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Stings, bites and venoms – a selection of references from CAB Abstracts database

<5>
Accession Number
20163122337
Author
Gamble, L.
Title
Are we doing enough and how can vets help? Rabies surveillance, stray dogs and disease control.
Source
European Journal of Companion Animal Practice; 2016. 26(1):4-9. 7 ref.
Publisher
Federation of European Companion Animal Veterinary Associations (FECAVA)
Location of Publisher
Paris
Country of Publication
France
Abstract
Rabies is a fatal zoonosis, mainly transmitted through bites of dogs infected with rabies. The disease occurs in over 150 countries wide, with over one third of victims (25,000) in India, in particular in children. The disease is entirely preventable by vaccinating dogs and by a solid epidemiological approach.
Publication Type
Journal article
Conference paper.

<6>
Accession Number
20163104355
Author
Martins, B. C.; Plummer, C. E.; Gelatt, K. N.; Brooks, D. E.; Czerwinski, S. E.; Monk, C.; Greenberg, S. M.; Mangan, B. G.; Londono, L.; Bolfer, L.; Bandt, C.; Schaer, M.
Title
Ophthalmic abnormalities secondary to periocular or ocular snakebite (pit vipers) in dogs - 11 cases (2012-2014).
Source
Veterinary Ophthalmology; 2016. 19(2):149-160. 31 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Objective: To describe ophthalmic abnormalities secondary to periocular and ocular snakebite in dogs. Animal Studied: Retrospective review of medical records from dogs presenting to the Small Animal Hospital at University of Florida following snakebites to the face (2012-2014). Two groups were identified: periocular bites (PB) and ocular bites (OB). Results: Records from eleven dogs matched the search criteria and were

included in the study (PB=9, 81.8%; OB=2, 18.2%). Both OB cases involved the cornea. Facial edema, blepharospasm, chemosis, and conjunctival hyperemia occurred in all cases (100%). Hemorrhage from the eyelids occurred in eight cases (72.7%; PB=7, OB=1). Subconjunctival hemorrhage occurred in seven cases (63.6%; PB=6, OB=1). Third eyelid laceration and nictitans gland prolapse occurred in 1 case each (9%; PB=1). Lagophthalmia was present in three cases (27.3%; PB=3), with secondary corneal ulcer in two cases (18.2%; PB=2). Corneal ulcer due to direct corneal bite occurred in two cases (18.2% - partial thickness with melting 1 and full thickness 1). Uveitis was present in 6 cases (54.5%; PB=4, OB=2), with flare and miosis in 4 cases (36.4%; PB=2, OB=2). Hyphema, fibrin in anterior chamber, and cataract occurred in one case (9%; OB=1). Vision loss occurred in two cases (18.2%; PB=2), secondary to retinal degeneration (PB=1) and amaurosis (PB=1). Mean follow-up time was 7 weeks (range: 3 days-11 months). Most clinical signs had resolved by last examination. Conclusions:: Periocular symptoms were more commonly observed than ocular alterations, regardless of bite location. Appropriate supportive therapy should be instituted according to clinical signs.
Publication Type
Journal article.

<7>
Accession Number
20153289760
Author
Carr, A.; Schultz, J.
Title
Prospective evaluation of the incidence of wound infection in rattlesnake envenomation in dogs.
Source
Journal of Veterinary Emergency and Critical Care; 2015. 25(4):546-551. 33 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Objective: To evaluate the incidence of wound infection following crotalidae envenomation in dogs and determine if the use of prophylactic antibiotics is warranted. Design: Prospective observational study. Setting: A 24-hour private practice specialty and emergency center in Murrieta, California. Animals: One hundred and two dogs with acute rattlesnake envenomation. Interventions: One hundred and forty-three consecutive cases of suspected acute rattlesnake envenomation were evaluated between March of 2012 and May of 2013. One hundred and two cases received no antimicrobials as part of management. Eight cases were placed on prophylactic antimicrobials by the primary care veterinarian prior to referral and were excluded. Two cases were excluded because they were initiated on antimicrobials during hospitalization for reasons unrelated to snakebite. Three cases involved cats and were excluded. Three patients died acutely near the time of presentation and were excluded. Twenty-one cases of suspected envenomation were excluded for lack of strong evidence of snakebite. Four cases were lost to follow-up and were excluded. Follow-up was conducted within 2 weeks either by phone or by direct inspection of the wound. Results: Of the 102 patients included in the study only 1 infection developed. This patient developed an abscess subsequent to suspected compartment syndrome. Conclusion: The incidence of wound infection in rattlesnake envenomation is low, and the use of prophylactic antimicrobials is not recommended. The use of antimicrobials should be reserved for wounds with necrosis or abscess and the choice of antimicrobial should be based on a culture and sensitivity of the wound.
Publication Type
Journal article.

<8>
Accession Number
20153107177
Author
Mughal, M. N.; Ghazanfar Abbas; Muhammad Saqib; Ghulam Muhammad
Title
Massive attack by honeybees in a German shepherd dog: description of a fatal case and review of the literature.
Source
Journal of Venomous Animals and Toxins including Tropical Diseases; 2014. 20(55):(13 December 2014). 26 ref.
Publisher
BioMed Central Ltd
Location of Publisher
London
Country of Publication
UK
Abstract
In the present study, a fatal case caused by honeybee (Apis cerana) stings was documented in a female German shepherd dog that was presented at the Veterinary Teaching Hospital, University of Agriculture Faisalabad, Pakistan. Characteristic clinical signs included hematuria, hematemesis, incoordination and convulsions along with evidence of massive honeybee attack supported the diagnosis of envenomation. The dog was treated with dexamethasone and diphenhydramine, but it did not respond to therapy and died. This outcome could be avoided if we had a bee antivenom available for treating envenomated patients.
Publication Type
Journal article.

<9>
Accession Number
20153022595
Author
Nagel, S. S.; Schoeman, J. P.; Thompson, P. N.; Wiinberg, B.; Goddard, A.
Title
Hemostatic analysis of dogs naturally envenomed by the African puffadder (Bitis arietans) and snouted cobra (Naja annulifera).
Source
Journal of Veterinary Emergency and Critical Care; 2014. 24(6):662-671. 38 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Objective: To investigate hemostatic changes in dogs envenomed by cytotoxic (African puffadder) and neurotoxic snakes (snouted cobra) using thromboelastography (TEG) and plasma-based coagulation assays. Design: Prospective observational clinical study. Setting: University teaching hospital. Animals: Eighteen client-owned dogs; 9 envenomed by African puffadder (Bitis arietans) and 9 by snouted cobra

(Naja annulifera). Ten healthy dogs served as controls. Interventions: None. Measurements and Main Results: Blood was collected at presentation and 24 hours post envenomation. Platelet count, TEG, prothrombin time, activated partial thromboplastin time (aPTT), antithrombin activity, and fibrinogen (Fib) and C-reactive protein (CRP) concentrations were measured. Outcomes were analyzed using linear mixed models at 5% significance. At presentation, R time was significantly prolonged in the puffadder group compared to the cobra (P=0.01) and control groups (P=0.05). Platelet count was significantly lower in the puffadder compared to the cobra (P=0.04) and control groups (P=0.001), respectively. Antithrombin activity was significantly decreased in the puffadder (P=0.002) and cobra groups (P=0.004) compared to the control group. Both prothrombin time and activated partial thromboplastin time were significantly prolonged in the cobra group compared to the control group (P=0.03 for both). The TEG variables, maximum amplitude (MA) and G, were significantly increased 24 hours post envenomation in the puffadder group compared to their values at presentation (P=0.05 for both). Fib and CRP concentrations were significantly increased 24 hours post envenomation in both snake-envenomed groups. Conclusions: Prolonged clot initiation was a common feature in puffadder-envenomed dogs at presentation and this was likely venom induced. Snouted cobra-envenomed dogs were normo- to hypercoagulable at presentation. Dogs from both puffadder and cobra groups progressed to a more hypercoagulable by 24 hours post envenomation, most likely due to marked inflammation as indicated by the increased Fib and CRP concentrations. TEG proved a sensitive tool for detecting abnormal hemostasis in snake-envenomed dogs.
Publication Type
Journal article.

<10>
Accession Number
20143323592
Author
Lenchner, I.; Aroch, I.; Segev, G.; Kelmer, E.; Bruchim, Y.
Title
A retrospective evaluation of Vipera palaestinae envenomation in 18 cats: (2006-2011).
Source
Journal of Veterinary Emergency and Critical Care; 2014. 24(4):437-443. 46 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Objective: To describe the clinical signs, clinicopathologic abnormalities, treatment, complications and outcome, and to identify risk factors for death in cats envenomed by Vipera palaestinae (Vp). Design Retrospective study. Setting: Veterinary teaching hospital. Animals Eighteen client-owned cats envenomed by Vp. Interventions None. Measurements and Main Results All envenomations occurred during the hot season (May to October), mostly in young (<4 years, 66%) domestic shorthair, outdoor or indoor-outdoor cats. Clinical signs included tachypnea (>40/min, 100%), lameness (78%), depression (71%), fang penetration marks (55%), hypothermia (<37.5 degrees C, 43%), hematoma at the envenomation site (27%), tachycardia (>220/min, 20%), and bradycardia (<140/min, 20%). Hematologic abnormalities included thrombocytopenia (89%), hemoconcentration (33%), and leukocytosis (33%). The activated partial thromboplastin and prothrombin times were prolonged in 100% and in 93% of the cats at presentation to a veterinarian, and remained prolonged 12-24 hours later in 92% and in 77% of the cats, respectively. Cats displayed increased serum creatine kinase activity (100%) and hyperglycemia (89%). Four cats (22%) did not survive. Median hospitalization time was 2 days. Variables associated with death included lower body weight (P=0.01), lower initial rectal temperature (P=0.02), lower initial hematocrit (P<0.001) and 12-24 hours later (P=0.001), and lower total plasma protein at 12-24 hours following presentation (P=0.001). There was

no association between death and administration of antivenom (10 mL/cat), fresh frozen plasma, or corticosteroids. Conclusions: Cats are at least as susceptible as dogs to Vp envenomation. Lower body weight, rectal temperature, and hematocrit at presentation were associated with nonsurvival.
Publication Type
Journal article.

<11>
Accession Number
20143243105
Author
Camplesi, A. C.; Albernaz, S. S.; Burger, K. P.; Moya-Araujo, C. F.
Title
Accidents caused by spider bites. (Special Issue: Spiders research.)
Source
Open Journal of Animal Sciences; 2014. 4(3):113-117. 26 ref.
Publisher
Scientific Research Publishing
Location of Publisher
Irvine
Country of Publication
USA
Abstract
Accidents caused by spider bites occur in many countries and represent a public health problem due to their high severity and occurrence of fatal accidents. In Veterinary Medicine, the incidence of arachnidism is considered nonexistent in large animals, as their thick skin cannot be pierced, rare in cats and common in dogs, particularly due to their exploratory and curious habit, and the habitats of venomous animals, such as the arachnids, located close to urban areas. The aim of this review is to describe the characteristics and distribution of spiders, the mechanism of action of the venom, clinical signs, diagnosis and treatment of accidents caused by arachnids of genera Loxosceles sp., Phoneutria sp., Latrodectus sp., and suborder Mygalomorphae.
Publication Type
Journal article.

<12>
Accession Number
20143189614
Author
Swaran; Randhawa, S.; Chhabra, S.; Randhawa, C. S.; Uppal, S. K.; Chand, N.; Bansal, B. K.; Dua, K.; Kumar, D.; Amol, S.
Title
Therapeutic management of bee stinging in horses.
Source
Veterinary Practitioner; 2013. 14(1):67-69. 9 ref.
Publisher
Veterinary Practitioner, c/o Dr. A. K. Gahlot
Location of Publisher
Bikaner
Country of Publication

India
Abstract
Bee stinging is a life threatening emergency in animals. Two mares aged 7 and 9 years and a male horse aged 11 years were presented in the Large Animal Clinics of the Teaching Veterinary Hospital of GADVASU with the history of multiple bee stinging after giving primary treatment with antihistaminics, corticosteroids and epinephrine. The clinical examination revealed icteric mucus membrane, haemoglobinuria along with oedematous swellings of approximately 3-4 cm diameter on the whole body surface and limbs including head and neck. Haematological findings in all the animals revealed leucocytosis along with mild left shift. Liver function tests revealed increased bilirubin and AKP and normal AST in two horses (could not be analysed in third one). BUN and creatinine was normal in two horses but elevated in the 3rd horse. Blood smear was negative for any haemoprotozoan parasite. Routine examination of urine revealed traces of protein and blood with plenty of urothelial cells, granular casts and debris but in the 3rd horse with elevated creatinine level, there were few leucocytes in addition. Urine examination also revealed haemoglobinuria. The horses responded well to fluid therapy with normal saline solution @ 30 ml/kg b.wt. i/v daily along with antibiotic treatment with ampicillin @10 mg/kg i/m twice daily and supportive therapy with liver extract and antioxidants. Two of the three horses recovered within 6 days while the third horse took at least two more weeks to recover from azotaemia.
Publication Type
Journal article.

<13>
Accession Number
20143152507
Author
Langhorn, R.; Persson, F.; Ablad, B.; Goddard, A.; Schoeman, J. P.; Willesen, J. L.; Tarnow, I.; Kjelgaard-Hansen, M.
Title
Myocardial injury in dogs with snake envenomation and its relation to systemic inflammation.
Source
Journal of Veterinary Emergency and Critical Care; 2014. 24(2):174-181. 39 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Objective: To investigate the presence of myocardial injury in dogs hospitalized for snake envenomation and to examine its relationship with systemic inflammation. Design: Prospective case-control study. Setting: University teaching hospital and small animal referral hospital. Animals: Dogs naturally envenomed by the European viper (Vipera berus; n=24), African puff adder (Bitis arietans; n=5), or snouted cobra (Naja annulifera; n=9). Interventions: Blood was collected from dogs envenomed by V. berus at admission, 12-24 hours postadmission, and 5-10 days postadmission. Blood was collected from dogs envenomed by B. arietans or N. annulifera at admission, and 12, 24, and 36 hours postadmission. Measurements and Main Results: Concentrations of cardiac troponin I (cTnI), a marker of myocardial injury, and C-reactive protein (CRP), a marker of systemic inflammation, were measured in each blood sample. Evidence of myocardial injury was found in 58% of dogs envenomed by V. berus at one or more time points. A significant correlation between cTnI and CRP concentrations was found at all time points. Evidence of myocardial injury was found in 80% of dogs envenomed by B. arietans at one or more time points; however, no correlation was found between cTnI and CRP concentrations. Evidence of myocardial injury was found in 67% of dogs envenomed by N. annulifera at one or more time points. A significant correlation between cTnI and CRP concentrations was found at admission, but not at other time points. Conclusions: Myocardial injury frequently occurred in

dogs with snake envenomation. While the degree of systemic inflammation was significantly correlated with degree of myocardial injury in V. berus envenomation at all time points, this was not the case in dogs envenomed by N. annulifera or B. arietans. This could be due to differences in the toxic substances of the snake venoms or to differences in the cytokines induced by the venom toxins.
Publication Type
Journal article.

<14>
Accession Number
20143152503
Author
Armentano, R. A.; Bandt, C.; Schaer, M.; Pritchett, J.; Shih, A.
Title
Thromboelastographic evaluation of hemostatic function in dogs treated for crotalid snake envenomation.
Source
Journal of Veterinary Emergency and Critical Care; 2014. 24(2):144-153. 29 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Objective: To characterize the overall hemostatic changes in dogs envenomated by crotaline snakes via kaolin-activated thromboelastography (TEG), and to determine any prognostic/monitoring value from a TEG tracing on presentation, as well as during treatment with antivenom therapy. Design: Prospective observational, cohort study. Setting: University teaching hospital and primary emergency hospital. Animals: Thirty-eight dogs envenomated by crotaline snakes. Interventions: TEG tracings were evaluated on presentation to the hospital (pre) as well as immediately following (post) and 12 hours (12 h post) after antivenom treatment, if administered. Measurements and Main Results: At presentation, data were available for 38 dogs envenomated by crotaline snakes. Twenty dogs were in Group 1 (Antivenin [Crotalidae] Polyvalent antivenom), 12 dogs were in Group 2 (Antivipmyn antivenom), and 6 dogs in Group 3 that were not treated with antivenom. The average number of vials administered to group 1 and 2 were equal at 2.2. On presentation, based on a G value < TEG reference range, 15/38 (39%) of the dogs had hypocoagulable TEG tracings. There was a significant increase in G and MA value from the pre and 12 hour post measurement (P=0.0001 and 0.0003, respectively), as well as from the post to 12 hour post measurement (P=0.003 and, 0.014, respectively). During the study, 5 of 38 dogs died (13%) and of the dogs that died, 4/5 (80%) had angle and MA equal to zero on presentation. A decreased G and MA were significantly associated with mortality (P=0.02 and 0.04, respectively). Conclusions: A hypocoagulable TEG tracing, particularly a decreased G value and MA, is associated with an increased mortality in crotaline snake envenomation. G and MA also demonstrate a significant increase over treatment time.
Publication Type
Journal article.

<15>
Accession Number
20133352318
Author

Messam, L. L. McV.; Kass, P. H.; Chomel, B. B.; Hart, L. A.
Title
Age-related changes in the propensity of dogs to bite.
Source
Veterinary Journal; 2013. 197(2):378-387. 35 ref.
Publisher
Elsevier Ltd
Location of Publisher
Oxford
Country of Publication
UK
Abstract
This retrospective cohort study was aimed at describing the effects of age at acquisition, age, and duration of ownership of dogs on the risk of (1) bites during play and (2) non-play bites to humans. Data were collected on 110 dogs that had bitten during play with a person, 161 dogs that had bitten outside of play and 951 non-biting dogs from veterinary clients in Kingston (KGN), Jamaica and San Francisco (SF), USA. Modified Poisson regression was employed to model the relationships of both types of bites to each variable separately. Effects of the variables on dog bite risk (1) during and (2) outside of play with the dog, differed from each other and by type of bite. Effects varied with the dog's age and age-related associations were strongest in dogs younger than 1 year old. Ages at acquisition of dogs at highest risk for bites during play were substantially lower than those at risk for non-play bites. Ages and durations of ownership of dogs at highest risk for bites during play were also lower than those of dogs at highest risk for non-play bites. The propensity of a dog to bite changes as it ages and relationships between dog bites occurring during and outside of play and the dog's age at acquisition, current age, and duration of ownership, differ from each other.
Publication Type
Journal article.

<16>
Accession Number
20123217352
Author
O'Dwyer, L.
Title
How to care for the bite wound patient.
Source
The Veterinary Nurse; 2012. 3(5):306...312. 14 ref.
Publisher
MA Healthcare Limited
Location of Publisher
London
Country of Publication
UK
Abstract
Bite wounds are commonly encountered in veterinary practice, and their initial management can make the difference between a successful case and one which proves problematic. These wounds can result in a detrimental cascade of physiological responses to the original injury including systemic inflammatory response syndrome (SIRS) and multiple organ dysfunction syndrome (MODS). These wounds require careful assessment, exploration and management and the systemic effects of the injury should also be considered as a priority. Correct and timely management of the bite wound patient can result in a positive outcome but severe cases rely heavily on close and careful assessment and monitoring of the patient as a whole.

Publication Type
Journal article.

<17>
Accession Number
20113392577
Author
Sutton, N. M.; Bates, N.; Campbell, A.
Title
Canine adder bites in the UK: a retrospective study of cases reported to the Veterinary Poisons Information Service.
Source
Veterinary Record; 2011. 169(23):607.
Publisher
BMJ Publishing Group
Location of Publisher
London
Country of Publication
UK
Abstract
This retrospective study examined cases with follow-up reported to the Veterinary Poisons Information Service (VPIS) between September 1985 and December 2010. Most bites (69.2 per cent) occurred between April and July, particularly between 15:00 and 16:00 hours. Adder bites were more frequently reported in the south-east of England, particularly in Surrey. Swelling to the face and limbs was common, as was lethargy, depression, hyperthermia and tachycardia. About two-thirds of dogs developed both systemic and local effects, while a third developed local effects alone. Initial clinical effects usually occurred within two hours, with full recovery typically occurring five days after the bite. Antivenom was used in 55.9 per cent of cases and appeared to significantly reduce duration of oedema from an average of 94 to 47 hours. Adder bites can cause significant morbidity (97 per cent of dogs were symptomatic), but mortality is low (4.6 per cent died).
Publication Type
Journal article.

<18>
Accession Number
20113363385
Author
Armentano, R. A.; Schaer, M.
Title
Overview and controversies in the medical management of pit viper envenomation in the dog.
Source
Journal of Veterinary Emergency and Critical Care; 2011. 21(5):461-470. 81 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract

Objective - To provide a review and update on the medical management of pit viper envenomation in dogs. Etiology - Pit viper snake (Crotalidae) envenomation in dogs is a common emergency in the United States. At least 50 enzymes contribute to snake venom potency that causes soft tissue damage, vasculotoxicity, coagulopathy, cytotoxicity, and necrosis. Diagnosis - Snakebite envenomation may be identified by fang puncture wounds but primarily as a focal site with a rapid onset of severe swelling, hemorrhage, pain, and potentially necrosis. Crotalid venom causes hematologic abnormalities, local tissue damage, hypotension, and occasionally neurological impairment. The most marked hematologic abnormalities include thrombocytopenia, hemolytic anemia, and various forms of coagulopathy, including defibrination without disseminated intravascular coagulation (in North America), summarized as a venom-induced coagulopathy. Therapy - The mainstay of treatment includes intravenous crystalloid fluid therapy, antivenom, and analgesic medications. Currently available antivenom products include a mixed polyvalent Antivenin (Crotalidae) Polyvalent (ACPa), and Crotalinae polyvalent immune Fab (Crofabb). There are products from Mexico and Costa Rica that have limited availability, a similar imported Fab product (Antivipmync), and a polyspecific antivenom (Polyvet-ICPd), respectively. Glucocorticoids, nonsteroidal antiinflammatory drugs (NSAIDs) and antihistamines are not included in the majority of recommended treatment protocols by world authorities; however, there are some reports that describe their use. Antimicrobial therapy and blood products are used only when clinically indicated. There is a vaccine available, but at present, it is of unknown efficacy because of a lack of documented scientific information. Prognosis - Mortality from North American crotalid envenomation is generally rare and is influenced by several variables, including the amount of venom injected, the size and species of snake, the size of the victim, the location of the bite, time elapsed until treatment, and the therapy initiated. Mortality rates range from 1% to 30%.
Publication Type
Journal article.

<19>
Accession Number
20103185765
Author
Brooks, A.; Moxon, R.; England, G. C. W.
Title
Incidence and impact of dog attacks on guide dogs in the UK.
Source
Veterinary Record; 2010. 166(25):778-781. 12 ref.
Publisher
BMJ Publishing Group
Location of Publisher
London
Country of Publication
UK
Abstract
In a retrospective survey, researchers identified 100 incidents of attacks on guide dogs by other dogs. These were reviewed in order to determine the number, severity and impact on the handler and dog, and the characteristics of the aggressors and victims. During the study period there were more than three attacks reported each month, with 61 per cent of the attacks being upon dogs that were in harness and working with an owner or trainer. The majority of the dogs that were attacked were male (62 per cent), and the breeds that were over-represented (relative to their prevalence in the general guide dog population) were the labrador and the golden retriever x flat-coated retriever crossbreed. Most of the attacks occurred in public places between 09.00 and 15.00 and the majority (61 per cent) of the attacking dogs were off the lead at the time of the attack. Thirty-eight per cent of the attacking dogs were of bull breeds, which were over-represented among attackers compared with the proportion of this breed type in the general dog population. Veterinary attention was sought after 41 per cent of the attacks, and in 19 per cent of instances there was injury to the handler or to a member of the public. The attacks were reported to have affected the working performance

and behaviour of the victim dog in 45 per cent of the instances, and two dogs had to be subsequently withdrawn from working as guide dogs.
Publication Type
Journal article.

<20>
Accession Number
20083213725
Author
Petel, S.
Title
How to handle viper envenomation in dogs and cats. [French]
Source
Le Nouveau Praticien Veterinaire Canine - Feline; 2007. (33):61-66. 16 ref.
Publisher
NEVA Europarc
Location of Publisher
Creteil
Country of Publication
France
Abstract
In France, the majority of viper bites of cats and dogs occur between April and October, with 60% of bites taking place between 2 pm and 10 pm - the active period for vipers and a common time for walking dogs. Dogs account for 90% of animals bitten by vipers and cats <10%. Approximately 75% of bites affect the faces or necks of dogs. A system developed by the Pasteur Institute for grading the seriousness of snake bites has been adapted for animal use, and is used for evaluating victims and determining the appropriate treatment. When envenomation has occurred, the most frequent biological signs are thrombocytopenia, haemoconcentration, leukocytosis, anaemia and hypertriglyceridaemia. A diagnosis of a snake bite is generally easy to establish. An ELISA diagnostic test is available to confirm this diagnosis in humans, but is not available for animals. In dogs, viper envenomation is fatal in 3.5-5% of cases. Factors associated with high mortality rates include: (1) bites on limbs; (2) small size of victims; and (3) thrombocytopenia (<200 x 103 cells/ml) on admission. Veterinary treatment initially focuses on assessing the severity of envenomation. Non-specific therapeutic measures include: correcting hypovolaemic shock by fluid therapy; treating digestive troubles such as vomiting and diarrhoea; correcting hydro-electrolytic imbalances; and treating haematological symptoms (e.g. haemolysis, haemorrhagic syndrome or hypoalbuminaemia) with transfusions. Heparinotherapy does not have proven effectiveness against snake bites and should not be used. Corticoids are also ineffective against this type of envenomation, and may in fact increase the risk of mortality. In France, the only antivenom available for humans is Viperfav. However the use of Viperfav in veterinary medicine is limited by its limited availability and high cost. In countries such as Israel and the United States, polyvalent antivenoms are used for treating dogs with grade 2 and 3 envenomation.
Publication Type
Journal article.

<21>
Accession Number
20083206590
Author
Ben-Yakir, S.

Title
Veterinary apitherapy - or the therapy that stings.
Source
Small animal and exotics. Proceedings of the North American Veterinary Conference, Volume 22, Orlando, Florida, USA, 2008; 2008. :5-6.
Publisher
The North American Veterinary Conference
Location of Publisher
Gainesville
Country of Publication
USA
Publication Type
Conference paper.

<22>
Accession Number
20073294073
Author
Kumru, I. H.; Seyrek-Intas, K.; Tuna, B.; Celimli, N.; Seyrek-Intas, D.
Title
Severe abdominal dog bite wounds in a pregnant cat.
Source
Journal of Feline Medicine and Surgery; 2007. 9(6):499-502. 20 ref.
Publisher
Elsevier
Location of Publisher
Amsterdam
Country of Publication
Netherlands
Abstract
Bite wounds are one of the most common reasons for admission of cats to veterinary clinics. Appropriate wound management seems to be more important in the successful outcome of bite wound injuries than antibiotic therapy alone. This report describes a heavily pregnant cat that suffered severe abdominal bite wounds necessitating treatment with extensive surgery. A necrotic herniated kidney, abdominal wall hernias, internal peritoneal ruptures and fracture of the thirteenth rib, gravid cornu rupture, an extrauterine dead foetus and its free kidney were all observed at laparotomy. At surgery the extrauterine dead foetus was removed, and two live foetuses were retrieved by en bloc ovariohysterectomy. A right nephrectomy and partial costectomy were also performed. Two weeks postoperatively, the cat had fully recovered without a problem. Bite wounds encountered in cats, though severe and invasive, can be tolerated and extensive surgical management can result in successful outcomes even under suboptimal conditions.
Publication Type
Journal article.

<23>
Accession Number
20073232782
Author
Palanivel, K. M.; Sathiamoorthy, T.; George, R. S.; Nagarajan, B.; Ganesh, T. N.

Title
Snake bite and its treatment in dogs and cats.
Source
Indian Veterinary Journal; 2007. 84(7):739-740. 7 ref.
Publisher
Indian Veterinary Association
Location of Publisher
Chennai
Country of Publication
India
Abstract
This study describes canine and feline snake bite cases brought to the Emergency and Critical Care Unit of the Madras Veterinary College Teaching Hospital between June 2004 and July 2005. A total of 14 dogs of various breeds and three non-descript cats were presented to the hospital with history of snake bite. Clinical signs included dyspnoea, pale mucous membranes, low pulse rate, subnormal temperature, severe vomiting with milk tetanic spasms and loss of sensation at the site of bite. The fang marks were observed on the face and forelegs, and the area around the bite marks was swollen and bruised. Snake antivenin serum (Sii polyvalent) in an enzyme refined and concentrated preparation of equine globulin, was administered at 10 ml IV (single dose). Lactated ringers and normal saline were also given along with broad spectrum antibiotics and analgesics. Ten dogs (71.4%) and one cat (33%) survived after administration of the snake antivenin.
Publication Type
Journal article.

<24>
Accession Number
20073127202
Author
Landolt, G. A.
Title
Management of equine poisoning and envenomation. (Trauma and emergency care.)
Source
Veterinary Clinics of North America, Equine Practice; 2007. 23(1):31-47. 74 ref.
Publisher
W.B. Saunders
Location of Publisher
Philadelphia
Country of Publication
USA
Abstract
This article reviews the treatment steps that should be considered during the management of horses experiencing poisoning or envenomation (immediate emergency intervention, aggressive decontamination, supportive care and careful monitoring of the animal). The principles in the management of equine poisoning and envenomation are presented. In most cases, treatment of the animal must begin before an aetiologic diagnosis is established. Therefore, medical therapy should be focused on the clinical signs exhibited by the affected horse and should be based on sound veterinary medical principles.
Publication Type
Journal article.

<25>
Accession Number
20073109952
Author
Najman, L.; Seshadri, R.
Title
Rattlesnake envenomation.
Source
Compendium Continuing Education for Veterinarian; 2007. 29(3):166-177. 44 ref.
Publisher
Veterinary Learning Systems
Location of Publisher
Yardley
Country of Publication
USA
Abstract
Snake envenomation has been widely reported throughout the human and veterinary literature. The effects of venom include coagulation disorders, neurotoxicity, and tissue effects, such as local swelling and necrosis. Significant progress has been made in understanding the pathophysiology of envenomation, leading to changes in treatment protocols. Recent developments include the production of a new antivenin and a canine rattlesnake vaccine.
Publication Type
Journal article.

<26>
Accession Number
20073045999
Author
Peterson, M. E.
Title
Snake bite: coral snakes.
Source
Clinical Techniques in Small Animal Practice; 2006. 21(4):183-186. 18 ref.
Publisher
Elsevier Inc
Location of Publisher
Orlando
Country of Publication
USA
Abstract
North American coral snakes are distinctively colored beginning with a black snout and an alternating pattern of black, yellow, and red. They have fixed front fangs and a poorly developed system for venom delivery, requiring a chewing action to inject the venom. The severity of a coral snake bite is related to the volume of venom injected and the size of the victim. The length of the snake correlates positively with the snakes venom yield. Coral snake venom is primarily neurotoxic with little local tissue reaction or pain at the bite site. The net effect of the neurotoxins is a curare like syndrome. In canine victims there have been reports of marked hemolysis with severe anemia and hemoglobinuria. The onset of clinical signs may be delayed for as much as 10 to 18 hours. The victim begins to have alterations in mental status and develops generalized weakness and muscle fasciculations. Progression to paralysis of the limbs and respiratory muscles then follows. The best flied response to coral snake envenomation is rapid transport to a veterinary medical facility capable of 24 hour critical care and assisted ventilation. First aid treatment advocated in Australia for Elapid bites is the immediate use of a compression bandage. The victim should be hospitalized

for a minimum of 48 hours for continuous monitoring. The only definitive treatment for coral snake envenomation is the administration of antivenin (M. fulvius). Once clinical signs of coral snake envenomation become manifest they progress with alarming rapidity and are difficult to reverse. If antivenin is not available or if its administration is delayed, supportive care includes respiratory support. Assisted mechanical ventilation can be used but may have to be employed for up to 48 to 72 hours.
Publication Type
Journal article.

<27>
Accession Number
20073045998
Author
Peterson, M. E.
Title
Snake bite: pit vipers.
Source
Clinical Techniques in Small Animal Practice; 2006. 21(4):174-182. 52 ref.
Publisher
Elsevier Inc
Location of Publisher
Orlando
Country of Publication
USA
Abstract
Pit vipers are the largest group of venomous snakes in the United States and are involved in an estimated 150,000 bites annually of dogs and cats. The severity of any pit viper bite is related to the volume and toxicity of the venom injected as well as the location of the bite, which may influence the rate of venom uptake. The toxicity of rattlesnake venom varies widely. It is possible for pit vipers' venom to be strictly neurotoxic with virtually no local signs of envenomation. Venom consists of 90% water and has a minimum of 10 enzymes and 3 to 12 nonenzymatic proteins and peptides in any individual snake. The onset of clinical signs after envenomation may be delayed for several hours. The presence of fang marks does not indicate that envenomation has occurred, only that a bite has taken place. Systemic clinical manifestations encompass a wide variety of problems including pain, weakness, dizziness, nausea, severe hypotension, and thrombocytopenia. The victim's clotting abnormalities largely depend upon the species of snake involved. Venom induced thrombocytopenia occurs in approximately 30% of envenomations. Many first aid measures have been advocated for pit viper bite victims, none has been shown to prevent morbidity or mortality. Current recommendations for first aid in the field are to keep the victim calm, keep the bite site below heart level if possible, and transport the victim to a veterinary medical facility for primary medical intervention. The patient should be hospitalized and monitored closely for a minimum of 8 hours for the onset of signs of envenomation. The only proven specific therapy against pit viper envenomation is the administration of antivenin. The dosage of antivenin needed is calculated relative to the amount of venom injected, the body mass of the victim, and the bite site. The average dosage in dogs and cats is 1 to 2 vials of antivenin.
Publication Type
Journal article.

<28>
Accession Number
20053092303

Author
Heller, J.; Bosward, K. L.; Hodgson, J. L.; Cole, F. L.; Reid, S. W. J.; Hodgson, D. R.; Mellor, D. J.
Title
Snake envenomation in dogs in New South Wales.
Source
Australian Veterinary Journal; 2005. 83(5):286-292. 40 ref.
Publisher
Australian Veterinary Association
Location of Publisher
Artarmon
Country of Publication
Australia
Abstract
Objective: To obtain baseline data on the prevalence of elapid snake envenomation in dogs presented to veterinary practices in New South Wales and to assess attitudes of veterinarians to this clinical entity. Procedure: A mailed questionnaire, sent to all veterinary clinics within New South Wales, was utilised to collect epidemiological information regarding elapid snake envenomation in dogs. Results: A response rate of 68% was obtained and a yearly prevalence of snake envenomation in dogs across New South Wales veterinary clinics was estimated as 0.31%. The most common species reported to be responsible for envenomation within NSW was the Red Bellied Black snake (Pseudechis porphyriacus) followed by the Brown snake (Pseudonaja textilis) and then Tiger snake (Notechis scutatus). The reported envenomation syndromes caused by these common snake species were perceived to be similar for Brown and Tiger snakes but differed for Red Bellied Black snakes. Diagnosis of snake envenomation was based predominantly on the recognition of clinical signs. Specific diagnostic tests, such as venom detection kits, were used infrequently. The most common treatment was reported to be a combination of intravenous fluid therapy and antivenom, and monitoring of response to this treatment was usually through assessment of clinical signs. Survival after antivenom administration was reported to be highest for Red Bellied Black snake species. Survival was perceived to be associated with time between envenomation and presentation to the veterinary clinic and with antivenom administration. Conclusions: Current attitudes and perceptions of veterinarians have been defined. Diagnosis of species-specific snake envenomation is shown to be made on the basis of clinical signs which are, however, reported as similar for each species. Clearer definition of these envenomation syndromes and identification of accessible diagnostic testing procedures are needed.
Publication Type
Journal article.

<29>
Accession Number
20053042269
Author
Lobetti, R. G.; Joubert, K.
Title
Retrospective study of snake envenomation in 155 dogs from the Onderstepoort area of South Africa.
Source
Journal of the South African Veterinary Association; 2004. 75(4):169-172. 16 ref.
Publisher
South African Veterinary Association
Location of Publisher
Pretoria
Country of Publication
South Africa
Abstract

A retrospective study was undertaken to evaluate the incidence, signalment, haematological and biochemical changes, therapy, and outcome of dogs presented to the Outpatients section of the Onderstepoort Veterinary Academic Hospital for confirmed snake envenomation. Three hundred and seventy-six records of dogs presented for snake envenomation from 1998 to 2002 were reviewed and 155 were selected on the basis of there being a positively identified snake. The 2 most commonly encountered snake envenomations in dogs were puff-adders (Bitis arietans) and snouted cobras (Naja annulifera annulifera). The majority of cases (56%) occurred in the autumn (March to May), with most being bitten by puff-adders. Dogs were 3 to 168 months old with a median of 36 months. No sex predilection was identified. Ten per cent of cases died because of the snake envenomation. Fifty-seven per cent and 43% of snakebites were puff-adders and cobras, respectively. There was no difference in mortality between the 2 groups of snakes. Of the cobras 60% were the snouted cobra, 14% Mozambique spitting cobra, and 24% rhinkals. Swelling in the area of the bite, usually the face and forequarters, was the primary clinical abnormality. Significant haematological findings were leukocytosis (median 17.3x109/l; range 0.4-44), neutrophilia (median 13.6x109/l; range 0.3-39.9), band neutrophilia (median 0.4x109/l; range 0-5.32), and thrombocytopaenia (median 124x109/l; range 3-555). Dogs envenomated by a puff-adder and Mozambique spitting cobra had a greater degree of thrombocytopaenia: median of 68 and 66, respectively, versus 243 for the cobra group. The most commonly used treatments were intravenous fluids, antibiotics and glucocorticoids. Thirty-eight dogs were treated with polyvalent antiserum: 9 for puff-adder envenomation and 29 for cobra envenomation. Only 2 of the dogs that received antisera died, both of them of cobra envenomation. The study concluded that snake envenomation in dogs is associated with high morbidity but moderate mortality rate and that the most significant haematological abnormality is thrombocytopaenia.

Publication Type

Journal article.

<30>

Accession Number

19982214112

Author

Mirtschin, P. J.; Masci, P.; Paton, D. C.; Kuchel, T.

Title

Snake bites recorded by veterinary practices in Australia.

Source

Australian Veterinary Journal; 1998. 76(3):195-198. 16 ref.

Abstract

The extent of the snake bite problem in domestic animals, its regional significance and the effects of antivenom treatment were investigated in a questionnaire on the number and type of domestic animals referred, whether treated or untreated, type of snakes and management of the bite sent to 10% of veterinary surgeons, selected at random throughout Australia. The response of 106 veterinary surgeons indicated that snake bite in domestic animals is frequent, with an estimated 6200 cases reported annually. Bites were more common in rural (78%) than urban areas (22%) with brown, tiger and black snakes accounting for 76, 13 and 6% of cases, respectively. Cats and dogs were the most frequently reported victims. 91% of cats and 75% of dogs survived following antivenom treatment whereas 66% of cats and 31% of dogs survived without antivenom. Overall, in 33% of cases antivenom was not used, and venom detection kits were used in only 1% of cases. A number of drugs were used in various combinations with or without antivenom and i.v. fluids in the treatment of animals with snake bite, but their role in reducing the severity of envenomations was not assessed. Antivenom significantly improves the chances of survival of domestic animals bitten by snakes.

Publication Type

Journal article.

<31>
Accession Number
19972205599
Author
Shahar, R.; Shamir, M.; Johnston, D. E.
Title
A technique for management of bite wounds of the thoracic wall in small dogs.
Source
Veterinary Surgery; 1997. 26(1):45-50. 20 ref.
Abstract
A simple method was used for treatment of 11 dogs with severe bite wounds at the Veterinary Teaching Hospital at Koret School of Veterinary Medicine, Israel, between October 1992 and March 1995. All dogs had severe injuries to the thoracic wall muscles and open pneumothorax and 8 dogs had multiple rib fractures. All dogs required an emergency treatment. The wound areas were surgically explored and devitalized soft tissue was removed. The pleural cavity was explored, intrathoracic injuries repaired, and a thoracic drainage tube was placed. Ribs in the injured area were stabilized in anatomic position by heavy gauge sutures passed around pairs of adjacent ribs. Viable muscle and subcutaneous tissues were apposed and the skin closed over the defect. There was no evidence of chest wall instability in any of the dogs after surgery. Nine dogs survived the injury and were clinically normal at re-evaluation 3 to 32 months after surgery. One dog developed wound infection and pyothorax, caused by insufficient debridement of injured muscle tissue, and died 10 days after surgery. Another dog died 24 h after surgery due to undetermined causes.
Publication Type
Journal article.

<32>
Accession Number
19910504688
Author
Wasserman, G. S.
Title
A letter to the editor on the spitting spider.
Source
Veterinary and Human Toxicology; 1990. 32(3):252. 5 ref.
Abstract
The author, an ophthalmologist, reports the case of a 14-year-old boy referred to his clinic with conjunctival symptoms. This boy had encountered "an unusually large black hairy spider" in a garage the previous evening and on attempting to kill it the spider had allegedly spat in his eyes (both in one shot) from a distance of 2-3 feet, causing an immediate burning/stinging sensation. The author notes that on examination 16 h after the incident, the boy's corneal abrasions stained more like a scratch/rub type lesion than punctate spots from a spray; he goes on to speculate that the culprit spider may have been a species of Lycosa, but not having heard of a spider capable of projecting its venom 24-36 inches, he asks for verification. W. C. Edwards, a veterinary toxicologist from Stillwater, Oklahoma, replies (see Veterinary and Human Toxicology, 32 (4): 330 (1990)) with the opinion that the spider was too large to have been a true spitting spider (fam. Scytodidae), which in any case would have been capable of projecting their sticky secretion a mere 20 mm or so. Rather, it was probably a tarantula (fam. Theraphosidae), known to be capable of flicking microscopic bristles from the abdomen into the eyes of an attacker. In support of this view he reports having seen one such spider rear up and flick hairs into the eyes of an inquisitive dog, causing extreme irritation.
Publication Type
Correspondence.