. 32 (5): p. 314-316; 1991 May. Includes
references.

Language: English

Descriptors: Cats; Injectable anesthetics; Anesthesia

198 NAL Call. No.: SF911.B56
Intraoperative or postoperative pain.
Pascoe, P.J.
Toronto : B.C. Decker, Inc; 1988.
Decision making in small animal soft tissue surgery / Allen G. Binnington,
Joanne R. Cockshutt. p. 186-187; 1988. Includes references.

Language: English

Descriptors: Dogs; Surgery; Pain; Treatment; Methoxyflurane; Analgesics

199 NAL Call. No.: SF915.J6 1988
Intrathecal and epidural anesthesia., 6th ed.
Booth, N.H.
Ames, Iowa : Iowa State University Press; 1988.
Veterinary pharmacology and therapeutics / edited by Nicholas H. Booth, Leslie
E. McDonald. p. 424-439. ill; 1988. Includes references.

Language: English

Descriptors: Cattle; Sheep; Goats; Pigs; Cat; Anesthesia; Spinal cord; Drugs;
Anesthetics; Injections; Pharmacodynamics

200 NAL Call. No.: 410.9 P94
Intravenous chloralose is a safe anesthetic for longitudinal use in beagle
puppies.
Grad, R.; Witten, M.L.; Quan, S.F.; McKelvie, D.H.; Lemen, R.J.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1988 Aug.
Laboratory animal science v. 38 (4): p. 422-425; 1988 Aug. Includes
references.

Language: English

Descriptors: Dogs; Pups; Anesthesia; Veins; Injections; Chloralose

Abstract: Chloralose is an intravenous anesthetic which preserves vagal and central baroreceptor reflexes, thus rendering it useful for physiologic research. However, chloralose is recommended for terminal experiments only, due to concerns relating to long-term toxicity. We investigated the safety of chloralose in longitudinal pulmonary function studies in beagle puppies. Twelve puppies received chloralose anesthesia repeatedly (8-12 times per dog) between the ages of 80 and 300 days. Constant anesthetic depth was maintained reliably throughout the course of the experiments. Recovery lasted approximately 4 hours in each experiment and occurred in four definable stages. Following recovery, the puppies exhibited normal health and growth as compared with other colony animals. There was no biochemical evidence of acute renal, hepatic, pancreatic or cardiac toxicity prior to and immediately after anesthesia, and no evidence of chronic toxicity following completion of the study protocol, after a total cumulative dose of 1.18 g/kg chloralose. These studies demonstrate that intravenous chloralose is a safe anesthetic for longitudinal use.

201 NAL Call. No.: 41.8 V641
Introduction of anaesthesia in dogs and cats with propofol.
Weaver, B.M.Q.; Raptopoulos, D.
London : The Association; 1990 Jun23.
The Veterinary record : journal of the British Veterinary Association v. 126
(25) AGL: p. 617-620; 1990 Jun23. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Anesthetics; Adverse effects

202 NAL Call. No.: SF911.V43
Introduction to the quantitative technique of closed circuit anesthesia in dogs.
Moens, Y.
Philadelphia, Pa. : J.B. Lippincott Co; 1988 Mar.
Veterinary surgery v. 17 (2): p. 98-104. ill; 1988 Mar. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Circuits; Quantitative techniques

203 NAL Call. No.: 410.9 P94
Ketamine/xylazine/butorphanol: a new anesthetic combination for rabbits.
Marini, R.P.; Avison, D.L.; Corning, B.F.; Lipman, N.S.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1992 Feb.
Laboratory animal science v. 42 (1): p. 57-62; 1992 Feb. Includes references.

Language: English

Descriptors: Rabbits; Anesthesia; Ketamine; Xylazine; Drug combinations; Neuroleptics; Opioids; Heart rate; Respiration rate; Blood pressure; Blood; Gases; Reflexes

Abstract: Ketamine is often used in combination with tranquilizers to produce surgical anesthesia in rabbits. While generally effective, there is considerable variation in the depth and duration of anesthesia achieved with ketamine combinations. Butorphanol is a mixed agonist-antagonist opioid that is widely used in a variety of other species. In this study, the commonly used ketamine (35 mg/kg)/xylazine (5 mg/kg) combination is compared with ketamine (35 mg/kg)/xylazine (5 mg/kg)/butorphanol (0.1 mg/kg). Rabbits were anesthetized on consecutive weeks with one of the two regimens. Physiologic parameters including heart rate, respiratory rate, blood pressure and arterial blood gases (pH, PO₂, PCO₂) were measured throughout anesthesia. Loss of palpebral, pedal and righting reflexes were recorded and reflexes were subsequently evaluated. The addition of butorphanol prolonged reflex loss to 140% (X = 68 min +/- 20 SEM) of control for palpebral reflex; 506% (X = 52 min +/- 18 SEM) of control for pedal reflex; and 159% (X = 128 min +/- 21 SEM) of control for righting reflex. Addition of butorphanol to ketamine/ xylazine resulted in mild alterations in the physiologic changes traditionally associated with this combination. Butorphanol can be safely added to the ketamine/xylazine combination in rabbits and results in moderate increases in the duration of reflex loss.

204 NAL Call. No.: QL55.A1L3
Ketamine-xylazine anaesthesia in the Djungarian hamster (Phodopus sungorus).
Curl, J.L.
London : Royal Society of Medicine Services; 1988 Oct.
Laboratory animals v. 22 (4): p. 309-312; 1988 Oct. Includes references.

Language: English

Descriptors: Hamsters; Strains; Anesthesia; Ketamine; Xylazine; Drug combinations; Photoperiod

Abstract: The combination of ketamine-xylazine was assessed as a surgical anaesthetic in Djungarian hamsters acclimatized to both long (16 h light : 8 h dark) and short (8 h light : 16 h dark) photoperiods. It was concluded that 50 mg/kg of ketamine with 10 mg/kg of xylazine or 100 mg/kg of ketamine with 5-10 mg/kg of xylazine when given together by intraperitoneal injection was a satisfactory general anaesthetic. Two hundred mg/kg of ketamine with 10 mg/kg xylazine caused death in 13 of 24 animals. There were no clinically significant effects on depth of anaesthesia due to photoperiod.

205 NAL Call. No.: 41.8 AM3A
Kinetics of uptake and effects of topical indomethacin application on protein concentration in the aqueous humor of dogs.
Spiess, B.M.; Mathis, G.A.; Franson, K.L.; Leber, A.
Schaumburg, Ill. : American Veterinary Medical Association; 1991 Jul.
American journal of veterinary research v. 52 (7): p. 1159-1163; 1991 Jul.
Includes references.

Language: English

Descriptors: Dogs; Indometacin; Topical application; Body fluids; Eyes; Protein content; Pharmacokinetics

Abstract: The pharmacokinetic properties of indomethacin and its effects on aqueous protein values were studied in 15 clinically normal Beagles. The dogs were treated every 6 hours with 1% indomethacin suspension in 1 eye, with the other eye serving as a control. After 24 hours, the dogs were anesthetized and samples of aqueous humor (AH) were drawn by aqueocentesis at 0, 15, 30, 60, and 90 minutes after initial paracentesis. Additional samples were drawn at the time of euthanasia, 180 (6 dogs) and 360 minutes (9 dogs) minutes after initial paracentesis. Blood samples were obtained at each treatment and at each aqueocentesis. The eyes were enucleated after dogs were euthanized. Aqueous protein concentrations and indomethacin concentrations in AH, plasma, and different ocular tissues were determined. Topical indomethacin administration had no effect on baseline protein concentrations of AH. It reduced protein concentrations in AH significantly at all times after initial aqueocentesis. This reduction was approximately 30%. Indomethacin in the AH is mostly protein-bound. Concentrations were 350 ng/ml in primary AH and 1,305 ng/ml in secondary AH, 90 minutes after initial aqueocentesis. Free-drug concentrations were relatively constant at about 220 ng/ml. Indomethacin administered topically is readily absorbed by the ocular adnexae, reaching a steady-state concentration of 25 ng/ml in blood plasma 18 hours after the start of treatment. Plasma concentrations were 50 times lower than therapeutically effective concentrations. High indomethacin concentrations were found in the cornea only. Low concentrations were found in the iris and ciliary body, the lens, and in the choroid. On the basis of our findings, we conclude that topically administered indomethacin is effective in reducing protein concentrations in secondary AH and is rapidly eliminated from the eye.

206 NAL Call. No.: SF774.C5
Lack of gravitational influence on distribution of regional and intraregional inhalation-to-perfusion mismatching in anesthetized dogs.
Clercx, C.; Brom, W.E. van den; Vries, H.W. de
S.l. : s.n., 1988? :.; 1988.
Scintigraphical analyses of pulmonary function in dogs; Scintigrafische longfunctie analyse bij de hond; Analyses scintigraphiques de la fonction pulmonaire chez le chien / door Cecile Clercx. p. 40-50; 1988. Dutch and French Summaries on pages 141-149. Includes references.

Language: English

Descriptors: Dogs; Radiorespirometry; Blood circulation; Radiography; Lungs; Respiration; Ventilation; Gravity

207 NAL Call. No.: 410.9 P94
Long term anesthesia using a continuous infusion guaifenesin, ketamine, and xylazine in cats.
Brown, M.J.; McCarthy, T.J.; Bennett, B.T.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1991 Jan.
Laboratory animal science v. 41 (1): p. 46-50; 1991 Jan. Includes references.

Language: English

Descriptors: Cats; Anesthesia; Guaifenesin; Ketamine; Xylazine; Drug combinations; Safety; Dosage; Duration

Abstract: Cats (*Felis catus*) were anesthetized with a solution containing guaifenesin, ketamine and xylazine (GKX) in 0.9% saline. Anesthesia was induced by intravenous (IV) injection and was maintained for 6 hours by IV infusion. Heart rate, respiratory rate and PvO₂ did not change significantly during the 6 hour monitoring period and remained consistently within the published normal ranges for cats. Although the PvCO₂ did not change significantly, many values were abnormal. Venous pH decreased to slightly below normal values. Lead II ECG tracings showed no abnormalities. Loss of response to pedal pinch and jam, tone indicates maintenance of a surgical plane of anesthesia and adequate muscle relaxation throughout the 6 hour anesthetic period. Cats exhibited voluntary motor movement and were in sternal recumbency in just over 2 hours and were showing no residual clinical effects

of the anesthesia 16 hours later. Although a transient mild acidosis was observed, we conclude that GKX provides a safe, effective and easily administered anesthetic regime for cats for periods up to 6 hours.

208 NAL Call. No.: QL55.A1L3
Long-term anaesthesia with alfentanil and midazolam for lung transplantation in the dog.
Flecknell, P.A.; Hooper, T.L.; Fetherstony, G.; Locke, T.J.; McGregor, C.G.A.
London : Royal Society of Medicine Services; 1989 Jul.
Laboratory animals v. 23 (3): p. 278-284; 1989 Jul. Includes references.

Language: English

Descriptors: Dogs; Anesthetics; Lungs; Transplantation; Anesthesia; Cardiovascular system; Cardiac output; Blood pressure

Abstract: An anaesthetic regime was developed for lung transplantation in the dog using a continuous infusion of alfentanil and midazolam. This combination of agents provided excellent analgesia and also produced loss of consciousness. Cardiovascular stability was well maintained over a 24-h period of anaesthesia following lung transplantation. Although no animals were allowed to recover from anaesthesia in the present series, the regime described is likely to be suitable for recovery anaesthesia, particularly since both of the agents used can be reversed with specific antagonists.

209 NAL Call. No.: 410.9 P94
A low cost tail-cuff method for the estimation of mean arterial pressure in conscious rats.
Zatz, R.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1990 Mar.
Laboratory animal science v. 40 (2): p. 198-201. ill; 1990 Mar. Includes references.

Language: English

Descriptors: Rats; Blood pressure; Estimation; Tail; Veterinary equipment

Abstract: Methods utilized in the determination of systolic tail-cuff pressure (TCP) in awake rats are aimed at detecting the earliest possible tail pulsations as the cuff is deflated. In the method described in this study, a small, inexpensive electret microphone is used as a sensor, connected to the tail by a piece of rubber tubing. This design provides selective attenuation of tail pulsations appearing as the cuff is deflated between systolic and mean arterial pressures. In this manner, tail pulsations are detected only when the cuff pressure is lowered below the mean arterial pressure, thus providing an estimation of the latter. The method was validated in prewarmed awake normotensive and hypertensive rats by simultaneous comparison with directly measured systolic and mean pressures or with a conventional tail-cuff method. Validation studies were also carried out in anesthetized rats undergoing wide variations of arterial pressure by parenteral injections of norepinephrine or nitroprusside. Close agreement was observed between TCP determined with this method and directly obtained mean, but not systolic, pressure. Thus, the method described in this study constitutes an inexpensive alternative to conventional tail-cuff methods. Mean, rather than systolic pressure, appears to be evaluated in the conscious rat by employing this method.

210 NAL Call. No.: 41.8 AM3
Malignant hyperthermia in dogs.
Nelson, T.E.
Schaumburg, Ill. : The Association; 1991 Mar15.
Journal of the American Veterinary Medical Association v. 198 (6): p. 989-994; 1991 Mar15. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Adverse effects; Hyperthermia; Susceptibility; Muscles; Halothane; Caffeine; Progeny; Calcium ions

211 NAL Call. No.: 410.9 P94
A mask system for halothane anesthesia of guinea pigs.
Franz, D.R.; Dixon, R.S.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1988 Dec.
Laboratory animal science v. 38 (6): p. 743-744. ill; 1988 Dec. Includes references.

Language: English

Descriptors: Guinea pigs; Anesthesia; Halothane; Apparatus

212 NAL Call. No.: 41.8 AM3A
Measurements of left and right ventricular pressures and their derivatives by transcutaneous puncture in rats.
Hamlin, R.L.
Schaumburg, Ill. : American Veterinary Medical Association; 1992 Jan.
American journal of veterinary research v. 53 (1): p. 34-35; 1992 Jan.
Includes references.

Language: English

Descriptors: Rats; Ventricles; Blood pressure; Determination; Recordings

Abstract: Eighteen rats were anesthetized with xylazine/ketamine and placed in right lateral recumbency, and a small incision was made in the skin of the left hemithorax. A 21-gauge, 1-inch, short-beveled hypodermic needle, attached directly to a pressure transducer filled with degassed saline solution, was advanced through the incision into the left ventricle and then advanced through the septum into the right ventricle. High-fidelity tracings of right and left ventricular pressures and their derivatives were obtained through this approach in 13 rats. In 5 rats, measurements of right ventricular pressures were obtained by additional right ventricular puncture through the incision in the left hemithorax. Right and left ventricular pressures were recorded on single occasions in 18 rats, twice at 2-week intervals in 6 rats, and 3 times at 2-week intervals in 3 rats. Minimal hemopericardium was observed, but most rats had evidence of hemorrhage on the visceral pericardium. Left and right ventricular pressures can be measured rapidly, safely, and repeatedly in anesthetized rats by this method.

213 NAL Call. No.: 41.8 M69
Measuring how dogs respond to Telazol-xylazine combinations.
Sanders, E.; Short, C.E.; Keegan, R.; Tracy, C.H.
Lenexa, Kan. : Veterinary Medicine Publishing Company; 1989 Feb.
Veterinary medicine v. 84 (2): p. 222-227; 1989 Feb. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Anesthetics; Xylazine; Neuroleptics; Drug combinations; Blood pressure; Heart rate; Respiration; Duration

214 NAL Call. No.: 41.8 J8292
Medetomidine, a new sedative-analgesic for use in the dog and its reversal with atipamezole.
Clarke, K.W.; England, G.C.W.
London : British Small Animal Veterinary Association; 1989 Jun.
The Journal of small animal practice v. 30 (6): p. 343-345, 347-348; 1989 Jun.
Includes references.

Language: English

Descriptors: Dogs; Analgesics; Neuroleptics; Xylazine; Detoxicants; Adverse effects

215 NAL Call. No.: 41.8 J8292
Medetomidine as a premedicant in dogs and its reversal by atipamezole.
Young, L.E.; Brearley, J.C.; Richards, D.L.S.; Bartram, D.H.; Jones, R.S.
London : British Small Animal Veterinary Association; 1990 Nov.
The Journal of small animal practice v. 31 (11): p. 554-556, 557-559; 1990 Nov. Includes references.

Language: English

Descriptors: Dogs; Preanesthetic medication; Halothane; Nitrous oxide; Thiopental; Anesthesia; Narcotic antagonists; Recovery

216 NAL Call. No.: 41.8 V641
Medetomidine-butorphanol-midazolam for anaesthesia in dogs and its reversal by atipamezole.
Verstegen, J.; Petcho, A.
London : The Association; 1993 Apr03.
The Veterinary record : journal of the British Veterinary Association v. 132 (14): p. 353-357; 1993 Apr03. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Narcotic antagonists

217 NAL Call. No.: 41.8 AM3A
Median effective dosage of propofol for induction of anesthesia in dogs.
Watney, G.C.G.; Pablo, L.S.
Schaumburg, Ill. : American Veterinary Medical Association; 1992 Dec.
American journal of veterinary research v. 53 (12): p. 2320-2322; 1992 Dec.
Includes references.

Language: English

Descriptors: Dogs; Anesthetics; Dosage

Abstract: The median effective dosage (ED50) of propofol for induction of anesthesia was determined in 25 dogs premedicated with acepromazine, 0.05 mg/kg of body weight, and in 35 unpremedicated dogs. The ED50 was found to be 2.2 mg/kg in premedicated dogs and was 3.8 mg/kg in unpremedicated dogs. The mean +/- SD total dosage of propofol required to induce anesthesia in premedicated animals was 2.8 +/- 0.5 mg/kg and was 4.7 +/- 1.3 mg/kg in unpremedicated animals. Signs of excitement were observed in 5 of the unpremedicated dogs, but in none of those that were premedicated.

218 NAL Call. No.: 41.8 V643
The medical implications of canine obesity and their relevance to anaesthesia.
Clutton, R.E.
London : Bailliere Tindall; 1988 Jan.
British veterinary journal v. 144 (1): p. 21-28; 1988 Jan. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Obesity; Etiology

219 NAL Call. No.: 41.8 AM3
Methemoglobinemia associated with dermal application of benzocaine cream in a cat.
Wilkie, D.A.; Kirby, R.
Schaumburg, Ill. : The Association; 1988 Jan01.
Journal of the American Veterinary Medical Association v. 192 (1): p. 85-86; 1988 Jan01. Includes references.

Language: English

Descriptors: Cat; Anesthetics; Topical application; Adverse effects; Methemoglobinemia

220 NAL Call. No.: SF910.P34A55 1992
A method for assessing noxious stimuli in anesthetized dogs.
Moore, M.P.; Greene, S.A.; Keegan, R.D.
New York : Churchill Livingstone; 1992.
Animal pain / edited by Charles E. Short, Alan Van Poznak. p. 439-446, 477; 1992. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Electroencephalography

221 NAL Call. No.: QL55.A1L3
A method for hyperthermic treatment of mouse skin.
Gragtmans, N.J.; Jevcak, J.J.; Mitchel, R.E.J.; Morrison, D.P.; McCann, R.A.; Murphy, J.W.
London : Royal Society of Medicine Services; 1992 Apr.
Laboratory animals v. 26 (2): p. 122-126; 1992 Apr. Includes references.

Language: English

Descriptors: Mice; Skin; Animal models; Disease models; Hyperthermia; Carcinogenesis; Promoters; Carcinogens

Abstract: The Sencar mouse skin system is a recognized model for tumour initiation, promotion and progression. The current interest in the effect of hyperthermia on this multi-stage tumorigenesis model prompted the need for a technique to accurately heat a section of dorsal skin of a large number of

mice for 30 min per heat treatment. In the technique described, experimental groups of 25 female Sencar mice were treated at 7-8 weeks of age under general methoxyflurane anaesthesia. Treatment consisted of the application of initiating and/or promoting agents with or without hyperthermia. For hyperthermic skin treatments, each group of mice was placed onto a platform in a water bath so that the dorsal skin of the mice was in contact with 44 degrees C temperature controlled water.

222 NAL Call. No.: SF915.J63
Method of objective assessment of analgesia in the dog.
Hamlin, R.L.; Bednarski, L.S.; Schuler, C.J.; Weldy, P.L.; Cohen, R.B.
Oxford : Blackwell Scientific Publications; 1988 Jun.
Journal of veterinary pharmacology and therapeutics v. 11 (2): p. 215-220.
ill; 1988 Jun. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Xylazine; Dosage effect

223 NAL Call. No.: QL55.A1L3
A modified anaesthetic induction chamber for rats.
Gwynne, B.J.; Wallace, J.
London : Royal Society of Medicine Services; 1992 Jul.
Laboratory animals v. 26 (3): p. 163-166; 1992 Jul. Includes references.

Language: English

Descriptors: Rats; Anesthesia; Laboratory equipment; Halothane; Oxygen; Waste gases

Abstract: The anaesthetic induction chamber for rats described in this paper has been designed for use in conjunction with a controlled delivery of halothane/O₂ mixture and an anaesthetic scavenger system. Using this system rapid induction of anaesthesia is achieved using low levels of anaesthetic vapour without risk to the operator.

224 NAL Call. No.: QL55.A1L3
Monitoring of blood gas parameters and acid-base balance of pregnant and non-pregnant rabbits (*Oryctolagus cuniculus*) in routine experimental conditions.
Barzago, M.M.; Bortolotti, A.; Omarini, D.; Aramayona, J.J.; Bonati, M.
London : Royal Society of Medicine Services; 1992 Apr.
Laboratory animals v. 26 (2): p. 73-79; 1992 Apr. Includes references.

Language: English

Descriptors: Rabbits; Pregnancy; Blood; Gases; Acid base equilibrium; Anesthesia

Abstract: Blood gas parameters and acid-base balance values were determined in adult pregnant New Zealand rabbits (*Oryctolagus cuniculus*) in standard laboratory housing conditions and during anaesthesia with an association of ketamine-chlorpromazine, administered before surgical procedures. All the variables were also studied in adult non-pregnant female, used as controls. No differences in pH, sO₂c, O₂Hb, COHb, sO₂m and a-vDO₂ were found between pregnant and non-pregnant rabbits in physiological conditions and during anaesthesia. Ketamine-chlorpromazine and pregnancy seemed to change the other parameters used to assess the acid-base balance and the oxygenation conditions. Anaesthesia affected only Hb, O₂Ct, O₂Cap, C₂O₂ and P₅₀. The additive effect of pregnancy and anaesthesia modified pCO₂, PO₂, HCO₃⁻, TCO₂, BEb, SBC, BEecf, A-aDO₂, RI, MetHb, RHb, CaO₂ and CvO₂. The patterns described are close to those of other species, suggesting the New Zealand rabbit might be a reliable animal model for monitoring selected variables.

225 NAL Call. No.: 41.8 J8292
Muscle relaxants in canine anaesthesia. 1. History and the drugs.
Jones, R.S.
London : British Small Animal Veterinary Association; 1992 Aug.
The Journal of small animal practice v. 33 (8): p. 371-375; 1992 Aug.
Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Muscle relaxants; History; Suxamethonium

226 NAL Call. No.: 41.8 J8292
Muscle relaxants in canine anaesthesia 2: Clinical application.
Jones, R.S.
London : British Small Animal Veterinary Association; 1992 Sep.
The Journal of small animal practice v. 33 (9): p. 423-429; 1992 Sep.
Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Muscle relaxants

227 NAL Call. No.: RS160.J6
Myrcene mimics the peripheral analgesic activity of lemongrass tea.
Lorenzetti, B.B.; Souza, G.E.P.; Sarti, S.J.; Filho, D.S.; Ferreira, S.H.
Limerick : Elsevier Scientific Publishers; 1991 Aug.
Journal of ethno-pharmacology v. 34 (1): p. 43-48; 1991 Aug. Includes
references.

Language: English

Descriptors: Cymbopogon citratus; Myrcene; Analgesics; Essential oils;
Chromatography; Folk medicine; Rats

Abstract: Oral administration of a infusion of lemongrass (*Cymbopogon citratus*) fresh leaves to rats produced a dose-dependent analgesia for the hyperalgesia induced by subplantar injections of either carrageenin or prostaglandin E₂, but did not affect that induced by dibutyryl cyclic AMP. These results indicate a peripheral site of action which was confirmed with the essential oil obtained by steam distillation of the leaves. Silica gel column fractionation of the essential oil allowed the identification of myrcene as the major analgesic component in the oil. Identification of the components was made by thin-layer chromatography and checked by mass spectrometry. The peripheral analgesic effect of myrcene was confirmed by testing a standard commercial preparation on the hyperalgesia induced by prostaglandin in the rat paw test and upon the contortions induced by intraperitoneal injections of iloprost in mice. In contrast to the central analgesic effect of morphine, myrcene did not cause tolerance on repeated injection in rats. This analgesic activity supports the use of lemongrass tea as a "sedative" in folk medicine. Terpenes such as myrcene may constitute a lead for the development of new peripheral analgesics with a profile of action different from that of the aspirin-like drugs.

228 NAL Call. No.: SF911.B56
Neck pain.
Parent, J.; Cochrane, S.M.
Toronto : B.C. Decker, Inc; 1988.
Decision making in small animal soft tissue surgery / Allen G. Binnington,
Joanne R. Cockshutt. p. 138-139; 1988. Includes references.

Language: English

Descriptors: Dogs; Neck; Pain; Dislocations; Diagnosis; Cerebrospinal fluid;
Biopsy; Resection

229 NAL Call. No.: 41.8 R3224
Nephrotoxicity in dogs associated with methoxyflurane anesthesia and flunixin meglumine analgesia.
Mathews, K.A.; Doherty, T.; Dyson, D.H.; Wilcock, B.; Valliant, A.
Ottawa : Canadian Veterinary Medical Association; 1990 Nov.
The Canadian veterinary journal v. 31 (11): p. 766-771; 1990 Nov. Includes
references.

Language: English

Descriptors: Dogs; Methoxyflurane; Flunixin; Anesthesia; Drug combinations;
Adverse effects; Kidney diseases; Uremia; Renal function

230 NAL Call. No.: 410.9 P94
Nephrotoxicity of tiletamine in New Zealand white rabbits.
Doerning, B.J.; Brammer, D.W.; Chrisp, C.E.; Rush, H.G.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1992 Jun.
Laboratory animal science v. 42 (3): p. 267-269; 1992 Jun. Includes
references.

Language: English

Descriptors: Rabbits; Injectable anesthetics; Muscle relaxants; Kidneys; Drug toxicity; Dosage; Histopathology; Intramuscular injection

Abstract: Tiletamine and zolazepam, the two constituents of Telazol, were evaluated independently to determine which agent was responsible for the nephrotoxicity caused by Telazol in New Zealand White rabbits. Five rabbits were injected i.m. with 32 mg/kg of tiletamine, four animals received 7.5 mg/kg of tiletamine, and five rabbits received 32 mg/kg of zolazepam. Urinalysis was performed and blood urea nitrogen and serum creatinine were monitored for 7 days postinjection. In all five rabbits injected with the high dose of tiletamine, blood urea nitrogen and creatinine rose by 3 days postinjection and increased steadily throughout the week. By 4 days postinjection, urine protein and glucose were elevated and cellular and protein casts were present. No serum chemistry or urine abnormalities were detected in rabbits receiving low doses of tiletamine, zolazepam, or in the four control rabbits. All animals were euthanized and necropsied at 7 days postinjection. Histopathology showed severe renal tubular necrosis in all five rabbits injected with 32 mg/kg tiletamine. Mild nephrosis was present in three of four rabbits injected with 7.5 mg/kg of tiletamine. No lesions were present in the zolazepam-injected or control rabbits. The results of this study show that tiletamine is the constituent responsible for the nephrotoxicity of Telazol in rabbits. They further demonstrate that doses commonly used for anesthetic induction or restraint can produce renal lesions in rabbits.

231 NAL Call. No.: RB127.P34
Neurokinin and NMDA antagonists (but not a kainic acid antagonist) are antinociceptive in the mouse formalin model.
Murray, C.W.; Cowan, A.; Larson, A.A.
Amsterdam : Elsevier Science Publishers; 1991 Feb.
Pain : the journal of the International Association for the Study of Pain v. 44 (2): p. 179-185; 1991 Feb. Includes references.

Language: English

Descriptors: Mice; Animal models; Antagonists; Pain; Substance p; Aspartic acid; Receptors; Opioids; Formaldehyde; Tests

232 NAL Call. No.: 447.8 AM3
Neuropeptide regulation of feeding in dogs.
Inui, A.; Okita, M.; Nakajima, M.; Inoue, T.; Sakatani, N.; Oya, M.; Morioka, H.; Okimura, Y.; Chihara, K.; Baba, S.
Bethesda, Md. : American Physiological Society; 1991 Sep.
American journal of physiology v. 261 (3,pt.2): p. R588-R594; 1991 Sep.
Includes references.

Language: English

Descriptors: Dogs; Norepinephrine; Neuropeptides; Opioid peptides; Somatoliberin; Appetite control; Satiety; Food intake

Abstract: Norepinephrine and four families of neuropeptides, namely, neuropeptide Y (NPY), opioid peptides, galanin, and growth hormone-releasing factor (GRH), have been shown to stimulate feeding after central administration. Because these studies were mainly done on laboratory rats, the present study was designed to ascertain the central stimulators of feeding in dogs. We have shown that porcine and human pancreatic polypeptides (PPs), when administered into the third cerebral ventricle (intracerebroventricularly), increased food and water intake of satiated animals but that the COOH-terminal fragments [hPP-(18-36) and hPP-(23-36)] did not do so at the same molar dose (11.9 nmol). The K-opioid receptor agonist dynorphin A-(1-17) also stimulated food and water intake, whereas alpha-neoendorphin and Met-enkephalin did not. These results suggest the structural specificity of PPs and dynorphin peptides for stimulating feeding. Surprisingly, neither intracerebroventricular injections of NPY and peptide YY nor intracerebroventricular pretreatment with anti-hNPY gamma-globulin modulated feeding, stressing the species differences in the feeding response to exogenous substances and the underlying physiology. Intracerebroventricular injections of norepinephrine, GRH, galanin, and pancreastatin also failed to increase food intake, although most substances tended to or did increase water intake. These results suggest that neuropeptides play a role in a species-specific way in modulating appetite regulation.

233 NAL Call. No.: 450 P697
Neurotropic action of the hydroalcoholic extract of *Melissa officinalis* in the mouse.
Soulimani, R.; Fleurentin, J.; Mortier, F.; Misslin, R.; Derrieu, G.; Pelt, J.M.

Stuttgart, W. Ger. : Georg Thieme Verlag; 1991 Apr.
Planta medica v. 57 (2): p. 105-109; 1991 Apr. Includes references.

Language: English

Descriptors: Melissa officinalis; Plant extracts; Essential oils; Analgesics;
Mice

234 NAL Call. No.: 410.9 P94

A new anesthetic agent for use in the gerbil.
Hrapkiewicz, K.L.; Stein, S.; Smiler, K.L.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1989.
Laboratory animal science v. 39 (4): p. 338-341; 1989. Includes references.

Language: English

Descriptors: Gerbils; Anesthesia; Anesthetics

Abstract: Gerbils have been neglected in published reports on anesthesia. This study compared several dosages of Telazol used for anesthesia in the gerbil. Each group of animals injected with Telazol was evaluated for onset and duration of anesthesia and analgesia. Results showed Telazol to be a safe anesthetic and when dosed at 60 mg/kg to be suitable for major surgical procedures. Lower dosages of Telazol, in contrast, provided immobility and analgesia suitable for less nociceptive and noninvasive experimental manipulations. Dosages of Telazol required for surgical depth of analgesia and anesthesia were accompanied by a prolonged recovery time. Gerbils should be monitored closely to insure a safe recovery when using the higher dosages.

235 NAL Call. No.: SF910.P34A55 1992

Pain control with medetomidine in dogs, cats, and laboratory animals.
Vainio, O.
New York : Churchill Livingstone; 1992.
Animal pain / edited by Charles E. Short, Alan Van Poznak. p. 213-219,
222-223; 1992. Includes references.

Language: English

Descriptors: Dogs; Cats; Laboratory animals; Rats; Mice; Pain; Tests; Drugs;
Drug effects; Physiological functions

236 NAL Call. No.: SF601.C66

Pain. II. Control of pain in animals.
Sackman, J.E.
Trenton, N.J. : Veterinary Learning Systems Company; 1991 Feb.
The Compendium on continuing education for the practicing veterinarian v. 13
(2): p. 181-187, 190-192; 1991 Feb. Includes references.

Language: English

Descriptors: Dogs; Cats; Analgesics; Pain; Opium alkaloids; Receptors;
Narcotic antagonists; Antiinflammatory agents; Arachidonic acid; Mode of
action; Treatment; Dosage

237 NAL Call. No.: SF601.C66

Pain: its perception and alleviation in dogs and cats. 1. The physiology of
pain.
Sackman, J.E.
Trenton, N.J. : Veterinary Learning Systems Company; 1991 Jan.
The Compendium on continuing education for the practicing veterinarian v. 13
(1): p. 71-75, 79. ill; 1991 Jan. Includes references.

Language: English

Descriptors: Dogs; Cats; Pain; Physiology; Peripheral nerves; Animal anatomy;
Endorphins; Analgesics; Neurotransmitters

238 NAL Call. No.: 41.8 AM3A

Pharmacokinetics of butorphanol tartrate in rabbits.
Portnoy, L.G.; Hustead, D.R.
Schaumburg, Ill. : American Veterinary Medical Association; 1992 Apr.
American journal of veterinary research v. 53 (4): p. 541-543; 1992 Apr.
Includes references.

Language: English

Descriptors: Rabbits; Analgesics; Pharmacokinetics; Half life; Intravenous injection; Subcutaneous injection

Abstract: The pharmacokinetic properties of butorphanol tartrate were determined in 7 rabbits after iv and sc injection (0.5 mg/kg of body weight). A 2-compartment model (biexponential) best represented the concentration vs time curve after IV injection. The half-life was calculated to be 1.64 hours via IV administration, whereas SC injection resulted in an elimination half-life of 3.16 hours.

239 NAL Call. No.: 41.8 AM3A

Pharmacokinetics of etomidate in cats.

Wertz, E.M.; Benson, G.J.; Thurmon, J.C.; Tranquilli, W.J.; Davis, L.E.; Koritz, G.D.

Schaumburg, Ill. : American Veterinary Medical Association; 1990 Feb.

American journal of veterinary research v. 51 (2): p. 281-285; 1990 Feb.

Includes references.

Language: English

Descriptors: Cat; Anesthetics; Injections; Anesthesia; Pharmacokinetics

Abstract: Pharmacokinetic variables of etomidate were determined after IV administration of etomidate (3.0 mg/kg of body weight). Blood samples were collected for 6 hours. Disposition of this carboxylated imidazole best conformed to a 2- (n = 2) and a 3- compartment (n = 4) open pharmacokinetic model. The pharmacokinetic values were calculated for the overall best-fitted model, characterized as a mixed 2- and 3-compartmental model. The first and most rapid distribution half-life was 0.05 hour and a second distribution half-life was 0.35 hour. Elimination half-life was 2.89 hours, apparent volume of distribution was 11.87 +/- 4.64 L/kg, apparent volume of distribution at steady state was 4.88 +/- 2.25 L/kg, apparent volume of the central compartment was 1.17 +/- 0.70 L/kg, and total clearance was 2.47 +/- 0.78 L/kg/h.

240 NAL Call. No.: 41.8 V641

Pharmacokinetics of intramuscularly administered pethidine in dogs and the influence of anaesthesia and surgery.

Waterman, A.E.; Kalthum, W.

London : The Association; 1989 Mar25.

The Veterinary record : journal of the British Veterinary Association v. 124 (12): p. 293-296; 1989 Mar25. Includes references.

Language: English

Descriptors: Dogs; Anesthetics; Anesthesia; Surgical operations; Pharmacokinetics; Intramuscular injection; Blood plasma

241 NAL Call. No.: 41.8 Am3A

Pharmacokinetics of propofol in mixed-breed dogs and Greyhounds.

Zoran, D.L.; Riedesel, D.H.; Dyer, D.C.

Schaumburg, Ill. : American Veterinary Medical Association; 1993 May.

American journal of veterinary research v. 54 (5): p. 755-760; 1993 May.

Includes references.

Language: English

Descriptors: Dogs; Greyhound; Crossbreds; Anesthetics; Pharmacokinetics; Anesthesia; Recovery; Breed differences

Abstract: Pharmacokinetics and recovery characteristics of propofol in Greyhounds and mixed-breed dogs were compared. In all dogs, disposition of propofol was adequately described by a 2-compartment open model, with a rapid distribution phase followed by a slower elimination phase. When findings in Greyhounds were compared with those in mixed-breed dogs, significant differences were observed in mean concentrations of propofol in blood, recovery characteristics, and estimates for apparent volume of distribution, volume of distribution at steady state, and total body clearance. In addition, Greyhounds recovered from anesthesia at higher concentrations of propofol than did mixed-breed dogs. A secondary peak in blood propofol concentration was observed in 8 of 10 Greyhounds and in 5 of 8 mixed-breed dogs. This peak corresponded to the time of return of the righting reflex.

242 NAL Call. No.: 41.8 AM3

Pharmacologic features of butorphanol in dogs and cats.

Hosgood, G.
Schaumburg, Ill. : The Association; 1990 Jan01.
Journal of the American Veterinary Medical Association v. 196 (1): p. 135-136;
1990 Jan01. Includes references.

Language: English

Descriptors: Dogs; Cat; Analgesics; Pharmacodynamics; Pharmacokinetics;
Adverse effects

243 NAL Call. No.: 475 J824
Picogram level determination of medetomidine in dog serum by capillary gas chromatography with negative ion chemical ionization mass spectrometry.
Vuorilehto, L.; Salonen, J.S.; Anttila, M.
Amsterdam : Elsevier Science Publishers; 1989 Dec29.
Journal of chromatography v. 497: p. 282-287; 1989 Dec29. Includes references.

Language: English

Descriptors: Dogs; Serums; Analgesics; Determination; Gas chromatography; Mass spectrometry

244 NAL Call. No.: SF895.P76
A pilot study of the effects of anesthesia with isoflurane, thiopental, methohexital, propofol, or nitrous oxide on magnetic motor evoked potentials in the dog.
Young, S.S.; Sylvestre, A.M.
Santa Barbara, CA : Brillig Hill, Inc; 1992.
Progress in veterinary neurology v. 3 (3): p. 91-94; 1992. Includes references.

Language: English

Descriptors: Ontario; Dogs; Thiopental; Nitrous oxide; Anesthesia;
Barbiturates; Halogenated hydrocarbons

245 NAL Call. No.: 41.8 AM3A
Platelet aggregation in dogs after sedation with acepromazine and atropine and during subsequent general anesthesia and surgery.
Barr, S.C.; Ludders, J.W.; Looney, A.L.; Gleed, R.D.; Erb, H.N.
Schaumburg, Ill. : American Veterinary Medical Association; 1992 Nov.
American journal of veterinary research v. 53 (11): p. 2067-2070; 1992 Nov.
Includes references.

Language: English

Descriptors: Beagle; Dogs; Platelets; Aggregation; Atp; Anesthesia; Halothane;
Luminescence; Luciferase

Abstract: Platelet aggregation and adenosine triphosphate (ATP) release were measured by use of the impedance method in blood samples obtained from 25 adult female Beagles before and after sedation with acepromazine (0.13 mg/kg of body weight) and atropine (0.05 mg/kg), and during general anesthesia. General anesthesia was induced by IV administration of thiamylal (average dosage, 2.1 mg/kg, range, 1.2 to 4.2 mg/kg) and was maintained with halothane in oxygen. Samples of jugular venous blood were obtained from each dog, using citrate as anticoagulant. Platelet count was done on each sample. Platelet aggregation and ATP released from the aggregating platelets were measured within 2.5 hours of sample collection, using a whole-blood aggregometer. Adenosine diphosphate (ADP) or collagen was used as aggregating agent. For each aggregating agent, platelet aggregation and ATP release were measured over 6 minutes. After sedation with acepromazine and atropine, significant ($P < 0.01$) reduction was observed in platelet count (from median values of 341,000 cells/microliter to 283,000 cells/microliter) and in the ability of platelets to aggregate in response to ADP (from 14.0 to 7.0 Ohms). During the same period, maximal release of ATP in response to collagen also was reduced (from 5.56 micromoles to 4.57 micromoles; $P < 0.01$); however, this difference ceased to be significant when ATP release was normalized for platelet count. During general anesthesia and surgery (200 minutes after sedation), platelet count and aggregation responses to ADP and collagen had returned to presedation values. None of the dogs in this study appeared to have hemostasis problems during surgery. In conclusion, sedation with acepromazine and atropine induces measurable inhibition of ADP-induced platelet aggregation that resolves during subsequent general anesthesia and surgery. Transient inhibition of platelet aggregation is not manifested by a change in gross hemostasis during surgery.

246 NAL Call. No.: 442.8 L62
Possible participation of endogenous opioid peptides on the mechanism involved in analgesia induced by vouacapan.
Duarte, I.D.G.; Ferreira-Alves, D.L.; Nakamura-Craig, M.
Elmsford, N.Y. : Pergamon Press; 1992.
Life sciences v. 50 (12): p. 891-897; 1992. Includes references.

Language: English

Descriptors: Medicinal plants; Seeds; Plant extracts; Opioid peptides; Analgesics; Mode of action; Rats; Mice

Abstract: The involvement of opioid peptides in the mechanism of action of vouacapan, a new experimental compound extracted from seeds of *Pterodon poligalaeflorus* Benth, was investigated both in mice utilizing acetic acid writhing response and in rats utilizing inflammatory hyperalgesia induced by carrageenan and modified Randall-Selitto method. Vouacapan, in both models, caused a dose-dependent analgesia when injected p.o., s.c. and i.p. The analgesic effect was partially blocked by naloxone, nalorphine and n-methyl-nalorphine. Significant tolerance to analgesic effect was observed following repeated administration of vouacapan or morphine. On the last day of treatment, cross administration revealed symmetrical and asymmetrical cross-tolerance between vouacapan and morphine, in rats and mice, respectively. We conclude that a release of endorphins could be involved in the analgesic mechanism of vouacapan in both models studied.

247 NAL Call. No.: QL55.A1L3
Post-operative analgesia following thoracotomy in the dog: an evaluation of the effects of bupivacaine intercostal nerve block and nalbuphine on respiratory function.
Flecknell, P.A.; Kirk, A.J.B.; Liles, J.H.; Hayes, P.H.; Dark, J.H.
London : Royal Society of Medicine Services; 1991 Oct.
Laboratory animals v. 25 (4): p. 319-324; 1991 Oct. Includes references.

Language: English

Descriptors: Dogs; Postoperative care; Pain; Analgesics; Duration; Blood; Gases

Abstract: Pain following thoracotomy reduces pulmonary ventilation in man and a similar effect is believed to occur in animals. The effects of two analgesic regimens on arterial blood gas parameters were studied in dogs following thoracotomy. Post-operative analgesia was provided with intermittent nalbuphine, either alone or in combination with an intercostal nerve block using bupivacaine. Arterial blood gas analysis was carried out at 4, 8 and 16 h post-operatively, both before the administration of nalbuphine and again 30 min later. Animals which received nalbuphine alone had a significant rise in arterial oxygenation following administration of this analgesic. This effect was not observed at 4 and 8 h postoperatively in dogs which had an intercostal block with bupivacaine, but was seen at 16 h post-operatively when it could be anticipated that the effects of bupivacaine would have waned. These results suggest that intercostal block with bupivacaine can provide analgesia for over 8 h, and that the duration of action of nalbuphine in controlling post-operative pain in the dog is probably less than 4 h.

248 NAL Call. No.: QL55.A1L33
Post-operative analgesia in rabbits and rodents.
Flecknell, P.A.
New York, N.Y. : Nature Publishing Company; 1991 Oct.
Lab animal v. 20 (9): p. 34-37; 1991 Oct. Includes references.

Language: English

Descriptors: Laboratory animals; Postoperative care; Pain; Analgesics

249 NAL Call. No.: SF911.V43
Postoperative catecholamine response to onychectomy in isoflurane-anesthetized cats: effect of analgesics.
Benson, G.J.; Wheaton, L.G.; Thurmon, J.C.; Tranquilli, W.J.; Olson, W.A.; Davis, C.A.
Hagerstown, Md. : J.B. Lippincott Company; 1991 May.
Veterinary surgery v. 20 (3): p. 222-225; 1991 May. Includes references.

Language: English

Descriptors: Cats; Anesthesia; Analgesics; Surgical operations; Postoperative care; Catecholamines; Morphine; Xylazine; Salicylates; Pain

250 NAL Call. No.: SF601.V523
Postoperative epidural analgesia.
McMurphy, R.M.
Philadelphia, Pa. : W.B. Saunders Company; 1993 Jul.
The Veterinary clinics of North America : Small animal practice v. 23 (4): p. 703-716; 1993 Jul. In the series analytic: Stifle surgery / edited by James K. Roush. Includes references.

Language: English

Descriptors: Dogs; Cats; Conduction anesthesia

251 NAL Call. No.: 41.8 AM3A
Potency of rapidly acting barbiturates in dogs, using inhibition of the laryngeal reflex as the end point.
Turner, D.M.; Ilkiw, J.E.
Schaumburg, Ill. : American Veterinary Medical Association; 1990 Apr.
American journal of veterinary research v. 51 (4): p. 595-597; 1990 Apr.
Includes references.

Language: English

Descriptors: Dogs; Barbiturates; Thiopental; Larynx; Reflexes; Anesthesia; Dosage effect

Abstract: Thiopental, thiamylal, and methohexital were administered to 30 dogs to determine equipotent doses necessary to inhibit laryngeal reflexes. The doses studied were 7.1, 10.0, 14.1, 20.0, and 28.3 mg of thiopental/kg of body weight; 5.7, 8.0, 11.3, 16.0, and 22.6 mg of thiamylal/kg; and 3.5, 5.0, 7.1, 10.0, and 14.1 mg of methohexital/kg. At 1, 2.5, 5, and 10 minutes after injection, the presence or absence of the laryngoscopic reflex, pedal reflex, and jaw tone were recorded. The times for return of each reflex, as well as the ability to walk 10 steps without assistance, were also recorded. Using the method of least squares, a probit analysis was performed on the quantal responses at 1 minute. The effective dose in 50% of the population for the laryngoscopic reflex was chosen as the end point for intubation, and the computed doses necessary to achieve this end point were 19.4 mg of thiopental/kg, 18.4 mg of thiamylal/kg, and 9.7 mg of methohexital/kg. When potencies of the drugs were compared with that of thiopental (1), thiamylal was found to be equipotent (1.06) and methohexital twice as potent (2.0). At the accepted clinical dose, recovery times for thiopental (71.1 +/- 7.2 minutes) and thiamylal (75.3 +/- 7.7 minutes) were similar, and twice that for methohexital (33.9 +/- 4.6 minutes).

252 NAL Call. No.: QP501.B64
Pregnancy and pentobarbital anaesthesia modify hepatic synthesis of acylglycerol glycerol and glycogen from gluconeogenic precursors during fasting in rats.
Zorzano, A.; Herrera, E.
London : The Biochemical Society; 1988 Dec01.
The Biochemical journal v. 256 (2): p. 487-491; 1988 Dec01. Includes references.

Language: English

Descriptors: Rats; Pregnancy; Pentobarbital; Anesthesia; Liver; Glycerol; Fasting; Gluconeogenesis; Blood glucose; Glycogen

253 NAL Call. No.: RS160.J6
Preliminary studies on the antiinflammatory and analgesic activities of Calotropis procera root extract.
Basu, A.; Chaudhuri, A.K.N.
Limerick : Elsevier Scientific Publishers; 1991 Mar.
Journal of ethno-pharmacology v. 31 (3): p. 319-324; 1991 Mar. Includes references.

Language: English

Descriptors: Calotropis procera; Roots; Plant extracts; Analgesics; Antiinflammatory agents; Edema; Mice; Rats

Abstract: A chloroform-soluble fraction from Calotropis procera roots showed significant dose-related antiinflammatory activity in rats using the

pharmacologic models of carrageenin-induced pedal oedema, cotton pellet granuloma and formaldehyde-induced arthritis. In addition, significant analgesic potential was demonstrated using acetic acid-induced writhing in mice.

254 NAL Call. No.: RS164.P59
A preliminary study of *Cedronella canariensis* (L.) var. *canariensis* extracts for antiinflammatory and analgesic activity in rats and mice.
Lopez-Garcia, R.E.; Rabanal, R.M.; Darias, V.; Martin-Herrera, D.; Carreiras, M.C.; Rodriguez, B.
Sussex : John Wiley & Sons; 1991 Dec.
Phytotherapy research : PTR v. 5 (6): p. 273-275; 1991 Dec. Includes references.

Language: English

Descriptors: Canary Islands; Labiatae; Plant extracts; Medicinal plants; Antiinflammatory agents; Analgesics; Antipyretics; Drug toxicity; Folk medicine; Rats; Mice

255 NAL Call. No.: 41.8 AM3
Prescription and use of analgesics in dogs and cats in a veterinary teaching hospital: 258 cases (1983-1989).
Hansen, B.; Hardie, E.
Schaumburg, Ill. : The Association; 1993 May01.
Journal of the American Veterinary Medical Association v. 202 (9): p. 1485-1494; 1993 May01. Includes references.

Language: English

Descriptors: Dogs; Cats; Analgesics; Pain; Prescriptions; Frequency; Postoperative care

256 NAL Call. No.: SF601.P76
Problems and complications associated with endocrine surgery in the dog and cat.
Matthiesen, D.T.; Mullen, H.S.
Hagerstown, Md. : J.B. Lippincott Co; 1990 Dec.
Problems in veterinary medicine v. 2 (4): p. 627-667; 1990 Dec. In the series analytic: Endocrinology / edited by R. Nichols. Literature review. Includes references.

Language: English

Descriptors: Dogs; Cats; Surgical operations; Neoplasms; Preoperative care; Postoperative complications; Endocrine diseases; Metastasis; Pancreas; Adrenal glands; Animal anatomy; Parathyroid; Thyroid gland; Anesthesia; Preanesthetic medication; Pituitary; Literature reviews

257 NAL Call. No.: 41.8 J8292
Propofol anaesthesia in cats.
Brearley, J.C.; Kellagher, R.E.B.; Hall, L.W.
London : British Small Animal Veterinary Association; 1988 May.
The Journal of small animal practice v. 29 (5): p. 315-322; 1988 May.
Includes references.

Language: English

Descriptors: Cat; Anesthesia; Anesthetics; Surgery

258 NAL Call. No.: 41.8 V6456
Propofol anaesthesia in the dog and cat.
Jones, R.S.
London : Wright; 1990.
The Veterinary annual (30): p. 200-202; 1990. Includes references.

Language: English

Descriptors: Dogs; Cats; Anesthesia; Anesthetics

259 NAL Call. No.: SF911.V43
Pulsus alternans during halothane anesthesia in a dog.
Bailey, J.E.; Muir, W.W. III; Skarda, R.T.
Hagerstown, Md. : J.B. Lippincott Company; 1993 Jan.

Veterinary surgery v. 22 (1): p. 79-84; 1993 Jan. Includes references.

Language: English

Descriptors: Ohio; Dogs; Halothane; Pulse rate; Anesthesia; Surgery; Pyloroplasty

260 NAL Call. No.: SF915.J63
Quantitative electroencephalography for measurement of central nervous system responses to diazepam and the benzodiazepine antagonist, flumazenil, in isoflurane-anaesthetized dogs.
Greene, S.A.; Moore, M.P.; Keegan, R.D.; Gallagher, L.V.
Oxford : Blackwell Scientific Publications; 1992 Sep.
Journal of veterinary pharmacology and therapeutics v. 15 (3): p. 259-266; 1992 Sep. Includes references.

Language: English

Descriptors: Dogs; Diazepam; Antagonists; Drug antagonism; Electroencephalography; Measurement

261 NAL Call. No.: SF910.P34A55 1992
Quantitative electroencephalography for monitoring responses to noxious electrical stimulation in dogs anesthetized with halothane or with halothane and morphine.
Greene, S.A.; Moore, M.P.; Keegan, R.D.; Gallagher, L.V.; Rosenthal, J.C.
New York : Churchill Livingstone; 1992.
Animal pain / edited by Charles E. Short, Alan Van Poznak. p. 459-465, 478-479; 1992. Includes references.

Language: English

Descriptors: Dogs; Pain; Electrical stimulation; Anesthetics; Central nervous system; Electroencephalography; Morphine; Halothane; Animal experiments

262 NAL Call. No.: 41.8 AM3A
Quantitative electroencephalography in dogs anesthetized with 2.0% end-tidal concentration of isoflurane anesthesia.
Moore, M.P.; Greene, S.A.; Keegan, R.D.; Gallagher, L.; Gavin, P.R.; Kraft, S.L.; DeHaan, C.; Klappenbach, K.
Schaumburg, Ill. : American Veterinary Medical Association; 1991 Apr.
American journal of veterinary research v. 52 (4): p. 551-560. ill; 1991 Apr. Includes references.

Language: English

Descriptors: Dogs; Electroencephalography; Anesthesia; Anesthetics; Brain; Physiological functions

Abstract: Quantitative electroencephalography was assessed in dogs under controlled, 2% end-tidal isoflurane anesthetic conditions, and each variable at each electrode site was tested for normal distribution. With the quantitative electroencephalographic system used, 16 values for each of 21 electrode sites were evaluated. Absolute power ratios also were evaluated. The methods for quantitative electroencephalographic recording and analysis appear to be readily adaptable to the dog. Most of the data do not conform to a normal distribution. Therefore, distribution-free nonparametric statistics should be used when looking for differences under experimental or clinical conditions. Quantitative electroencephalography appears to be a sensitive noninvasive method that could be used to evaluate brain function under anesthetic, clinical, and experimental settings.

263 NAL Call. No.: Slide no.379
Rabbits introduction to use in research.. Rabbits, introduction to use in research
Van Hoosier, G. L.; DiGiacomo, R. F.
University of Washington, Health Sciences Center for Educational Resources
Seattle, WA : produced and distributed by University of Washington, Health Sciences Center for Educational Resources.; 1990.
46 slides : col. + 1 sound cassette (19 min.) + 1 guide. (Laboratory animal medicine and science. Series 2 ; V-9001). Publication date on guide: 1991.
Sound accompaniment compatible for automatic and manual operation.

Language: English

Descriptors: Rabbits as laboratory animals; Animal welfare

Abstract: Presents laws and guidelines, historical use in research and testing, development of alternatives, attributes as research animals, recognition of pain and disease, and signs and significance of common diseases.

264 NAL Call. No.: 41.8 AM3
Radiographic evaluation of nonanesthetized and nonsedated dogs for hip dysplasia.
Farrow, C.S.; Back, R.T.
Schaumburg, Ill. : The Association; 1989 Feb15.
Journal of the American Veterinary Medical Association v. 194 (4): p. 524-526. ill; 1989 Feb15. Includes references.

Language: English

Descriptors: Dogs; Radiography; Anesthesia; Hip dysplasia; Breeds

265 NAL Call. No.: 41.8 V643
Recommended techniques in small animal anaesthesia. IV. Anaesthesia and cardiac disease.
Seeler, D.C.; Dodman, N.H.; Norman, W.; Court, M.
London : Bailliere Tindall; 1988 Mar.
British veterinary journal v. 144 (2): p. 108-122; 1988 Mar. Literature review. Includes references.

Language: English

Descriptors: Dogs; Cat; Anesthesia; Anesthetics; Physiopathology; Heart diseases; Monitoring

266 NAL Call. No.: 41.8 AM3A
Reduction of isoflurane anesthetic requirement by medetomidine and its restoration by atipamezole in dogs.
Ewing, K.K.; Mohammed, H.O.; Scarlett, J.M.; Short, C.E.
Schaumburg, Ill. : American Veterinary Medical Association; 1993 Feb.
American journal of veterinary research v. 54 (2): p. 294-299; 1993 Feb. Includes references.

Language: English

Descriptors: Dogs; Medetomidine; Inhaled anesthetics; Dosage; Narcotic antagonists; Anesthesia; Drug antagonism

Abstract: The isoflurane-sparing effect of the alpha 2-adrenergic agonist medetomidine (30 micrograms/kg of body weight, IV) was tested in 7 dogs, using a blinded, randomized-block study design. The baseline minimal alveolar concentration (MAC) of isoflurane was 1.18 vol% (95% confidence interval [0.97,1.39]). Medetomidine significantly ($P < 0.003$) reduced isoflurane MAC by 47.2%. Atipamezole (0.3 mg/kg, IV), an alpha 2-adrenergic antagonist, completely reversed the effect of medetomidine on isoflurane MAC. Atipamezole alone did not significantly alter isoflurane MAC. After medetomidine administration, marked bradycardia developed in all dogs and persisted for more than 2 hours. Mean arterial blood pressure increased acutely, but later decreased, and hypotension persisted for more than 2 hours. Atipamezole reversed the bradycardic and hypotensive effects of medetomidine. Results of this study indicate that medetomidine may be useful in clinical cases in which isoflurane MAC-reduction is desirable and that atipamezole might be used to reverse desirable and undesirable effects of medetomidine during isoflurane anesthesia.

267 NAL Call. No.: 41.8 AM3A
Reduction of the ventricular arrhythmogenic dose of epinephrine by ketamine administration in halothane-anesthetized cats.
Bednarski, R.M.; Sams, R.A.; Majors, L.J.; Ashcraft, S.
Schaumburg, Ill. : American Veterinary Medical Association; 1988 Mar.
American journal of veterinary research v. 49 (3): p. 350-354; 1988 Mar. Includes references.

Language: English

Descriptors: Cat; Ketamine; Halothane; Anesthesia; Adrenalin; Heart rate; Blood pressure; Dosage effect

268 NAL Call. No.: 41.8 AM3A

Relative effects of xylazine-atropine, xylazine-atropine-ketamine, and xylazine-atropine-pentobarbital combinations and time-course effects of the latter two combinations on brain stem auditory-evoked potentials in dogs. Tokuriki, M.; Matsunami, K.; Uzuka, Y. Schaumburg, Ill. : American Veterinary Medical Association; 1990 Jan. American journal of veterinary research v. 51 (1): p. 97-102; 1990 Jan. Includes references.

Language: English

Descriptors: Dogs; Xylazine; Atropine; Ketamine; Pentobarbital; Drug combinations; Drug effects; Brain; Electric potential

Abstract: Brain stem auditory-evoked potentials (BAEP) were recorded in 4 dogs to analyze the relationship between acoustic stimulus intensities and peak latencies of each wave, and to investigate the relative effects of xylazine-atropine-ketamine, and xylazine-atropine-pentobarbital combinations and the time-course effects of the latter 2 drug combinations on BAEP. Click stimulations fixed at a stimulus rate of 10/s and a frequency of 4 kHz were delivered at intensities ranging from 10- to 110-dB sound pressure level (SPL) in 10-dB steps for analyzing the relationship between the acoustic stimulus intensities and the peak latencies and at an intensity of 110-dB SPL for investigating the effects of the sedative and the anaesthetic drug combinations and their time-course effects on BAEP. Waves I and VI were identified with stimulus intensity of greater than or equal to 50-dB SPL. Wave VII was observed in some records, but was excluded from statistical analysis. As intensity was increased from 50- to 110-dB SPL, the latency decreased for all waves during xylazine-atropine-ketamine anesthesia. There were no statistically significant differences in the peak latencies of each wave in BAEP among xylazine-atropine, xylazine-atropine-ketamine, and xylazine-atropine-pentobarbital combinations 20 minutes after drug administration, except that the latency of wave VI during xylazine-atropine sedation was significantly ($P < 0.01$) shorter than that detected during xylazine-atropine-ketamine or xylazine-atropine-pentobarbital anesthesia. There were no significant changes in peak latencies of waves I, II, III, V, and VI for 90 minutes after administration of the xylazine-atropine-ketamine combination and for 120 minutes after administration of the xylazine-atropine-pentobarbital combination. It was concluded that BAEP did not change over time after xylazine-atropine-ketamine or xylazine-atropine-pentobarbital administration.

269 NAL Call. No.: QL55.A1L3
Responses of laboratory animals to some injectable anaesthetics. Smith, W. London : Royal Society of Medicine Services; 1993 Jan. Laboratory animals v. 27 (1): p. 30-39; 1993 Jan. Includes references.

Language: English

Descriptors: Laboratory animals; Injectable anesthetics

Abstract: Xylazine, ketamine, methohexitone and alphadalone/alphaxalone, were administered intraperitoneally, intramuscularly or intravenously to mice, rats, guineapigs and rabbits. Times for disappearance and reappearance of reflexes were recorded, and duration of loss of reflex. Delivering a predetermined dose gave a varying individual response, ranging from inadequate anaesthesia to death. Using reflexes to assess depth of anaesthesia was of limited value. Reflex movements to noxious stimuli generally persisted even at dose rates that caused prolonged recovery times and death. Conversely, in rats there was no response to a cutaneous stimulus in some animals even though recumbency was almost restored.

270 NAL Call. No.: 41.8 R312
Reversal of atracurium neuromuscular block with neostigmine in the dog. Jones, R.S. London : British Veterinary Association; 1990 Jan. Research in veterinary science v. 48 (1): p. 96-98; 1990 Jan. Includes references.

Language: English

Descriptors: Dogs; Neostigmine; Drug antagonism; Anesthesia; Muscle relaxants; Time; Dosage effect

271 NAL Call. No.: QL55.A1L3
Reversal of fentanyl/fluanisone neuroleptanalgesia in the rabbit using mixed agonist/antagonist opioids.

Flecknell, P.A.; Liles, J.H.; Wootton, R.
London : Royal Society of Medicine Services; 1989 Apr.
Laboratory animals v. 23 (2): p. 147-155; 1989 Apr. Includes references.

Language: English

Descriptors: Rabbits; Anesthesia; Fentanyl; Neuroleptics; Opium; Drug antagonism; Drug synergy

Abstract: The reversal of the neuroleptanalgesic combination of fentanyl/fluanisone using mixed agonist/antagonist opioids has been investigated in the rabbit. All of the compounds studied (naloxone, nalbuphine, meptazinol, butorphanol, buprenorphine, pentazocine, doxapram) reversed the respiratory depression and sedation produced by fentanyl/fluanisone. Fentanyl/fluanisone produced profound analgesia for 180 min, which was rapidly and completely antagonized by naloxone. The mixed agonist/antagonist opioids produced a reduction in the degree of analgesia but, in contrast to naloxone, analgesic activity persisted from 120 min (meptazinol) to 420 min (buprenorphine). Administration of buprenorphine to rabbits anaesthetized with fentanyl/fluanisone and midazolam confirmed that the reversal of respiratory depression was accompanied by the return of arterial pH, PCO₂ and PO₂ to preanaesthetic values. The use of neuroleptanalgesic anaesthetic regimens, which have been shown to provide effective surgical anaesthesia, combined with reversal using a mixed agonist/antagonist opioid to provide postoperative analgesia, appears to be a valuable refinement of current laboratory animal anaesthetic practice.

272 NAL Call. No.: SF915.J63
Reversal of medetomidine sedation by atipamezole in dogs.
Vainio, O.; Vaha-Vahe, T.
Oxford : Blackwell Scientific Publications; 1990 Mar.
Journal of veterinary pharmacology and therapeutics v. 13 (1): p. 15-22; 1990 Mar. Includes references.

Language: English

Descriptors: Dogs; Anesthetics; Anesthesia; Drug antagonism; Narcotic antagonists; Adverse effects

273 NAL Call. No.: 500 N21P
Rheoreceptors in the carotid sinus of dog.
Hajduczuk, G.; Chapleau, M.W.; Abboud, F.M.
Washington, D.C. : The Academy; 1988 Oct.
Proceedings of the National Academy of Sciences of the United States of America v. 85 (19): p. 7399-7403; 1988 Oct. Includes references.

Language: English

Descriptors: Dogs; Pressoreceptors; Neurophysiology; Blood pressure; Anesthesia

274 NAL Call. No.: SF915.J63
Sedative and analgesic effects of medetomidine in dogs.
Vainio, O.; Vaha-Vahe, T.; Palmu, L.
Oxford : Blackwell Scientific Publications; 1989 Jun.
Journal of veterinary pharmacology and therapeutics v. 12 (2): p. 225-231; 1989 Jun. Includes references.

Language: English

Descriptors: Dogs; Analgesics; Anesthesia; Drug effects

275 NAL Call. No.: 41.8 M69
Selecting the right analgesics: indications and dosage requirements.
Tranquilli, W.J.; Fikes, L.L.; Raffe, M.R.
Lenexa, Kan. : Veterinary Medicine Publishing Company; 1989 Jul.
Veterinary medicine v. 84 (7): p. 692-697; 1989 Jul. Includes references.

Language: English

Descriptors: Dogs; Cat; Analgesics; Dosage effect; Anesthetics; Pain

276 NAL Call. No.: 41.8 AM3
Side effects of etomidate in dogs.
Muir, W.W. III; Mason, D.E.

Schaumburg, Ill. : The Association; 1989 May 15.
Journal of the American Veterinary Medical Association v. 194 (10): p. 1430-1434; 1989 May 15. Includes references.

Language: English

Descriptors: Dogs; Anesthetics; Anesthesia; Adverse effects; Diazepam; Morphine; Drugs

277 NAL Call. No.: QL55.A1L3
A simple laryngoscopic technique for the endotracheal intubation of rabbits. Macrae, D.J.; Guerreiro, D.
London : Royal Society of Medicine Services; 1989 Jan.
Laboratory animals v. 23 (1): p. 59-61. ill; 1989 Jan. Includes references.

Language: English

Descriptors: Rabbits; Anesthesia; Larynx; Trachea; Endoscopy

Abstract: A safe and reliable technique for the endotracheal intubation of rabbits is described. Direct laryngoscopy is followed by intubation of the trachea with a fine catheter, and subsequent advancement of the endotracheal tube over this catheter.

278 NAL Call. No.: 410.9 P94
A simple method for collection of blood from the rat foot. Snitily, M.U.; Gentry, M.J.; Mellencamp, M.A.; Preheim, L.C.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1991 Jun.
Laboratory animal science v. 41 (3): p. 285-287; 1991 Jun. Includes references.

Language: English

Descriptors: Rats; Blood sampling; Collection; Feet; Anesthesia

279 NAL Call. No.: 410.9 P94
A simple technique for artificial cardiac pacing in closed chest anesthetized rats. Hoffman, A.; Keiser, H.R.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1990 Jul.
Laboratory animal science v. 40 (4): p. 426-427; 1990 Jul. Includes references.

Language: English

Descriptors: Rats; Heart; Electrodes; Catheterization

280 NAL Call. No.: QD415.A1X4
Species differences in blood profiles, metabolism and excretion of ¹⁴C-propofol after intravenous dosing to rat, dog and rabbit. Simons, P.J.; Cockshott, I.D.; Douglas, E.J.; Gordon, E.A.; Knott, S.; Ruane, R.J.
London : Taylor & Francis; 1991 Oct.
Xenobiotica v. 21 (10): p. 1243-1256; 1991 Oct. Includes references.

Language: English

Descriptors: Dogs; Anesthetics; Intravenous injection; Drug metabolism; Excretion; Species differences; Rabbits; Rats

Abstract: 1. Bolus i.v. doses of ¹⁴C-propofol (7-10 mg/kg) to rat, dog and rabbit, or an infusion dose (0.47 mg/kg per min for 6 h) to dog were eliminated primarily in urine (60-95% dose); faecal elimination (13-31%) occurred for rat and dog, but was minimal (< 2%) for rabbit. 2. After bolus administration, blood ¹⁴C concentrations were maximal (8-30 micrograms equiv./ml) at 2-15 min; these declined rapidly during the 0-2 h period and thereafter more slowly. Propofol concentrations were maximal (4-16 micrograms/ml) at 2 min and the profiles were best fitted by a tri-exponential (rat and dog) or bi-exponential (rabbit) equation. Duration of sleep ranged from 5 to 8 min. 3. Infusion of ¹⁴C-propofol in dog gave a blood ¹⁴C concentration of 117 micrograms equiv./ml at the end of the 6 h infusion period; this declined at a similar rate to that after the bolus dose. Propofol concentration on termination of infusion was 13 micrograms/ml; thereafter, propofol concentrations declined less rapidly than after the bolus dose. Waking occurred about 44 min post-infusion. 4. Propofol was cleared by conjugation of the parent molecule or its quinol metabolite; hydroxylation of

an isopropyl group also occurred in rat and rabbit. Biliary excretion leading to enterohepatic recirculation, and in turn increased sulphate conjugation, occurred in rat and dog, but not rabbit, resulting in a marked interspecies variation in drug clearance and metabolite profiles.

281 NAL Call. No.: RS160.J6
Studies on the constituents of Aconitum species. IX. The pharmacological properties of pyro-type aconitine alkaloids, components of processed aconite powder 'Kako-bushi-matsu': analgesic, antiinflammatory and acute toxic activities.
Murayama, M.; Mori, T.; Bando, H.; Amiya, T.
Limerick : Elsevier Scientific Publishers; 1991 Dec.
Journal of ethno-pharmacology v. 35 (2): p. 159-164; 1991 Dec. Includes references.

Language: English

Descriptors: Japan; China; Aconitum; Analgesics; Antiinflammatory agents; Toxic substances; Alkaloids; Mice; Traditional medicines

Abstract: Eight pyro-type aconitine alkaloids contained in the processed aconite powder 'Kako-bushi-matsu' were studied for their analgesic, antiinflammatory and acute toxic actions. All these compounds showed significant analgesic and antiinflammatory actions. Among the pyro-type alkaloids was lower than that of each of the parent alkaloids, aconitine, mesaconitine, hypaconitine and jesaconitine. However, pyro-type aconitine alkaloids had very low toxicity, and the decreasing rates of the toxicity in changing from the parent alkaloids to the pyro-type aconitine alkaloids were much larger than those relating to the analgesic activity. Eight pyro-type aconitine alkaloids were found to inhibit the carrageenin-induced hind paw edema at 2 to 6 h after the carrageenin subplantar injection. Consequently, it was demonstrated that the pyro-type aconitine alkaloids produced through the processing of raw aconite roots. 'Bushu' have a role in the medicinal effects of the processed aconite powder 'Kako-bushi-matsu'.

282 NAL Call. No.: SF910.P34A55 1992
Studies on the role of adrenergic receptors in a model of tonic pain.
Tasker, R.A.R.
New York : Churchill Livingstone; 1992.
Animal pain / edited by Charles E. Short, Alan Van Poznak. p. 155, 164, 175-176; 1992. Includes references.

Language: English

Descriptors: Laboratory animals; Rats; Pain; Alpha-adrenergic receptors; Drugs; Testing; Drug effects; Analgesics; Yohimbine; Dosage; Methoxamine

283 NAL Call. No.: SF601.C66
Surgical and anesthetic management of puppies and kittens.
Hosgood, G.
Trenton, N.J. : Veterinary Learning Systems Company, Inc; 1992 Mar.
The Compendium on continuing education for the practicing veterinarian v. 14 (3): p. 345-348, 350-353, 356-359; 1992 Mar. Literature review. Includes references.

Language: English

Descriptors: Puppies; Kittens; Preoperative care; Surgery; Respiratory system; Cardiovascular system; Liver; Kidneys; Age differences; Case reports; Anesthetics; Metabolism; Monitoring; Body temperature regulation; Pharmacokinetics; Sutures; Postoperative care; Antibiotics; Bandages; Literature reviews

284 NAL Call. No.: 41.8 AM3
Surgical techniques for neutering 6- to 14-week-old kittens.
Aronsohn, M.G.; Faggella, A.M.
Schaumburg, Ill. : The Association; 1993 Jan01.
Journal of the American Veterinary Medical Association v. 202 (1): p. 53-55; 1993 Jan01. Includes references.

Language: English

Descriptors: Kittens; Castration; Ovariectomy; Postoperative complications; Anesthesia; Age

285 NAL Call. No.: SF985.F4
Suspected adverse reaction to xylazine-ketamine anesthesia in a cat.
Raptopoulos, D.; Papazoglou, L.; Galatos, A.
Santa Barbara, Calif. : Veterinary Practice Publishing Co; 1993 Jul.
Feline practice v. 21 (4): p. 29-29; 1993 Jul. Includes references.

Language: English

Descriptors: Cats; Xylazine; Ketamine; Adverse effects

286 NAL Call. No.: SF911.V43
Suspected malignant hyperthermia after halothane anesthesia in a cat.
Bellah, J.R.; Robertson, S.A.; Buergelt, C.D.; McGavin, A.D.
Hagerstown, Md. : J.B. Lippincott Company; 1989 Nov.
Veterinary surgery v. 18 (6): p. 483-488; 1989 Nov. Includes references.

Language: English

Descriptors: Cat; Halothane; Anesthesia; Hyperthermia; Case studies

287 NAL Call. No.: SF911.V43
Thermal burns in four dogs during anesthesia.
Dunlop, C.I.; Daunt, D.A.; Haskins, S.C.
Philadelphia, Pa. : J.B. Lippincott Company; 1989 May.
Veterinary surgery v. 18 (3): p. 242-246. ill; 1989 May. Includes references.

Language: English

Descriptors: Dogs; Anesthesia; Burns; Hypothermia

288 NAL Call. No.: SF915.J63
Thiamylal- and halothane-sparing effect of diazepam in dogs.
Muir, W.W. III; Bednarski, L.; Bednarski, R.
Oxford : Blackwell Scientific Publications; 1991 Mar.
Journal of veterinary pharmacology and therapeutics v. 14 (1): p. 46-50; 1991
Mar. Includes references.

Language: English

Descriptors: Dogs; Diazepam; Preanesthetic medication; Halothane; Anesthetics;
Dosage

289 NAL Call. No.: SF911.V43
Thiamylal-sparing effect of midazolam for canine endotracheal intubation. A
clinical study of 118 dogs.
Greene, S.A.; Benson, G.J.; Hartsfield, S.M.
Hagerstown, Md. : J.B. Lippincott Company; 1993 Jan.
Veterinary surgery v. 22 (1): p. 69-72; 1993 Jan. Includes references.

Language: English

Descriptors: Washington; Illinois; Texas; Dogs; Benzodiazepines; Anesthesia;
Surgery; Neuroleptics

290 NAL Call. No.: 41.8 AM3
Thoracic vertebral osteochondroma in a cat.
Reidarson, T.H.; Metz, A.L.; Hardy, R.M.
Schaumburg, Ill. : The Association; 1988 Apr15.
Journal of the American Veterinary Medical Association v. 192 (8): p.
1102-1104. ill; 1988 Apr15. Includes references.

Language: English

Descriptors: Cat; Neoplasms; Spinal diseases; Pain; Surgical operations

291 NAL Call. No.: 410.9 P94
Tissue response to intramuscular and intraperitoneal injections of ketamine
and xylazine in rats.
Smiler, K.L.; Stein, S.; Hrapkiewicz, K.L.; Hiben, J.R.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1990 Jan.
Laboratory animal science v. 40 (1): p. 60-64. ill; 1990 Jan. Includes
references.

Language: English

Descriptors: Rats; Ketamine; Xylazine; Intramuscular injection; Intraperitoneal injection; Anesthesia; Lesions; Strain differences; Muscles; Necrosis

Abstract: Ketamine-xylazine is a widely accepted anesthetic combination for laboratory animals. Although frequently recommended for administration by intramuscular (IM) or intraperitoneal (IP) routes, the potential for tissue damage following either route of administration in the rat has not been investigated. This study evaluated tissue damage after IM use at two doses in Fischer 344 and Sprague-Dawley rats. Tissue reactions following IP injections of ketamine-xylazine were compared to lesions produced by IM injections in animals euthanized on 1, 3 and 14 days post-injection. Results showed muscle necrosis present in nearly all ketamine-xylazine injected limbs. Intraperitoneal injections produced no significant lesions in the peritoneal cavity when careful IP injection techniques were used. Ketamine-xylazine should not be administered by the IM route for survival procedures in these two widely used strains of rats.

292 NAL Call. No.: 41.8 V6456
Toxic hazards to cats.
Evans, R.J.
London : Scientifica; 1988.
The Veterinary annual v. 28: p. 251-260; 1988. Includes references.

Language: English

Descriptors: Cat; Poisoning; Toxic substances; Analgesics; Insecticides; Heavy metals; Ethylene glycol; Poisonous plants

293 NAL Call. No.: SF911.V43
Trigger points in 48 dogs with myofascial pain syndromes.
Janssens, L.A.A.
Hagerstown, Md. : J.B. Lippincott Company; 1991 Jul.
Veterinary surgery v. 20 (4): p. 274-278; 1991 Jul. Includes references.

Language: English

Descriptors: Dogs; Pain; Lameness; Anesthetics; Analgesics

294 NAL Call. No.: QL55.A1L3
The use lignocaine-prilocaine local anaesthetic cream for pain-free venepuncture in laboratory animals.
Flecknell, P.A.; Liles, J.H.; Williamson, H.A.
London : Royal Society of Medicine Services; 1990 Apr.
Laboratory animals v. 24 (2): p. 142-146; 1990 Apr. Includes references.

Language: English

Descriptors: Laboratory animals; Local anesthetics; Local anesthesia; Lidocaine; Intravenous injection; Ointments

Abstract: An assessment was made of the effects of topical application of a eutectic mixture of local anaesthetics (EMLA cream) in a number of species of laboratory animals. Application of EMLA cream enabled percutaneous insertion of catheters into the cephalic vein in dogs and cats and the marginal ear vein in rabbits without causing any detectable pain or discomfort. Application to the tail in rats prior to percutaneous cannulation of the lateral tail vein did not produce a significant reduction in the behavioural responses to venepuncture. EMLA cream represents a useful refinement of current techniques for intravenous injection in some species, and is especially valuable when the procedure is to be undertaken by an inexperienced operator.

295 NAL Call. No.: SF914.A53 1990
Use of analgesic for postsurgical pain in dogs and cats.
Sawyer, D.C.
Columbia, Md. : American College of Laboratory Animal Medicine, 1990? :; 1990.
Anesthesia and analgesia in laboratory animals : proceedings -- 1990 Forum, American College of Laboratory Animal Medicine, Columbia Inn, Columbia, Maryland, May 3-6, 1990. p. 93-99; 1990. Includes references.

Language: English

Descriptors: Dogs; Cats; Analgesics

296 NAL Call. No.: SF910.5.V4
Use of epidural morphine in the dog for pain relief.
Valverde, A.; Dyson, D.H.; McDonell, W.N.; Pascoe, P.J.
Stuttgart : F.K. Schattauer Publishers; 1989 Jun.
Veterinary and comparative orthopaedics and traumatology : V.C.O.T. v. 2 (2):
p. 55-58. ill; 1989 Jun. Includes references.

Language: English

Descriptors: Dogs; Morphine; Pain; Conduction anesthesia

297 NAL Call. No.: 410.9 P94
Use of ketamine-HCl anesthesia in studies of chylomicron-triglyceride
metabolism in the rat.
Brown, C.M.; Layman, D.K.
Cordova, Tenn. : American Association for Laboratory Animal Science; 1990 Mar.
Laboratory animal science v. 40 (2): p. 183-185; 1990 Mar. Includes
references.

Language: English

Descriptors: Rats; Anesthesia; Ketamine; Chylomicron lipids; Lipid metabolism;
Skeletal muscle; Heart; Kidneys

Abstract: Ketamine with 10% acepromazine (Km/Ac) was evaluated for use in an
investigation of plasma chylomicron-triglyceride clearance in rats. Clearance
rate and the half-life of radiolabeled (14C) chylomicron triglycerides plus
tissue uptake of 14C-fatty acids were equal in Km/Ac anesthetized and
non-anesthetized rats. Km/Ac was found to be a suitable anesthesia in rats for
the study of plasma chylomicron-triglyceride clearance.

298 NAL Call. No.: 41.8 AM3
Use of low-flow and closed-system anesthesia.
Wagner, A.E.; Bednarski, R.M.
Schaumburg, Ill. : The Association; 1992 Apr01.
Journal of the American Veterinary Medical Association v. 200 (7): p.
1005-1010; 1992 Apr01. Includes references.

Language: English

Descriptors: Dogs; Cats; Anesthesia; Oxygen; Flow

299 NAL Call. No.: QL55.A1L3
The use of non-steroidal anti-inflammatory drugs for the relief of pain in
laboratory rodents and rabbits.
Liles, J.H.; Flecknell, P.A.
London : Royal Society of Medicine Services; 1992 Oct.
Laboratory animals v. 26 (4): p. 241-255; 1992 Oct. Includes references.

Language: English

Descriptors: Rats; Mice; Rabbits; Pain; Antiinflammatory agents; Analgesics;
Dosage; Adverse effects

Abstract: The data concerning the use of non-steroidal anti-inflammatory
drugs (NSAIDs) and evidence for their efficacy in laboratory rats and mice are
reviewed. This information is then extrapolated to clinical situations and
dose rates that take account of ulcerogenic side effects are recommended.
NSAIDs have the potential to be a very useful group of analgesics and should
always be considered when attempting to provide pain relief in laboratory
animals.

300 NAL Call. No.: 391.8 F73
Use of ophthalmic topical anaesthetics.
Seabaugh, V.M.; Chambers, W.A.; Green, S.; Gupta, K.C.; Hill, R.N.; Hurley,
P.M.; Lambert, L.A.; Lee, C.C.; Lee, J.K.; Liu, P.T.
Exeter : Pergamon Press; 1993 Feb.
Food and chemical toxicology : an international journal published for the
British Industrial Biological Research Association v. 31 (2): p. 95-98; 1993
Feb. Workshop on "Updating Eye Irritation Test Methods: Proposals for
Regulatory Consensus," held September 26-27, 1991, Washington, D.C. Includes
references.

Language: English

Descriptors: Eyes; Anesthetics; Irritant properties; Testing; Topical application; Rabbits

301 NAL Call. No.: SF910.P34A55 1992
Use of opioids in providing postoperative analgesia in the dog: a double-blind trial of pethidine, pentazocine, buprenorphine, and butorphanol.
Waterman, A.E.; Kalthum, W.
New York : Churchill Livingstone; 1992.
Animal pain / edited by Charles E. Short, Alan Van Poznak. p. 466-476, 479; 1992. Includes references.

Language: English

Descriptors: Dogs; Opioids; Postoperative care; Analgesics; Trials; Pethidine; Anesthetics; Drug effects

302 NAL Call. No.: 41.8 AM3A
Use of pulsed-wave Doppler echocardiography to determine aortic and pulmonary velocity and flow variables in clinically normal dogs.
Brown, D.J.; Knight, D.H.; King, R.R.
Schaumburg, Ill. : American Veterinary Medical Association; 1991 Apr.
American journal of veterinary research v. 52 (4): p. 543-550. ill; 1991 Apr.
Includes references.

Language: English

Descriptors: Dogs; Echocardiography; Velocity; Blood flow; Normal values; Aorta; Pulmonary artery; Cardiac output; Hemodynamics

Abstract: Transcutaneous pulsed-wave Doppler echocardiography was used to obtain velocity signals from the aortic and pulmonary roots of clinically normal adult dogs tranquilized with acepromazine. Doppler-derived variables included peak ejection velocity, ejection time, and velocity-time integral. The cross-sectional areas of the left and right ventricular outflow tracts were estimated from diameters of the respective orifices measured from two-dimensional echocardiographic images. These data were used to calculate stroke volume and cardiac output for each ventricle. Linear, single variable regressions of ejection time, velocity-time integral, and peak velocity with body weight showed no significant correlations. Significant correlations existed between body weight and estimated left and right ventricular stroke volume and cardiac output. A close correspondence existed between pulmonary and aortic determinations of velocity-time integral, stroke volume, and cardiac output. These results provide an initial framework for interpretation of clinical data by veterinary cardiologists.

303 NAL Call. No.: SF601.J62
Use of the laboratory rabbit in the small animal student surgery laboratory.
Boothe, H.W.; Hartsfield, S.M.
Blacksburg, Va. : The Association of American Veterinary Medical Colleges; 1990.
Journal of veterinary medical education v. 17 (1): p. 16-18; 1990. Includes references.

Language: English

Descriptors: Veterinary education; Surgery; Rabbits; Anesthesia; Surgical operations; Learning experiences; Animal anatomy; Animal testing alternatives

304 NAL Call. No.: SF601.C66
Using bupivacaine hydrochloride for lumbosacral epidural analgesia.
Heath, R.B.; Broadstone, R.V.; Wright, M.; Grandy, J.L.
Lawrenceville, N.J. : Veterinary Learning Systems Company; 1989 Jan.
The Compendium on continuing education for the practicing veterinarian v. 11 (1): p. 50-52, 54-55. ill; 1989 Jan. Includes references.

Language: English

Descriptors: Dogs; Limbs; Surgery; Analgesics; Anesthesia; Loins; Spines

305 NAL Call. No.: 41.8 AM3
Vaporizer in circle for delivery of isoflurane to dogs.
Bednarski, R.M.; Gaynor, J.S.; Muir, W.W. III
Schaumburg, Ill. : The Association; 1993 Mar15.
Journal of the American Veterinary Medical Association v. 202 (6): p. 943-948; 1993 Mar15. Includes references.

Language: English

Descriptors: Dogs; Anesthetics; Vaporization; Veterinary equipment; Drug delivery systems; Safety

306 NAL Call. No.: 41.8 J8292

Vecuronium infusion in the dog.

Jones, R.S.; Young, L.E.

London : British Small Animal Veterinary Association; 1991 Oct.

The Journal of small animal practice v. 32 (10): p. 509-512; 1991 Oct.

Includes references.

Language: English

Descriptors: Dogs; Muscle relaxants; Anesthesia; Dosage; Neostigmine; Atropine

307 NAL Call. No.: 41.8 AM3A

Ventricular arrhythmogenic dose of epinephrine in dogs and cats anesthetized with tiletamine/zolazepam and halothane.

Bednarski, R.M.; Muir, W.W. III

Schaumburg, Ill. : American Veterinary Medical Association; 1990 Sep.

American journal of veterinary research v. 51 (9): p. 1468-1470; 1990 Sep.

Includes references.

Language: English

Descriptors: Dogs; Cats; Epinephrine; Dosage; Arrhythmia; Halothane; Injectable anesthetics; Anesthesia

Abstract: The ventricular arrhythmogenic dose of epinephrine (ADE) was determined in 6 dogs anesthetized with halothane alone or with halothane after injection of tiletamine/zolazepam (TZ). Respiratory rate and tidal volume were controlled and sodium bicarbonate was administered to maintain arterial pH and blood gas values within reference range. Heart rate and arterial blood pressure were recorded during determination of the ADE. The ADE (mean +/- SD) was no different during anesthesia with use of halothane alone (8.9 +/- 4.3) than it was when injections of TZ preceded administration of halothane (6.7 +/- 2.8). Tiletamine/zolazepam was also administered IV immediately after determination of the ADE during halothane-induced anesthesia. The TZ administered in this manner did not alter the ADE. Blood pressure and heart rate were significantly greater during infusion of epinephrine than immediately prior to infusion. The administration of TZ did not alter blood pressure response. The ADE was also determined in 6 cats anesthetized with halothane preceded by administration of TZ. The ADE (mean +/- SD) was 0.7 +/- 0.23 microgram/kg, a value similar to that reported for cats during anesthesia with halothane alone.

308 NAL Call. No.: SF601.C66

The veterinarian's responsibility: assessing and managing acute pain in dogs and cats. I.

Johnson, J.M.

Trenton, N.J. : Veterinary Learning Systems Company; 1991 May.

The Compendium on continuing education for the practicing veterinarian v. 13 (5): p. 804-807; 1991 May. Includes references.

Language: English

Descriptors: Dogs; Cats; Pain; Treatment; Animal welfare; Postoperative care

309 NAL Call. No.: SF601.C66

The veterinarian's responsibility: assessing and managing acute pain in dogs and cats. II.

Johnson, J.M.

Trenton, N.J. : Veterinary Learning Systems Company; 1991 Jun.

The Compendium on continuing education for the practicing veterinarian v. 13 (6): p. 911-916, 921; 1991 Jun. Includes references.

Language: English

Descriptors: Dogs; Cats; Pain; Analgesics; Animal welfare; Opioids; Drug combinations; Postoperative care

310 NAL Call. No.: 41.8 V641

Xylazine or medetomidine premedication before propofol anaesthesia.

Cullen, L.K.; Reynoldson, J.A.
London : The Association; 1993 Apr10.
The Veterinary record : journal of the British Veterinary Association v. 132
(15): p. 378-383; 1993 Apr10. Includes references.

Language: English

Descriptors: Dogs; Preanesthetic medication; Anesthetics

311 NAL Call. No.: 391.8 T662
Xylazine-induced pulmonary edema in rats.
Amouzadeh, H.R.; Sangiah, S.; Qualls, C.W. Jr; Cowell, R.L.; Mauromoustakos, A.
Orlando, Fla. : Academic Press; 1991 May.
Toxicology and applied pharmacology v. 108 (3): p. 417-427; 1991 May.
Includes references.

Language: English

Descriptors: Xylazine; Drug toxicity; Lungs; Edema; Etiology; Rats

Abstract: Inhibitors of cytochrome P450, such as SK&F 525-A, prolong the duration of xylazine-ketamine anesthesia and cause pulmonary edema (PE) and death in rats. To determine the cause of PE, Sprague-Dawley rats were given a single dose of xylazine (21 mg/kg, im) alone or in combination with ketamine (45 mg/kg, im) and/or SK&F 525-A (50 mg/kg, ip) and percentage lung to body weight (%LW/BW) ratios (as an indicator of PE) were compared. The results indicated that xylazine caused PE which was independent of ketamine and was enhanced by SK&F 525-A. Subsequently, it was determined that 42 mg/kg xylazine, im, is an optimal edemagenic dose. Xylazine (42 mg/kg, im) increased the %LW/BW ratio as compared to control. Pleural effusion (PLE) of various amounts was observed in 75% of the animals. The pleural fluid to serum protein ratio for xylazine was similar to that obtained for alpha-naphthylthiourea (5 mg/kg, ip). Extensive serous PLE and alveolar edema with hemorrhage were found at necropsy in xylazine-treated rats. Pretreatment with yohimbine (4.2 mg/kg), prazosin (20 mg/kg), tolazoline (20 mg/kg), yohimbine (4.2 mg/kg) plus prazosin (20 mg/kg), atropine (20 mg/kg), dimethyl sulfoxide (DMSO) (7.8 g/kg), allopurinol (50 mg/kg), superoxide dismutase (20,000 U/kg), catalase (20,000 U/kg), BW755C (50 mg/kg), ibuprofen (50 mg/kg), cystathionine (100 mg/kg) plus taurine (100 mg/kg) did not affect the %LW/BW ratio. PLE was increased by yohimbine, yohimbine plus prazosin, and allopurinol, reduced by DMSO, and not changed in other groups. The results indicate that xylazine caused increased-permeability PE characterized by rapid onset, cellular damage and protein-rich pleural fluid. PE may not be mediated by adverse cardiovascular effects of xylazine and oxygen radicals are possibly involved in its etiology.

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