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In the spotlight: Equine emergencies

Search strategy

Database: CAB Abstracts <2000 to 2017 Week 40>

Search Strategy:
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1 (equine* or horse* or equus or foal* or colt* or horses/).mp.
2 (emergenc* or critical* or acute or atypical).mp.
3 (rescu* or colic or ocular* or wound* or myopath* or lymphangitis or toxic* or poison*).mp.
4 (triage or resuscit* or CPR).mp.
5 (1 and 2 and 3) or (1 and 4)
****
[mp=abstract, title, original title, broad terms, heading words, identifiers, cabicodes]

A selection of references retrieved from CAB Abstracts

1.
Accession Number
20173218458
Author
Wong, D. M.; Ruby, R. E.; Eatroff, A.; Yaeger, M. J.
Title
Use of renal replacement therapy in a neonatal foal with postresuscitation acute renal failure.
Source
Journal of Veterinary Internal Medicine; 2017. 31(2):593-597. 21 ref.
Publisher
Wiley
Location of Publisher
Boston
Country of Publication
USA
Abstract
A newborn foal was presented because it was unresponsive and in cardiopulmonary arrest. Aggressive cardiopulmonary cerebral resuscitation was administered to the foal, which revived the foal; however, acute renal failure developed. Fluid retention and azotemia occurred although the foal was alert and able to suckle. A 6-hour renal replacement therapy session using hemodiafiltration and a continuous renal replacement therapy machine was administered to the foal at 3 days of age which lowered the foal's azotemia and facilitated removal of some of the excess body fluid. Despite therapy, the foal developed pulmonary edema and was euthanized. Although the foal in this case did not survive, this report highlights the possibility of developing postresuscitation complications such as acute renal failure and describes the use of renal replacement therapy using hemodiafiltration as a viable option in neonatal foals with acute kidney injury.
Publication Type
Journal article.

2.
Evidence for marsh mallow (Malva parviflora) toxicosis causing myocardial disease and myopathy in four horses.
Bauquier, J. Stent, A. Gibney, J. Jerrett, I. White, J. Tennent-Brown, B. Pearce, A. Pitt, J.
Equine Veterinary Journal; 2017. 49(3):307-313. 48 ref.
[Journal article]
AN: 20173240346
Reason for performing the study: Investigation of toxicosis caused by Malva parviflora was required after 4 horses from the same farm developed severe muscle fasciculations, tachycardia, sweating and periods of recumbency leading to death or euthanasia after ingesting the plant. Objectives: To describe historical, clinical, clinicopathological and pathological findings of 4 horses with suspected M. parviflora toxicosis. The role of cyclopropene fatty acids (found in M. parviflora) and mechanism for toxicosis are proposed. Study Design: Case series. Methods: Historical, physical examination, clinicopathological and pathological findings are reported. Due to similarities with atypical myopathy or seasonal pasture myopathy acyl carnitine profiles were performed on sera from 2 cases and equine controls. Presence of cyclopropene fatty acids was also examined in sera of 2 cases. Results: M. parviflora had been heavily grazed by the horses with little other feed available. Horse 1 deteriorated rapidly and was subjected to euthanasia. Horse 2 was referred to hospital where severe myocardial disease and generalised myopathy was determined; this horse was subjected to euthanasia 36 h after admission. Horse 3 died rapidly and Horse 4 was subjected to euthanasia at onset of clinical signs. Post-mortem examinations performed on 3 horses revealed acute, multifocal cardiac and skeletal myonecrosis. Myocyte glycogen accumulation was absent when examined in Horse 2. Acyl carnitine profiles revealed increased C14-C18 acyl carnitine concentrations in cases relative to controls. Cyclopropene fatty acids were detected in sera of cases but not controls. Conclusion: These findings suggest aetiology different to that of atypical myopathy or seasonal pasture myopathy. We hypothesise that cyclopropene fatty acids in M. parviflora interfere with fatty acid beta -oxidation in horses in negative energy balance, causing the clinical signs and abnormal acyl carnitine profiles. These equine cases suggest a pathophysiological course that closely mimics the human genetic condition very long chain acyl CoA dehydrogenase deficiency.
Publisher
Wiley
Location of Publisher
Oxford
Country of Publication
UK

3.
Equine recurrent uveitis: a review of clinical assessment and management.
Allbaugh, R. A.
Equine Veterinary Education; 2017. 29(5):279-288. many ref.
[Journal article]
AN: 20173240339
Equine recurrent uveitis (ERU) is a vision-threatening ocular disease that practitioners must be able to identify and manage. Although not every case of acute uveitis will develop into ERU, if 2 or more episodes of uveitis are observed, a diagnosis of ERU can be made. Patient outcomes improve with early diagnosis, appropriate therapy and client education. Recent advances in surgical options and treatment of horses with ERU have improved success in managing this condition. New therapeutic strategies under investigation may further enhance results and reduce the development of complicating factors.
Publisher
Wiley
Location of Publisher
Oxford
Country of Publication
UK

4.
Cardiopulmonary resuscitation: a waste of time?
Hallowell, G. D.
AN: 20173283914
Equine Veterinary Education; 2016. 28(5):245-247. 9 ref.
Publisher
Wiley
Location of Publisher
Oxford
Country of Publication
UK

5.
Review of how to triage a dystocia.
Spirito, M. A.
Proceedings of the 62nd Annual Convention of the American Association of Equine Practitioners, Orlando, Florida, USA, 3-7 December 2016; 2016. :6-12. 4 ref.
[Conference paper]
AN: 20173162947
Publisher
American Association of Equine Practitioners (AAEP)
Location of Publisher
Lexington
Country of Publication
USA

6.
Giving the broken horse a break: some practical practices in orthopedic first aid.
Richardson, D. W.
Proceedings of the 62nd Annual Convention of the American Association of Equine Practitioners, Orlando, Florida, USA, 3-7 December 2016; 2016. :29-31. 5 ref.
[Conference paper]
AN: 20173162868
Publisher
American Association of Equine Practitioners (AAEP)
Location of Publisher
Lexington
Country of Publication
USA

7.
Emergency neonatal triage for sepsis.
Slovis, N. M.

Proceedings of the 62nd Annual Convention of the American Association of Equine Practitioners, Orlando, Florida, USA, 3-7 December 2016; 2016. :21-28. 12 ref.
[Conference paper]
AN: 20173162846
Publisher
American Association of Equine Practitioners (AAEP)
Location of Publisher
Lexington
Country of Publication
USA

8.
When rescues fail: legal considerations for veterinary involvement.
Wilson, J. H.
Proceedings of the 62nd Annual Convention of the American Association of Equine Practitioners, Orlando, Florida, USA, 3-7 December 2016; 2016. :195-198. 6 ref.
[Conference paper]
AN: 20173162843
Publisher
American Association of Equine Practitioners (AAEP)
Location of Publisher
Lexington
Country of Publication
USA

9.
Diagnosis, management, and triage of respiratory emergencies.
Belgrave, R. L.
Proceedings of the 62nd Annual Convention of the American Association of Equine Practitioners, Orlando, Florida, USA, 3-7 December 2016; 2016. :13-20. 12 ref.
[Conference paper]
AN: 20173162831
Publisher
American Association of Equine Practitioners (AAEP)
Location of Publisher
Lexington
Country of Publication
USA

10.
Emergency assessment of the horse with acute colic.
Schaer, B. D.
Proceedings of the 62nd Annual Convention of the American Association of Equine Practitioners, Orlando, Florida, USA, 3-7 December 2016; 2016. :1-5. 13 ref.
[Conference paper]
AN: 20173162828
Publisher
American Association of Equine Practitioners (AAEP)

Location of Publisher
Lexington
Country of Publication
USA

11.
Acute poisoning in horses: Part 2.
Bates, N.
Livestock; 2017. 22(3):164-169. many ref.
[Journal article]
AN: 20173179002
Horses are at risk of poisoning from plants in their environment or from contaminants in their feed. Well recognised toxic plants in horses include oleander, yew, false acacia, bracken, sycamore, oak and ragwort. Some plants are unpalatable but are eaten when mixed with hay, the plant is dried or when grazing is poor. Poisoning may also be seasonal depending on the plant involved. Specific treatment will depend on the clinical signs and the plant involved, but should include identification and removal of the plant and symptomatic care.
Publisher
MA Healthcare Limited
Location of Publisher
London
Country of Publication
UK

12.
Occurence of spasmodic/idiopathic colic and possible risk factors in horses in Albania.
Simon, B. Postoli, R.
Annals of the University of Craiova - Agriculture, Montanology, Cadastre Series; 2016. 46(2):56-61.
[Journal article]
AN: 20173144343
Colic in horses are the most acute problems faced by veterinarians and some predisposing factors are associated with them. One year study estimated the frequency and the risk factors that affect the occurrence of colic in the horse population in the region of Tirana. Details of 64 colic episodes, collected prospectively, were analyzed for a period from March-December 2015 The number of spasmodic/idiopathic colic cases in the 2-10-year-old group and the number of surgical colic in older than 10-year-old group were significantly greater than <2 years-old age group. Horses aged 2 to 10 years had a higher risk of occurrence of disease (P<0.05). 21.8% of the colic episodes were due to change of husbandry conditions, 9.3% by frequent changing of weather condition, 9.3% related to work or transport in agriculture, 3.1% from sweet/high carbohydrate diet (fruit). Nutritional causes and lack of anthelmintic control programs are important risk factors for development of colic. Types of grass and hay and poor-quality roughage are suspected causes. Little information is available about specific types of food or the measurement of specific nutrients in the food, such as minerals or fiber that cause colic in horses in Tirana Rural Areas. A greater understanding of the factors involved in the development of spasmodic/idiopathic colic episodes would be a great advancement in equine welfare in the region of Tirana.
Publisher
Faculty of Agriculture, University of Craiova
Location of Publisher
Craiova
Country of Publication
Romania

13.
Acute poisoning in horses: Part 1.
Bates, N.
Livestock; 2017. 22(2):105-109. 32 ref.
[Journal article]
AN: 20173105865
Poisoning in horses is rarely reported compared with poisoning in companion animals and food-producing animals. They are potentially at risk of exposure to numerous pesticide products and chemicals, various plants and snake bite. Diagnosis will involve determining the case history, and interpreting clinicopathological and chemical investigations to determine the source and cause of poisoning. Clinical signs and treatment of horses poisoned with herbicides, rodenticides, metaldehyde, lead and adder envenomation are described. Poisonous plant exposure in horses will be discussed in a later article.
Publisher
MA Healthcare Limited
Location of Publisher
London
Country of Publication
UK

14.
Considerations for timely decision-making regarding equine colic: medical or surgical management? [Spanish]
Cabrera, A. M. Z. Alves, G. E. S. Aranzales, J. R. M.
Revista de Medicina Veterinaria; 2017. (33):125-136. 50 ref.
[Journal article]
AN: 20173048405
The syndrome of acute abdomen (SAA) is a clinical condition with a strong impact on equine health, due to its characteristic high morbimortality. Multiple experimental models have been developed to establish causal relationships between alterations in the abdomen and the severity of equine colic. Research constantly tries to create protocols for timely and accurate medical care in order to reduce mortality rate. These protocols seek to reduce inaccuracies in therapeutic plans, especially when the severity of the syndrome requires surgical intervention to horses. Among the parameters included in the classification protocols of SAA or colic there are biomarkers of injury, such as lactate, cortisol, D-dimer, among others, and characteristic clinical signs grouped in classification tables. Parameters mostly associated with the therapeutic decision are pain intensity and response to analgesic therapy, although this may be accompanied, in order of sensitivity, by abdominal auscultation and trans-rectal palpation, naturally reinforced by full clinical examination. The use of classification tables is an aid in medical care in order to find fast and successful therapeutic approaches.
Publisher
Universidad de la Salle
Location of Publisher
Bogota
Country of Publication
Colombia

15.
Atypical myopathy in Denmark confirmed with the aTRAQ assay.
Hoffer, S. E. Votion, D. M. Anderberg, M. Boemer, F. Olsen, S. N. Galen, G. van
Journal of Equine Veterinary Science; 2016. 47:77-79. 18 ref.
[Journal article]
AN: 20173025544
Atypical myopathy is a severe form of rhabdomyolysis that occurs in grazing horses. Over the past decades, the disease has been emerging in Europe. The disease is widespread in Europe and has been suspected in

Denmark since 2000, yet no cases have been confirmed. The objective of this study was to confirm cases in this country and to use a new diagnostic technique (aTRAQ assay). Seven out of 8 samples from clinically highly suspicious cases were positive for hypoglycin A, and all had multiple acyl-CoA dehydrogenase deficiency, which confirms that the disease is also present in Denmark. Hypoglycin A levels were lower and clinical signs and mortality less severe than reported in other countries.
Publisher
Elsevier
Location of Publisher
New York
Country of Publication
USA

16.
Introduction of the use of thermography and thermometry in the diagnosis of uveitis in horses: a pilot project.
Rushton, J. O. Tichy, A. Nell, B.
Veterinary Record Open; 2015. 2(1):e000089. 25 ref.
[Journal article]
AN: 20163394612
Aims and objectives: To date assessment of changes in ocular temperature, as a hallmark of uveitis in horses has not been determined. Therefore the aim of the current study was to determine whether ocular temperature is increased in acute uveitic eyes compared with non-uveitic eyes, and to compare an affordable thermometry device with a thermography device. Material and methods: Ocular temperatures of both eyes of five horses with acute unilateral uveitis and 10 normal horses were measured using thermometry and thermography. Presence and absence of acute uveitis were diagnosed through a complete ophthalmological examination. Ambient temperature and core body temperature were also recorded. Results: The difference in temperatures between uveitic eyes and non-uveitic eyes was marked but not statistically significant (mean thermography temperature 34.0 degrees C sd+or-1.6 degrees C and 32.7 degrees C sd+or-2.4 degrees C, respectively v mean thermometry temperature 34.0 degrees C sd+or-1.9 degrees C and 31.6 degrees C sd+or-3.1 degrees C, respectively). No influence of core body temperature on either method was detected. Thermography was less influenced by ambient temperature than was thermometry. Conclusion: In conclusion uveitic eyes are not significantly warmer than non-uveitic eyes. Despite the lack of significance, a tendency towards increased ocular temperature in uveitic eyes, compared with non-uveitic eyes was noted. Therefore more research on this topic is warranted.
Publisher
BMJ Publishing Group
Location of Publisher
London
Country of Publication
UK

17.
Imaging advice for equine orthopaedic emergencies.
Dixon, J.
Veterinary Times; 2016. 46(43):20, 22. 6 ref.
[Journal article]
AN: 20163365198
Publisher
Veterinary Business Development Ltd
Location of Publisher
Peterborough
Country of Publication
UK

18.
Ocular trauma in general practice. (Ophtalmologie du cheval.) [French]
Merlin, N.
Pratique Veterinaire Equine; 2016. 48(Special):62-71. 17 ref.
[Journal article]
AN: 20163378901
Eye trauma is a common reason for emergency consultation in general practice and can be life threatening and can affect the animal's visual and/or aesthetic prognosis. The practitioner can manage many cases of ocular trauma in the field. The prognosis and an appropriate therapeutic approach are established after clinical and complementary examinations. An aesthetically impressive trauma does not routinely condemn the conservation of the eye and vision. It is worrying if the eyeball is affected but early aggressive and appropriate therapy can bring satisfactory results. Recovery can be achieved with appropriate (often intensive) care and motivated owners and therefore the veterinarian should not condemn the eye or vision too quickly.
Publisher
Newsmed
Location of Publisher
Paris
Country of Publication
France

19.
Equine atypical myopathy: a metabolic study.
Karlikova, R. Siroka, J. Jahn, P. Friedecky, D. Gardlo, A. Janeckova, H. Hrdinova, F. Drabkova, Z. Adam, T.
Veterinary Journal; 2016. 216:125-132. 25 ref.
[Journal article]
AN: 20163368063
Atypical myopathy (AM) is a potentially fatal disease of grazing horses. It is reportedly caused by the ingestion of sycamore seeds containing toxic hypoglycin A. In order to study metabolic changes, serum and urine samples from nine horses with atypical myopathy and 12 control samples from clinically healthy horses were collected and then analysed using a high-performance liquid chromatography coupled with tandem mass spectrometry; serum metabolic profiles as the disease progressed were also studied. Metabolic data were evaluated using unsupervised and supervised multivariate analyses. Significant differences were demonstrated in the concentrations of various glycine conjugates and acylcarnitines (C2-C26). Moreover, the concentrations of purine and pyrimidine metabolites, vitamins and their degradation products (riboflavin, trigonelline, pyridoxate, pantothenate), and selected organic and amino acids (aspartate, leucine, 2-oxoglutarate, etc.) were altered in horses with AM. These results represent a global view of altered metabolism in horses with atypical myopathy.
Publisher
Elsevier Ltd
Location of Publisher
Oxford
Country of Publication
UK

20.
Management of anaesthetic-associated complications in horses. [German]
Hopster, K.
Praktische Tierarzt; 2016. 97(9):794...806. 23 ref.

[Journal article]
AN: 20163321952
Anaesthetizing horses is risky business. Morbidity and mortality rates associated with equine anaesthesia suggest that horses are at high risk for the development of a wide variety of anaesthetic and anaesthesia-associated complications. Retrospective, prospective, and multicenter studies investigating anaesthesia-associated adverse events and the various factors influencing the outcome of equine anesthesia suggest that horses are 10 times more likely to suffer an anaesthesia-associated fatality than dogs and cats and 5000 to 8000 times more likely to die from anaesthesia than humans. Fatality rates are even higher if the horse presents for anaesthesia and surgery as an emergency. The leading causes of death were cardiac arrest or postoperative cardiovascular collapse, fractures, and myopathies. Increased risk of death was associated with the type of surgery (fracture repair, colic), duration of anaesthesia (higher risk for longer anesthesia time), timing of surgery (outside of regular hours), dorsal recumbency and age. Horses between the ages of 2 and 7 years old had a lower risk of death; foals younger than 1 month old had a greater risk. Early management of intraoperative complications as respiratory or cardiovascular impairments is necessary to reduce the incidence of postoperative complication. The following review gives an overview of common complications during general anaesthesia and the early postoperative period and how to treat them.
Publisher
Schlutersche Verlagsgesellschaft GmbH & Co. KG
Location of Publisher
Hannover
Country of Publication
Germany

21.
Acute-phase proteins as diagnostic markers in horses with colic.
Pihl, T. H. Scheepers, E. Sanz, M. Goddard, A. Page, P. Toft, N. Kjelgaard-Hansen, M. Andersen, P. H. Jacobsen, S.
Journal of Veterinary Emergency and Critical Care; 2016. 26(5):664-674. 33 ref.
[Journal article]
AN: 20163330126
Objective - To investigate the diagnostic potential of the concentrations of acute-phase proteins serum amyloid A (SAA), haptoglobin (Hp), and fibrinogen in blood and peritoneal fluid (PF) for differentiating horses with inflammatory colic (entero-colitis and peritonitis) from those with surgical colic. Design - Prospective observational multicenter study. Setting - Two university referral hospitals. Animals - Horses referred for severe acute abdominal pain to Hospital 1 (n=148) or Hospital 2 (n=78). Intervention - Blood and PF samples collected at admission were used for acute-phase protein concentration measurement. Measurements and Main - Results A multivariable logistic model including clinical parameters (lethargy, rectal temperature >38 degrees C [100.4 degrees F], normal rectal examination findings, and gastric reflux of 5-10 L) recorded at admission was constructed from Hospital 1 data. The ability of the model to correctly differentiate inflammatory from surgical colic was 86% determined as area under the receiver operating characteristic curve. Adding blood parameters (WBC, PCV, total plasma protein, lactate, SAA, Hp, and fibrinogen concentrations) to the logistic model based on clinical parameters revealed that only WBC and SAA and fibrinogen concentrations improved the model. With SAA included in the model no additional blood parameters improved the model, and the final model had an area under the curve of 90%. Addition of PF parameters (hemolysis, total protein concentration, WBC, SAA, or Hp concentrations) did not improve the model. When validated in Hospital 2 data, the models had good integrity and diagnostic performance. Conclusions - Evaluation of SAA in serum improved the ability to differentiate horses with acute inflammatory colic requiring medical treatment from horses with colic requiring surgery, as it allowed an additional 4% of horses to be correctly classified into medical and surgical cases. Improved differentiation of these 2 groups of horses with colic may minimize the risk of unnecessary or delayed surgery.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

22.
The veterinary nurse's role in nursing an equine surgical colic patient.
Lane, C.
Veterinary Nursing Journal; 2016. 31(9):276-279. 7 ref.
[Journal article]
AN: 20163314083
The nurse's role is critical in the pre-operative, peri-operative and post-operative period in surgical colic patients, due to colic being a major cause of morbidity and mortality in horses. The nurse's role can vary hugely when nursing a surgical colic patient as their role could include laboratory work, placing catheters and administering medication, theatre nursing, intravenous fluid therapy and general TLC.
Publisher
Taylor & Francis
Location of Publisher
Abingdon
Country of Publication
UK

23.
Acute wounds: when to be concerned.
Seabaugh, K. A. Riggs, L. M.
Proceedings of the NAVC Conference, 16-20 January 2016, Orlando, Florida, USA. Volume 30, Large Animal; 2016. :241-244. 12 ref.
[Conference paper]
AN: 20163308882
Publisher
North American Veterinary Community (NAVC)
Location of Publisher
Gainesville
Country of Publication
USA

24.
Traumatic coccygeal luxation and distal amputation of the tail of an Appaloosa mare.
McMaster, M. Munsterman, A. Albanese, V.
Equine Veterinary Education; 2016. 28(9):497-502. 8 ref.
[Journal article]
AN: 20163291292
A 17-year-old Appaloosa mare presented to the emergency service for acute, traumatic, partial amputation of the tail at the level of the ninth coccygeal vertebra. The patient did not have tail or anal tone and did not respond to sharp stimulation of skin in the perineal region. Two grade 1 rectal tears were found during rectal palpation. Radiographs revealed dislocation of the second (Cd2) and third (Cd3) caudal vertebrae. The patient was treated with antibiotics, an anti-inflammatory drug and stall confinement. The ninth caudal vertebra was surgically removed to facilitate closure of skin over the wound. When the mare was discharged after 7 days of hospitalisation, she had regained partial sensation of the perineum and partial function of the internal and external anal sphincters. At re-evaluation one year following injury, the mare was able to move her tail laterally and had regained sensation of her perineum and tail; however, she still was unable to lift her tail.
Publisher
Wiley-Blackwell

Location of Publisher
Oxford
Country of Publication
UK

25.
Scoring system for multiple organ dysfunction in adult horses with acute surgical gastrointestinal disease.
McConachie, E. Giguere, S. Barton, M. H.
Journal of Veterinary Internal Medicine; 2016. 30(4):1276-1283. 47 ref.
[Journal article]
AN: 20163272664
Background: The prevalence of multiple organ dysfunction syndrome (MODS) in horses with acute surgical gastrointestinal (GI) disease is unknown. Currently, there are no validated criteria to confirm MODS in adult horses. Objectives: To develop criteria for a MODS score for horses with acute surgical colic (MODS SGI) and evaluate the association with 6-month survival. To compare the MODS SGI score with a MODS score extrapolated from criteria used in people (MODS EQ). Animals: Adult horses that required exploratory laparotomy (n=62) for colic. Healthy adult horses undergoing elective surgical procedures (n=12) established the reference range of some variables. Methods: Prospectively, a MODS SGI score was developed based on organ-specific criteria established from a literature review, data collection, and clinical judgment. Data for scoring each horse were collected on Days 1 and 2 postoperatively. Horses were scored retrospectively using both scoring criteria. The prognostic performance of the MODS SGI score and its overall performance compared with the MODS EQ score were assessed with receiver operating characteristic (ROC) curve analysis. Results: The MODS SGI score had excellent performance for predicting 6-month survival with an area under the ROC curve (AUC) of 0.95 (95% CI: 0.87-0.99). The AUC for the MODS SGI score was significantly higher than the MODS EQ (AUC: 0.76; 0.63-0.86). Conclusions and Clinical Importance: The MODS SGI score predicts 6-month survival from discharge in horses with acute surgical colic. The MODS SGI score performed better than a score extrapolated from human scoring systems.
Publisher
Wiley-Blackwell
Location of Publisher
Boston
Country of Publication
USA

26.
Assessment of systemic inflammation by time-trends of blood granulocyte count and plasma myeloperoxidase and elastase concentrations following colic surgery in horses.
Salciccia, A. Grulke, S. Pouyade, G. de la R. de Franck, T. Detilleux, J. Serteyn, D. Sandersen, C.
Journal of Veterinary Emergency and Critical Care; 2016. 26(4):541-548. 52 ref.
[Journal article]
AN: 20163255714
Objective: To determine changes in blood granulocyte counts and in plasma myeloperoxidase (MPO) and elastase (ELT) concentrations in surgical colic cases, and to determine the relationship between these changes and the surgical procedure performed, occurrence of postoperative ileus, and final outcome. Design: Prospective clinical study conducted over a 12-month period. Setting: University teaching hospital. Animals: Fifty-three horses undergoing emergency laparotomy and surviving at least 12 hours postoperatively. Interventions: Blood samples were taken before surgery, during surgery, at the recovery from anesthesia, and then serially until the 150th hour after the first blood sampling. Granulocyte counts were performed by an automated cell hematology analyzer. Specific ELISAs were performed for the MPO and ELT measurements. Mixed models were used to compare the time-trends of the 3 parameters. Measurements and Main Results: Taking all horses together, the time-trends of MPO and ELT were not significantly different from each other, but they were significantly different from the granulocyte time-trend. The type of surgical procedure did not influence the time-trends of the 3 parameters. Significant changes in

the granulocyte time-trends were associated with postoperative ileus and outcome. Significant changes in the MPO time-trends were associated with outcome. The ELT time-trends were not influenced by ileus or outcome. Conclusions: Granulocyte counts and MPO change over time and are related to the severity of the inflammatory reaction in surgical colic cases. These time-trends may allow evaluation of treatment efficacy in an effort to modulate excessive granulocyte activation and degranulation.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

27.
Equine atypical myopathy caused by hypoglycin A intoxication associated with ingestion of sycamore maple tree seeds.
Zuraw, A. Dietert, K. Kuhnel, S. Sander, J. Klopfleisch, R.
Equine Veterinary Journal; 2016. 48(4):418-421. 19 ref.
[Journal article]
AN: 20163224928
Reasons for performing study: Evidence suggest there is a link between equine atypical myopathy (EAM) and ingestion of sycamore maple tree seeds. Objectives: To further evaluate the hypothesis that the ingestion of hypoglycin A (HGA) containing sycamore maple tree seeds causes acquired multiple acyl-CoA dehydrogenase deficiency and might be associated with the clinical and pathological signs of EAM. Study design: Case report. Methods: Necropsy and histopathology, using hematoxylin and eosin and Sudan III stains, were performed on a 2.5-year-old mare that died following the development of clinical signs of progressive muscle stiffness and recumbency. Prior to death, the animal ingested sycamore maple tree seeds (Acer pseudoplatanus). Detection of metabolites in blood and urine obtained post mortem was performed by rapid ultra-performance liquid chromatography-tandem mass spectrometry. Data from this case were compared with 3 geldings with no clinical history of myopathy. Results: Macroscopic examination revealed fragments of maple tree seeds in the stomach and severe myopathy of several muscle groups including Mm. intercostales, deltoidei and trapezii. Histologically, the affected muscles showed severe, acute rhabdomyolysis with extensive accumulation of finely dispersed fat droplets in the cytoplasm of degenerated skeletal muscle cells not present in controls. Urine and serum concentrations of several acyl carnitines and acyl glycines were increased, and both contained metabolites of HGA, a toxic amino acid present in sycamore maple tree seeds. Conclusions: The study supports the hypothesis that ingestion of HGA-containing maple tree seeds may cause EAM due to acquired multiple acyl-CoA dehydrogenase deficiency.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

28.
Equine atypical myopathy - nursing care in a crossbreed case.
Rippingale, M.
VN Times; 2016. 16(5):20-21. 5 ref.
[Journal article]
AN: 20163172424
Publisher
Veterinary Business Development Ltd
Location of Publisher
Peterborough

Country of Publication
UK

29.
'Atypical' myopathy - hypoglycin toxicity in horses.
Rendle, D.
Livestock; 2016. 21(3):188-193. 15 ref.
[Journal article]
AN: 20163191022
Atypical myopathy, or perhaps more correctly hypoglycin toxicity, is a distressing condition that is associated with a high fatality rate. The onset of signs can be dramatic or more insidious and a range of clinical signs related to muscle weakness develop. Outbreaks are common and a clinical case should prompt blood testing of cohorts to check for subclinical cases that may go on to develop signs. A suggested protocol for managing clinical cases and in-contacts is outlined. Horses with clinical signs should ideally be hospitalised to somewhere that they can receive 24-hour care and multimodal analgesia. Even cases which appear mild often deteriorate before they improve and it is therefore prudent to transport while they are standing and mobile. Prognosis is exceedingly hard to predict.
Publisher
MA Healthcare Limited
Location of Publisher
London
Country of Publication
UK

30.
Evaluation of serum amyloid A and haptoglobin concentrations as prognostic indicators for horses with colic.
Westerman, T. L. Foster, C. M. Tornquist, S. J. Poulsen, K. P.
Journal of the American Veterinary Medical Association; 2016. 248(8):935-940. 21 ref.
[Journal article]
AN: 20163176437
OBJECTIVE: To evaluate the use of the acute-phase proteins serum amyloid A (SAA) and haptoglobin as prognostic indicators in horses with colic with regard to the need for surgical intervention, development of complications, and hospitalization cost and duration. DESIGN: Prospective observational study. ANIMALS: 20 clinically normal horses and 42 horses with colic. PROCEDURES: Total WBC and neutrophil counts and plasma fibrinogen, SAA, and haptoglobin concentrations were compared between healthy (control) horses and horses admitted to a veterinary teaching hospital for colic. Clinicopathologic values were compared between medical and surgical colic cases to test the ability of acute-phase proteins to predict indication for surgical intervention, development of complications, and duration and cost of hospitalization. RESULTS: Mean SAA concentration was significantly higher in the surgical group, compared with that for both the control and medical groups. Haptoglobin concentration did not differ significantly among groups. Horses with colic and an abnormally increased SAA concentration (>5 micro g/mL) were more likely to be managed surgically than medically (OR, 5.7; 95% confidence interval, 1.4 to 22.8). Horses with small intestinal lesions had significantly higher SAA concentrations than did control horses. Euthanasia due to a poor prognosis or the development of thrombophlebitis was more likely for horses with an SAA concentration >5 micro g/mL (OR, 7.6; 95% confidence interval, 1.1 to 52.4). A weak positive correlation (r=0.30) was observed between cost of treatment and SAA concentration. CONCLUSIONS AND CLINICAL RELEVANCE: Horses with colic that had an abnormally increased SAA concentration were more likely to require surgical intervention, develop thrombophlebitis, or be euthanized because of a poor prognosis despite treatment.
Publisher
American Veterinary Medical Association
Location of Publisher
Schaumburg
Country of Publication

USA

31.
Concentrations of serum amyloid A and plasma fibrinogen in horses undergoing emergency abdominal surgery.
Daniel, A. J. Leise, B. S. Burgess, B. A. Morley, P. S. Cloninger, M. Hassel, D. M.
Journal of Veterinary Emergency and Critical Care; 2016. 26(3):344-351. 48 ref.
[Journal article]
AN: 20163175254
Objective: To compare the perioperative response of serum amyloid A (SAA) to fibrinogen in horses requiring exploratory celiotomy for colic and to determine if SAA could be used to predict complications and outcome. Design: Prospective observational clinical study. Setting: University teaching hospital. Animals: Eighteen horses undergoing exploratory celiotomy for colic. Inclusion criteria for the study included survival and anesthetic recovery from exploratory celiotomy, no history of surgery within the past year. Interventions: Blood was obtained via jugular venipuncture before surgery (time 0) and at 24, 48, 72, and 96 hours after recovery from anesthesia. Measurements and Main Results: Quantitative and semiquantitative fibrinogen, SAA, total nucleated cell counts, and total protein were evaluated at each time point. Multivariable linear regression was used to assess differences at each time point and after grouping horses according to duration of colic prior to surgery, strangulating surgical lesion or not, presence of systemic inflammatory response syndrome (SIRS) on admission, and postsurgical complications. Significant: (P<0.05) increases in SAA concentrations occurred in all cases after surgery compared to fibrinogen concentration, which only demonstrated a mild, clinically insignificant increase postsurgery. SAA concentrations were also significantly increased (P<0.05) in cases identified with SIRS prior to surgery and postoperatively at 48 (P=0.05) and 72 hours (P=0.02) in horses that developed complications. Conclusions: Measurement of SAA is a more sensitive indicator of inflammation than fibrinogen in the perioperative period of horses requiring exploratory celiotomy for colic. Serial measurement of SAA at 48, 72, and 96 hours after surgery may be helpful to determine risk of complications and guide postoperative management. Measurement of SAA on admission also allows for quantification of SIRS when it is detected clinically.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

32.
Heart rate variability in horses with acute gastrointestinal disease requiring exploratory laparotomy.
McConachie, E. L. Giguere, S. Rapoport, G. Barton, M. H.
Journal of Veterinary Emergency and Critical Care; 2016. 26(2):269-280. 39 ref.
[Journal article]
AN: 20163147188
Objective: To describe heart rate variability (HRV) in horses with acute gastrointestinal disease that undergo exploratory laparotomy. We hypothesized that horses with ischemic gastrointestinal disease will have reduced HRV compared to horses with nonischemic lesions. We further hypothesized that a reduction in HRV will be associated with nonsurvival. Design: Prospective, clinical, observational study. SETTING: University veterinary teaching hospital. Animals: Horses presented for acute colic (n=57) or elective surgical procedures (n=10) were enrolled. Interventions: Admission heart rate (HR) was recorded and within 2 hours of recovery from general anesthesia continuous telemetry was placed, monitored and recorded for 48-52 hours postoperatively. Stored electrocardiograms were manually inspected and R-to-R intervals were extracted and uploaded into HRV software for analysis. Time domain and frequency spectral analysis were investigated at Times 1 (2-10 h), 2 (16-24 h), 3 (30-38 h), and 4 (44-52 h) postoperatively. A two-way ANOVA for repeated measures was used for group comparisons. Logistic regression analysis was used to detect potential associations between admission HR, time and frequency domain variables, and nonsurvival.

Measurements and Main Results: Horses diagnosed with an ischemic gastrointestinal lesion (n=22) at the time of surgery had significantly higher postoperative heart rates and reduced time domain-derived measures of HRV than horses with nonischemic gastrointestinal lesions (n=35) or control horses (n=10). Horses that survived to discharge had significantly lower postoperative HRs, higher time domain, and lower low frequency spectral measures of HRV compared to nonsurvivors. The multivariable logistic regression model had a receiver operating characteristic area under the curve (AUC) of 0.95 and was significantly better at predicting nonsurvival than admission HR (P=0.0124). Conclusions: Reduced HRV was strongly associated with ischemic gastrointestinal disease and nonsurvival. HRV analysis is a noninvasive technique that may provide diagnostic and prognostic information pertinent to the management of postoperative horses with severe gastrointestinal disease.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

33.
Rapid diagnosis of hypoglycin A intoxication in atypical myopathy of horses.
Sander, J. Cavalleri, J. M. V. Terhardt, M. Bochnia, M. Zeyner, A. Zuraw, A. Sander, S. Peter, M. Janzen, N.
Journal of Veterinary Diagnostic Investigation; 2016. 28(2):98-104.
[Journal article]
AN: 20163120985
Hypoglycin A (2-amino-3-(2-methylidenecyclopropyl)propanoic acid) is the plant toxin shown to cause atypical myopathy in horses. It is converted in vivo to methylenecyclopropyl acetic acid, which is transformed to a coenzyme A ester that subsequently blocks beta oxidation of fatty acids. Methylenecyclopropyl acetic acid is also conjugated with carnitine and glycine. Acute atypical myopathy may be diagnosed by quantifying the conjugates of methylenecyclopropyl acetic acid plus a selection of acyl conjugates in urine and serum. We describe a new mass spectrometric method for sample volumes of <0.5 mL. Samples were extracted with methanol containing 5 different internal standards. Extracts were analyzed by ultra-high-performance liquid chromatography-tandem mass spectrometry focusing on 11 metabolites. The total preparation time for a series of 20 samples was 100 min. Instrument run time was 14 min per sample. For the quantification of carnitine and glycine conjugates of methylenecyclopropyl acetic acid in urine, the coefficients of variation for intraday quantification were 2.9% and 3.0%, respectively. The respective values for interday were 9.3% and 8.0%. Methylenecyclopropyl acetyl carnitine was detected as high as 1.18 micro mol/L in serum (median: 0.46 micro mol/L) and 1.98 mmol/mol creatinine in urine (median: 0.79 mmol/mol creatinine) of diseased horses, while the glycine derivative accumulated up to 1.97 mmol/mol creatinine in urine but was undetectable in most serum samples. In serum samples from horses with atypical myopathy, the intraday coefficients of variation for C4-C8 carnitines and glycines were <=4.5%. Measured concentrations exceeded those in healthy horses by ~10 to 1,400 times.
Publisher
American Association of Veterinary Laboratory Diagnosticians
Location of Publisher
Davis
Country of Publication
USA

34.
The Large Animal Vertical Rescue System (LAVRS) - a further development of the Animal Rescue and Transport Sling (ARTS). [German]
Kenel, L. Keller, R. Salis, B. von Furst, A.
Pferdeheilkunde; 2016. 32(2):141-147. 16 ref.

[Journal article]
AN: 20163095229
Mechanical suspension systems are often required for the rescue and transport of horses and other large animals. Large animal rescue has undergone significant progress over the last few years and several new lifting systems for rescue and in-clinic use have been developed. One of these is the Animal Rescue and Transport Sling (ARTS), by the Swiss Large Animal Rescue Service GTRD CH/FL in collaboration with the University of Zurich. However, the rescue of large animals entrapped in narrow spaces such as pits or wells remains difficult. In these situations, the opening to the space must be enlarged, which usually requires a great deal of work and loss of valuable time, or the animal is simply pulled out using belts, chains or ropes. Animals rescued in this fashion often die or are severely injured, or the rescue fails altogether. To facilitate the recovery of large animals from narrow enclosures, the ARTS was modified and improved to generate the Large Animal Vertical Rescue System (LAVRS) in which the animal is lifted in a vertical or near-vertical position. We have used this system extensively and found it to be safe and user-friendly. It has allowed us to rescue numerous cattle and horses without complications. The LAVRS has five main components: a front-leg sling, a dorsal belt with a hoist, a ventral belt, a seat portion and a rear hoist, and the two optional V-ropes. The application of the LAVRS is complex and at least four highly-trained and experienced people are required for a successful rescue operation. A critical component of the rescue is ensuring that the animal remains calm, and therefore one of the team members must be a veterinarian, who is responsible for the administration and monitoring of sedation and/or anaesthesia. The LAVRS is expensive and costs between 5,000 and 6,000 Swiss francs, but in our experience, most owners are willing to pay a fair price for the rescue of their animal. The LAVRS is currently the only rescue system that allows rescue of an entrapped large animal in a vertical position and is safe for both the rescuers and the animal. The aim of this article is to present the concept of rescuing a large animal in a vertical position using the LAVRS, to provide a detailed description of all its components and to illustrate its use in standing and recumbent animals.
Publisher
Hippiatrika Verlag GmbH
Location of Publisher
Baden-Baden
Country of Publication
Germany

35.
Perioperative trends in plasma colloid osmotic pressure in horses undergoing surgery.
Raftery, A. G. Morgan, R. A. MacFarlane, P. D.
Journal of Veterinary Emergency and Critical Care; 2016. 26(1):93-100. 37 ref.
[Journal article]
AN: 20163112237
Objective: To compare perioperative trends in plasma colloid osmotic pressure (COP) between horses undergoing orthopedic and colic surgery. Design: Prospective clinical study September 2009-January 2011. SETTING: Veterinary university teaching hospital. Animals: Thirty-three healthy, client-owned horses presenting for orthopedic surgery (non-GI) and 85 client-owned horses presenting for emergency exploratory celiotomy (GI, gastrointestinal). Interventions: None. Measurements: Data relating to the horse's parameters on presentation, surgical lesion, post-operative management and survival were extracted from computerized clinical records. Heparinized blood samples were taken on presentation (PreOp, pre-operative), on recovery from anesthesia (T0), at 12 (T12) and 24 (T24) hours post recovery. COP was measured within 4 hours of collection. Results: There was no significant difference in PreOp or T0 COP between groups. Both groups had a significant decrease in COP during anesthesia. When compared to their respective pre-operative values, horses in the non-GI group had significantly increased COP at T12, whereas those in the GI group had significantly reduced COP. This trend was continued at T24. Horses in the GI group placed on intravenous crystalloid isotonic fluids post-operatively had a significantly lower COP at T12 and T24. Horses in the GI group that did not survive had significantly lower post-operative COP values at T24. Conclusions: Horses undergoing exploratory celiotomy had significantly lower COP post-operatively than those horses undergoing orthopedic surgery. This difference was more marked in those horses receiving isotonic crystalloid intravenous fluid therapy post-operatively and in those that did not survive to discharge. In the non-GI group an increase in COP post-operatively was common.
Publisher

Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

36.
Antimicrobial prescribing practices by Swiss, German and Austrian equine practitioners.
Schwechler, J. Hoven, R. van den Schoster, A.
Veterinary Record; 2016. 178(9):216.
[Journal article]
AN: 20163075784
The objective of this study was to investigate the antimicrobial prescribing practices of Swiss, German and Austrian equine veterinarians. All members of the equine veterinary associations of Austria, Germany and Switzerland received an online questionnaire. Aside from demographic questions, six clinical scenarios were included and practitioners were asked to detail the antimicrobial therapy they would use. Antimicrobial choice and dosage were compared to each country's licensing bodies and current published scientific guidelines. Regression analysis was used to associate the use of critically important antimicrobials with demographic factors. Results showed that out of 203 respondents, 171 selected antimicrobials to treat the described case of an infected wound without synovial involvement, 73 to treat the case suggestive of recurrent airway obstruction, 121 for the case of a febrile yearling with signs suggestive of viral infection, and 129 for the case of sinusitis. When confronted with a case of uncomplicated strangles 77 respondents chose to use antimicrobials. Overall, 23 respondents used a third- or fourth-generation cephalosporin, eight used a fluoroquinolone and 44 used streptomycin. One respondent used a macrolide antibiotic (erythromycin). Use of third- or fourth-generation cephalosporins was associated with the type of practice and the number of veterinarians employed. Fluoroquinolone use was associated with the number of veterinarians employed. Of 167 respondents who provided enough detail, 63 used an antimicrobial not licensed for horses in at least one case scenario. 15 of 130 respondents underdosed antimicrobials compared to the licensed dose rates and 109 of 151 compared to current scientific guidelines. Antimicrobial use guidelines were present in 27 practices of 203 respondent. It can be concluded that Inadequate prescribing practices of antimicrobials by equine veterinarians in Austria, Germany and Switzerland were evidenced by selecting antimicrobials for diseases with an unlikely bacterial aetiology (38 per cent), extended perioperative use and use of third- and fourth-generation cephalosporins (11 per cent) and fluoroquinolones (4 per cent) as first-line antimicrobials. Underdosing was common compared to current scientific recommendations.
Publisher
BMJ Publishing Group
Location of Publisher
London
Country of Publication
UK

37.
Twenty years later: a single-centre, repeat retrospective analysis of equine perioperative mortality and investigation of recovery quality.
Dugdale, A. H. A. Obhrai, J. Cripps, P. J.
Veterinary Anaesthesia and Analgesia; 2016. 43(2):171-178. 21 ref.
[Journal article]
AN: 20163097102
Objectives: To determine the mortality rates associated with equine anaesthesia for elective and emergency (colic and non-colic) cases in one equine, university teaching hospital and to investigate the effect of several horse- and anaesthetic-related variables on anaesthetic recovery quality. Study design: Retrospective data analysis. Animals or animal population: In total, 1416 horses undergoing anaesthesia between May 2010

and December 2013. Methods: Patient information and details of the anaesthetic, recovery period and immediate complications were extracted from an archiving database. Statistical evaluation of factors affecting mortality included chi-squared tests and binary logistic regression. Factors affecting recovery quality were investigated using univariable and multivariable ordinal logistic regression. Statistical significance was set at p<0.05. Results: Anaesthesia/recovery-related mortality was 1.1% for all cases, 0.9% for elective cases, 1.6% for colics and 0% for non-colic emergencies. Fractures and dislocations accounted for the majority (71.4%) of deaths. No intra-operative deaths occurred during the study period. Risk factors for mortality included increasing age and American Society of Anesthesiologist's (ASA) status but these and other factors were confounded by 'colic'. Non-fatal complications in the immediate recovery period included postanaesthetic myopathy/neuropathy and postanaesthetic respiratory obstruction. Recovery quality was associated with body mass (p=0.016), ASA status 3 and 4 (p=0.020 and 0.002, respectively), duration of anaesthesia (p<0.001) and out-of-hours anaesthesia (p=0.013). Although recovery quality was also influenced by age and breed-type, these factors were removed from the final model as age was highly associated with both ASA status (p<0.001) and colic surgery (p<0.001), and breed-type was a determinant of body mass. Conclusion and clinical relevance: Anaesthetic/recovery-associated mortality was comparable to previously reported figures except intra-operative deaths were not reported. Fractures remained responsible for the largest proportion of recovery-associated deaths. Improvements to the recovery process that can reduce fracture occurrence are still required.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

38.
Collaboration between extension and industry: coordination and assessment of technical large animal emergency rescue training.
Porr, C. A. S. Shultz, A. M. Gimenez, R. Splan, R. K.
Journal of Extension; 2016. 54(1):1RIB4. 11 ref.
[Journal article]
AN: 20163092191
Rescuing large animals from emergency situations can be fraught with dangers not only to the animals but also to the rescuers. People involved at the scene of such an emergency are most likely to include first responders, horse owners, and veterinarians. These groups need to be aware of how they can best work together to effect a safe and efficient rescue as none typically has all the knowledge and skills that are necessary. Extension training programs that bring together such groups can be beneficial in supporting emergency and disaster preparedness in the local community.
Publisher
Extension Journal Inc
Location of Publisher
West Lafayette
Country of Publication
USA

39.
Sudden death, aortic rupture in horses, literature review, case studies reported and risk factors.
Briceno, A. M. Mendez, A. Brewer, K. Hughes, C. Tobin, T.
Brazilian Journal of Veterinary Research and Animal Science; 2015. 52(4):298-309. many ref.
[Journal article]
AN: 20163063236
Sudden deaths of horses in multiple equestrian disciplines have been attributed to acute and chronic respiratory and cardiovascular diseases. The aim of this study was to perform a review of aortic rupture in

horses analyzing, case studies and assessing risk factors. The literature has reported a total of 137 cases of aortic rupture in horses for 28 years (1986-2014), with approximately five horses dying of aortic rupture per year. Histopathologically, there are observed discrete macroscopic degenerative changes in the intima layer only in the aorta. The histological evaluation in the beginning portion of the aorta of the heart evidenced degenerative changes with loss of continuity and distribution of elastic fibers. Risk factors for the rupture of the aorta are: spontaneous rupture associated with hypertension, preexisting vascular injury (aneurysm), dilated or hypertrophic cardiomyopathy, copper levels in the endothelium, genetic factors such as inbreeding, toxicology or pharmacological factors. Aortic rupture shows similarity with pulmonary hemorrhage induced by exercise especially under the locomotors induced trauma theory of exercise that can induce pulmonary hemorrhage. In conclusion, degenerative changes to discrete elastic fiber of the intima of the aorta in the emergence of the heart seem to predispose the aorta wall rupture at the time of maximum blood pressure during exercise and the consequent collapse and athletic horse's death.
Publisher
Faculdade de Medicina Veterinaria e Zootecnia, Universidade de Sao Paulo
Location of Publisher
Sao Paulo
Country of Publication
Brazil

40.
History of colic surgery and a look to the future.
Freeman, D. E.
Proceedings of the 60th Annual Convention of the American Association of Equine Practitioners, Salt Lake City, Utah, USA, December 6-10 2014; 2014. :193-204. 91 ref.
[Conference paper]
AN: 20153416437
An overview of colic surgery over the last 40 years suggests improvements in outcome, largely a result of early diagnosis and referral, allowing horses to arrive at referral hospitals in better overall systemic condition, as compared to years past. However, closer inspection of information from different sources suggests that postoperative complications are increasing and long-term survival rates could improve further. The growing emphasis on postoperative treatment could divert our attention from surgical steps that are critical to improving outcome.
Publisher
American Association of Equine Practitioners (AAEP)
Location of Publisher
Lexington
Country of Publication
USA

41.
Prospective study of the primary evaluation of 1016 horses with clinical signs of abdominal pain by veterinary practitioners, and the differentiation of critical and non-critical cases.
Curtis, L. Burford, J. H. Thomas, J. S. M. Curran, M. L. Bayes, T. C. England, G. C. W. Freeman, S. L.
Acta Veterinaria Scandinavica; 2015. 57(69):(6 October 2015). 38 ref.
[Journal article]
AN: 20153370452
Background: The majority of research on the evaluation of horses with colic is focused on referral hospital populations. Early identification of critical cases is important to optimise outcome and welfare. The aim of this prospective study was to survey the primary evaluation of horses with clinical signs of abdominal pain by veterinary practitioners, and compare the initial presentation of critical and non-critical cases. Results: Data from 1016 primary evaluations of horses presenting with clinical signs of colic were submitted by 167 veterinary practitioners across the United Kingdom over a 13 month period. The mean age of the study population was 13.5 years (median 12.0, range 0-42). Mean heart rate on primary presentation was 47

beats/min (median 44, range 18-125), mean respiratory rate was 20 breaths/min (median 16, range 6-100), and median gastrointestinal auscultation score (0-12, minimum-maximum) was 5 (range 0-12). Clinical signs assessed using a behavioural severity score (0-17, minimum-maximum), were between 0 and 6 in 70.4% of cases, and 7-12 for 29.6% of cases. Rectal examination was performed in 73.8% of cases. Cases that responded positively to simple medical treatment were categorised retrospectively as 'non-critical'; cases that required intensive medical treatment, surgical intervention, died or were euthanased were categorised as 'critical'. Eight-hundred-and-twenty-two cases met these criteria; 76.4% were 'non-critical' and 23.6% were 'critical'. Multivariable logistic regression was used to identify features of the clinical presentation associated with critical cases. Five variables were retained in the final multivariable model: combined pain score: (OR 1.19, P<0.001, 95% CI 1.09-1.30), heart rate (OR 1.06, P<0.001, 95% CI 1.04-1.08), capillary refill time >2.5 s (OR 3.21, P=0.046, 95% CI 1.023-10.09), weak pulse character (OR 2.90, P=0.004, 95% CI 1.39-5.99) and absence of gut sounds in >=1 quadrant (OR 3.65, P<0.001, 95% CI 2.08-6.41). Conclusions: This is the first study comparing the primary presentation of critical and non-critical cases of abdominal pain. Pain, heart rate, gastrointestinal borborygmi and simple indicators of hypovolaemia were significant indicators of critical cases, even at the primary veterinary examination, and should be considered essential components of the initial assessment and triage of horses presenting with colic.
Publisher
BioMed Central Ltd
Location of Publisher
London
Country of Publication
UK

42.
Comparison of the findings of rectal examination and ultrasonographic findings in horses with colic. [German]
Scharner, D. Bankert, J. Brehm, W.
Tierarztliche Praxis. Ausgabe G, Grosstiere/Nutztiere; 2015. 43(5):278-286. 17 ref.
[Journal article]
AN: 20153370395
Objective: The examination of patients suffering from an acute abdomen routinely comprises both clinical and rectal examinations, and is ever more frequently accompanied by an ultrasonographic abdominal examination. The aim of the study was to compare the findings as defined through rectal examination with the results of the ultrasonographic examination for different forms of colic. Material and methods: In a retrospective study, the patient records of the Large Animal Clinic of the University of Leipzig from 2012 and 2013 were analysed, and those of horses suffering from colic were included. Diagnoses made through rectal and ultrasonographic examination were grouped and compared with the diagnoses made during colic surgery or pathologic examination, which served as the gold standard. Horses that underwent conservative treatment had a definitive diagnosis assigned only in cases where a pathognostic rectal finding defined the diagnosis. Based on these data, sensitivity, specificity and positive and negative predictive values were calculated for both techniques. Results: Ultrasonography was more sensitive than rectal examination in cases of small intestinal occlusion (97.1% vs. 50.7%), torsion of the large colon in the long axis (63.2% vs. 26.3%) and dislocation of the large colon into the nephrosplenic space (90.9% vs. 72.7%). Rectal examination was more sensitive than ultrasonographic examination in cases of other types of dislocation of the large colon (96.5% vs. 8.8%) and of constipations of the large colon (93.6% vs. 29.8%). Conclusion and clinical relevance: In cases of severe diseases, including small intestinal occlusions and torsions of the large colon, ultrasonography helps to better identify and more precisely diagnose conditions that in most cases require abdominal surgery than rectal examination. Therefore, under hospital conditions, it is highly advisable to include ultrasonography in the routine examination of the equine acute abdomen. However, this technique does not replace the traditional rectal examination, which is superior in the diagnosis of dislocations and constipations of the large colon as well as diseases of the caecum.
Publisher
Schattauer GmbH
Location of Publisher
Stuttgart
Country of Publication

Germany

43.
Emergency euthanasia of horses. (Themenheft: Nottotung von nutztieren.) [German]
Hinterhofer, C. Auer, U.
Wiener Tierarztliche Monatsschrift; 2015. 102(9/10):243-247. 23 ref.
[Journal article]
AN: 20153370123
Emergency euthanasia of horses, ponies and donkeys is largely performed by the application of substances that lead to sedation and general anaesthesia and finally to the termination of all vital parameters. Equids can also be put down by mechanical methods with a captive bolt pistol and subsequent exsanguation but, as most owners feel great affection for their animals, euthanasia by medication is generally chosen. The reasons for performing emergency euthanasia include severe colics that do not respond to medication and/or when the necessary surgical treatment cannot be offered; massive skin or soft tissue lacerations with substantial defects and disclosure of body cavities; bone fractures that cannot be stabilized; lung disorders that lead to critical shortage of oxygen and the irreversible loss of lung function; and severe complications in the course of acute or chronic laminitis. Severe internal diseases, intoxications, hereditary diseases in newborns or adults and other disorders may also give rise to the need for euthanasia. Individual and racial differences in the tolerance of pain and diverging environments may impede the decision whether and when to perform emergency euthanasia. The treating vet plays the leading part in the decision and bears the primary responsibility for it. The ultimate reasons for euthanasia are always untreatable pain, uncurable illness or injury or the impossibility of reestablishing an acceptable quality of life for the animal.
Publisher
Fairdrucker GmbH
Location of Publisher
Purkersdorf
Country of Publication
Austria

44.
Suspected acorn toxicity in nine horses.
Smith, S. Naylor, R. J. Knowles, E. J. Mair, T. S. Cahalan, S. D. Fews, D. Dunkel, B.
Equine Veterinary Journal; 2015. 47(5):568-572. 21 ref.
[Journal article]
AN: 20153307195
Reasons for performing study: Acorn toxicity has been anecdotally reported to cause fatal colitis and colic in horses but reports in the scientific literature are sparse. Objectives: This study reports the diagnosis, treatment, prognosis and outcome of 9 cases with suspected acorn toxicity admitted to 2 referral hospitals. Study design: Retrospective case series. Methods: Case records from 2004 to 2013 were reviewed. Horses were included in the study if they met 3 of 4 criteria: exposure to acorns; clinical and laboratory data suggesting alimentary or renal dysfunction; acorn husks in the faeces or gastrointestinal tract; and necropsy and histopathological findings consistent with acorn toxicity. Data collected included case history, clinical presentation, clinicopathological data, ultrasonographic findings, case progression, and necropsy and histopathological findings. Results: Nine horses met the inclusion criteria. Five cases presenting with haemorrhagic diarrhoea deteriorated rapidly and were subjected to euthanasia or died. Four cases showed signs of colic with gas distension, displacement of the large colon and diarrhoea. Three of these (33%) survived with medical management, the fourth was subjected to euthanasia. Post mortem examination of 6 cases demonstrated submucosal oedema of the large intestine and caecum (n=6), acute tubular nephrosis (n=6), diffuse necrohaemorrhagic and ulcerative typhlocolitis and enteritis (n=4), and small intestinal oedema (n=3). Conclusions: Acorn ingestion may be associated with typhylocolitis leading to diarrhoea, colic and acute renal tubular nephrosis. Recovery is possible in mildly affected cases; more severe cases show hypovolaemia, intractable pain, renal dysfunction and cardiovascular failure, and often succumb to the

disease process. Disease is only seen in a small proportion of the population exposed to acorns and there seems to be an increased occurrence in certain years. Further investigation into factors predisposing to disease is required, but limiting exposure to acorns in the autumn seems prudent.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

45.
Rectal tears: emergency procedures and diagnostics.
Hanson, R. R.
Proceedings of the NAVC Conference, January 17-21, 2015, Orlando, Florida, USA. Volume 29, Large animal edition; 2015. :120-122. 8 ref.
[Conference paper]
AN: 20153160522
Publisher
North American Veterinary Community (NAVC)
Location of Publisher
Gainesville
Country of Publication
USA

46.
Effects of preoperative administration of hypertonic saline or pentastarch solution on hematologic variables and long-term survival of surgically managed horses with colic.
Dugdale, A. H. A. Barron, K. E. Miller, A. J. Proudman, C. J.
Journal of the American Veterinary Medical Association; 2015. 246(10):1104-1111. 55 ref.
[Journal article]
AN: 20153215202
Objective - To compare the effects of preoperatively administered pentastarch (10% concentration in isotonic saline [0.9% NaCl] solution) and hypertonic saline (7.2% NaCl) solutions on PCV and circulating total protein (TP) concentration in horses with colic undergoing emergency exploratory laparotomy and to assess survival rates of horses that received each treatment. Design - Prospective, randomized study. Animals - 100 horses with signs of abdominal pain and PCV >=0.46 L/L. Procedures - Horses received a 4 mL/kg (1.8 mL/lb) dose of pentastarch solution (n=50) or hypertonic saline solution (50) over a 10- to 20-minute period before anesthetic induction. Blood samples were collected at the time of evaluation and <=5 minutes after fluid resuscitation; changes in PCV and TP concentration were compared. Survival was evaluated by Kaplan-Meier and Cox proportional hazards analyses. Results - Age, weight, sex, PCV, and heart rate on initial examination were similar between treatment groups. Hypertonic saline solution treatment resulted in a significantly greater reduction in PCV (median change, -0.14 L/L) than did pentastarch treatment (median change, -0.07 L/L). Reduction in TP concentration was also significantly greater after hypertonic saline solution treatment (median change, -16 g/L) than after pentastarch treatment (median change, -2 g/L). Long-term survival was not significantly different between groups. Conclusions and Clinical Relevance - Despite a greater reduction in preanesthetic hemoconcentration following administration of hypertonic saline solution (4 mL/kg infusion, once), no difference in overall long-term survival was found between horses that received this treatment and those that received an equal volume of pentastarch solution. Findings suggested that, in a clinical setting, either of these fluids would be appropriate for preoperative fluid resuscitation in horses with colic.
Publisher
American Veterinary Medical Association
Location of Publisher

Schaumburg
Country of Publication
USA

47.
Vitamin C ameliorates gentamicin-induced acute kidney injury in equines: an experimental study.
El-Ashker, M. Abdelhamid, F. Risha, E. Salama, M. El-Sebaei, M.
Journal of Equine Veterinary Science; 2015. 35(3):238-243. 37 ref.
[Journal article]
AN: 20153153502
To date, there is no specific treatment used to protect against gentamicin (Genta)-induced nephrotoxicity. The main objective of the present study was to determine the potential protective effect of vitamin C against Genta-induced acute kidney injury (AKI) in equines using donkey as a model. Nine apparently healthy adult male donkeys (Equus asinus) were included in this study. All animals were clinically sound. Three donkeys were randomly selected to receive saline solution and served as controls. The other six donkeys (treated groups) were randomly assigned to receive either vitamin C at a dosage of 30 mg/kg (GVC-group; n=3) or saline solution (G-group; n=3) via IV route once daily for 14 days. Animals of treated groups have concomitantly received Genta at a dosage of 20 mg/kg IV thrice daily for 14 consecutive days. Blood and urine samples were simultaneously collected at day 14 of Genta administration. Blood samples were used for measuring selected acute-phase proteins, cytokines profile, and oxidative stress mediators; whereas, urine samples were used for measuring different urinary analytes. Acute kidney injury was confirmed by classic laboratory findings. Our results showed that the serum amyloid A, haptoglobin, fibrinogen, C-reactive protein, interleukin (IL)-1 beta , IL-6, interferon gamma, IL-10, sialic acid, malondialdehyde, blood urea, serum creatinine, alkaline phosphatase, and serum gamma-glutamyl transpeptidase were significantly lower in GVC-group than those in G-group (P<.05). In contrast, total antioxidant capacity was much lower in G-group than that of GVC-group; however, they did not reach statistical significance. The results presented herein suggest that vitamin C could have a protective effect against Genta-induced AKI in equines. The ongoing trials orchestrated with improved diagnostic utilities can improve the outcomes of AKI in equines through prophylactic or early use of antioxidant therapy.
Publisher
Elsevier
Location of Publisher
New York
Country of Publication
USA

48.
Identification, management and outcome of postoperative hemoperitoneum in 23 horses after emergency exploratory celiotomy for gastrointestinal disease.
Gray, S. N. Dechant, J. E. LeJeune, S. S. Nieto, J. E.
Veterinary Surgery; 2015. 44(3):379-385. 36 ref.
[Journal article]
AN: 20153152271
Objective: To investigate postoperative hemoperitoneum in a population of horses that had surgery for colic. Study design Retrospective case series. Animals: Horses (n=23). Methods: Preoperative, intraoperative, and postoperative information was obtained from medical records (1985-2012) of horses with postoperative hemoperitoneum after emergency exploratory celiotomy. Pre-existing hemoperitoneum during surgery and nonsurgical hemoperitoneum were excluded. Results: Of 4520 horses that had emergency exploratory celiotomy for gastrointestinal disease, 23 horses met inclusion criteria; an incidence of 0.5%. Horse signalment approximated the colic population, although Thoroughbreds were significantly overrepresented. Hemoperitoneum was significantly associated with intestinal resection. Postoperative hemoperitoneum was recognized a mean (+or-SD) of 1.0+or-0.7 days after surgery and associated with tachycardia, decreasing

hematocrit, incisional drainage, or ultrasonographic identification of swirling, echogenic abdominal fluid. Primary treatments included intravenous fluid therapy (n=23), colloid support (20), blood transfusion (13), and antifibrinolytic agents (11). Fifteen horses (65%) survived to discharge, which was associated with admission lactate and days of hospitalization. Conclusions: Postoperative hemoperitoneum is a rare complication of exploratory celiotomy in horses that should be considered when there are signs of abdominal discomfort and declining hematocrit in the early postoperative period. Prognosis is guarded because of potential sequelae of septic peritonitis and adhesion formation.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

49.
Plasma C-reactive protein and haptoglobin concentrations in critically ill neonatal foals.
Zabrecky, K. A. Slovis, N. M. Constable, P. D. Taylor, S. D.
Journal of Veterinary Internal Medicine; 2015. 29(2):673-677. 28 ref.
[Journal article]
AN: 20153133706
Background: Accurate diagnostic markers for sepsis in neonatal foals are needed. Plasma C-reactive protein concentration (p[CRP]) and haptoglobin concentration (p[Hp]) are well-established biomarkers of infection in humans, but studies are lacking in foals. Hypotheses: (p[CRP]) and p[Hp] are increased in septic foals compared to sick nonseptic and healthy control foals, and are predictive of survival. Animals: Eighty critically ill foals (40 septic, 40 sick nonseptic) and 39 healthy control foals <1 week of age. Methods: Multicenter, prospective observational clinical study. Venous blood was collected at admission from septic and sick nonseptic foals and from clinically healthy foals at 24 h of age. A diagnosis of sepsis was made based on positive blood culture or a sepsis score >11, and p[CRP] and p[Hp] were measured by using ELISA tests. Data were analyzed by using the Mann-Whitney U-test and forward stepwise multivariable linear regression. P<.05 was considered significant. Results: Plasma [CRP] was positively associated with age, serum globulin, adrenomedullin, and bilirubin concentrations, aspartate aminotransferase activity, glutamyl-transferase activity, band neutrophil count, and rectal temperature, and was increased in foals with toxic neutrophils, enterocolitis, colic, rib fractures and septic arthritis. Surprisingly, p[Hp] was lower in septic foals than in sick nonseptic foals. Neither p[CRP] or p[Hp] was predictive of survival in critically ill foals. Conclusions and Clinical Importance: Plasma [CRP] increases with inflammation in neonatal foals but is not indicative of sepsis. Single time point, admission sampling of p[CRP] and p[Hp] do not appear to be useful biomarkers for sepsis in foals.
Publisher
Wiley-Blackwell
Location of Publisher
Boston
Country of Publication
USA

50.
Influence of disease process and duration on acute phase proteins in serum and peritoneal fluid of horses with colic.
Pihl, T. H. Scheepers, E. Sanz, M. Goddard, A. Page, P. Toft, N. Andersen, P. H. Jacobsen, S.
Journal of Veterinary Internal Medicine; 2015. 29(2):651-658. 38 ref.
[Journal article]
AN: 20153133703
Background: The acute phase proteins (APP) serum amyloid A (SAA), haptoglobin, and fibrinogen are valuable blood biomarkers in equine inflammatory diseases, but knowledge of factors influencing their

concentrations in blood and peritoneal fluid (PF) of horses with colic is needed. Objectives: The objective of this study was to investigate the influence of demographics (age, sex, breed), disease process (simple obstruction, strangulating obstruction, inflammatory), disease location, disease duration, hypovolemia, and admission hospital on concentrations of APP, lactate and white blood cell counts (WBC) in horses with colic admitted to 2 referral hospitals. Animals: The study included 367 horses with colic admitted at 2 referral hospitals. Methods: Prospective multicenter observational study of clinical data, as well as blood and PF biomarkers. Associations between biomarker concentrations and clinical variables were analyzed using multivariate linear regression analysis. Results: Increasing pre-admission duration of colic was associated with increased concentrations of APP in blood and PF. Blood concentrations of SAA and fibrinogen were associated with disease process (inflammatory, strangulations, simple obstructions) in more colic duration groups (5-12 and >24 hours) than any of the other biomarkers. No relevant associations between demographic factors, hospital, or hydration status and the measured biomarkers were found. Conclusions and Clinical Importance: In horses with colic, concentrations of APP are associated mainly with disease process and duration of colic and may thus be used for assessment of disease independently of demographic or geographic factors. Serum amyloid A may be a diagnostic marker for use in colic differential diagnosis, but further evaluation is needed.
Publisher
Wiley-Blackwell
Location of Publisher
Boston
Country of Publication
USA

51.
Perioperative antibiotics prophylaxis in equine surgical colic patients - are we doing the right thing?
Steinman, A. Kelmer, G. Tatz, A. Berlin, D.
Israel Journal of Veterinary Medicine; 2015. 70(1):3-6. 15 ref.
[Journal article]
AN: 20153127307
Perioperative prophylaxis is one of the most common reasons for antimicrobial administration. Its goal is to reduce postoperative infection at the surgical site, thereby reducing morbidity, mortality and treatment costs. When perioperative prophylactic treatment is used, several issues should be decided upon, including the drugs that are used, timing of first administration, re-administration after 2 half-lives of the drug if surgery is still ongoing and duration of treatment. Equine colic surgery is typically an emergency procedure, classified in the best circumstances as a clean-contaminated surgical procedure and carries a high rate of surgical site infection as an important short term complication. Information regarding the compliance with prophylaxis guidelines in veterinary medicine is limited and is often not detailed enough. The duration of prophylactic treatment is a more complicated topic due to the high rate of post-operative complications in horses undergoing colic surgery. Guidelines for the judicious use of antimicrobial therapy recommend that antimicrobials should be administered for the shortest effective period possible to prevent the development of resistant pathogens. A recent study in surgical colic patients has shown no difference in the rate of incision infection with the use of perioperative antimicrobial therapy for 72 hours and for 120 hours, resulting in the conclusion that there is no benefit for the longer duration of prophylactic antimicrobial administration. Clinician's awareness for guidelines or standard protocols for antimicrobial drug use for equine patients undergoing surgery for colic is important. Implementing such guidelines, which should be reviewed and updated regularly, and reducing the amounts of perioperative antimicrobials that are being used are important goals which we all should strive for in order to reduce the emergence of resistant strains of bacteria that could affect our patients.
Publisher
Israel Veterinary Medical Association
Location of Publisher
Raanana
Country of Publication
Israel

52.
Accession Number
20153049120
Author
Taylor, S.
Title
A review of equine sepsis.
Source
Equine Veterinary Education; 2015. 27(2):99-109. many ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Sepsis is defined as an exaggerated, systemic inflammatory response to infection and is a common condition in horses. Systemic inflammatory response syndrome (SIRS) associated with bacterial infection is a hallmark of sepsis. Sepsis in neonatal foals is a common sequela of failure of passive transfer and, in addition to development of SIRS, may be characterised by bacteraemia, pneumonia, enterocolitis, omphalophlebitis, meningoencephalitis or arthritis. Sepsis in mature horses is most commonly observed secondary to gastrointestinal lesions that result in disrupted mucosa and bacterial translocation into circulation (endotoxaemia). Pleuropneumonia and metritis may also cause sepsis in mature horses. Diagnosis of sepsis is based on SIRS criteria as well as suspected or confirmed infection. Due to the relatively low sensitivity of microbial culture and the subjectivity of sepsis scoring, many sepsis biomarkers are being studied for their usefulness in diagnosis and prognostication of sepsis in horses. Treatment of sepsis requires an intensive care approach that includes antimicrobial drug administration, fluid resuscitation and pressure support, and treatment for inflammation, endotoxaemia and coagulopathy. Early recognition of sepsis and prompt antimicrobial drug treatment are critical for a successful outcome. Multiple organ dysfunction syndrome may occur in severe cases of sepsis, with common manifestations including laminitis and coagulopathies. Although prognosis for septic mature horses depends highly on the primary disease process, the overall survival rate in septic neonatal foals ranges from 26 to 86%, with most studies indicating a survival rate of 45-60%.
Publication Type
Journal article.

53.
Antimicrobial use in critically ill horses. (Special Issue: Controversies in critical care.)
Dunkel, B. Johns, I. C.
Journal of Veterinary Emergency and Critical Care; 2015. 25(1):89-100. 142 ref.
[Journal article]
AN: 20153095978
Objective: To discuss controversies surrounding antimicrobial use in critically ill horses. Data Sources: PubMed searches from 1970-present for terms including, but not limited to: "horse," "foal," "antimicrobial," "prophylaxis," "infection," "surgery," "sepsis," and "antimicrobial resistance." Human Data Synthesis: Increasing bacterial antimicrobial resistance has changed first-line antimicrobial choices and prompted shortening of the duration of prophylactic and therapeutic treatment. The need to decrease bacterial resistance development to critically important antimicrobials has been highlighted. Veterinary Data Synthesis: Veterinary medicine has followed a similar trend but often without a high-level evidence. Common dilemmas include diseases in which the theoretically most effective drug is a reserved antimicrobial, the inability to differentiate infectious from noninfectious disease, the duration and necessity of prophylactic antimicrobials and use of antimicrobials in primary gastrointestinal disease. These problems are illustrated using examples of purulent infections, neonatal sepsis, colic surgery, and treatment of colitis. Although enrofloxacin, cephalosporins, and doxycycline, in contrast to gentamicin, reach therapeutic concentrations

within the lungs of healthy horses, the first two should not be used as first line treatment due to their reserved status. Due to the high risk of bacterial sepsis, antimicrobial treatment remains indispensable in compromised neonatal foals but shortening the length of antimicrobial treatment might be prudent. One prospective randomized study demonstrated no difference between 3 and 5 days of perioperative antimicrobial treatment in colic surgery but shorter durations were not evaluated. High-level evidence to recommend antimicrobial treatment of adult horses with undifferentiated diarrhea does not exist. Conclusions: Few evidence-based recommendations can be made. Commonly used antimicrobial combinations remain the mainstay for treating purulent infections. Antimicrobial treatment for compromised foals should not extend beyond recovery. Continuation of prophylactic antimicrobials >3 days is likely unnecessary after colic surgery; shorter durations might be equally effective. Antimicrobial prophylaxis in adult horses with diarrhea is unlikely to be beneficial.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

54.
Surgical repair of a diaphragmatic tear in a Thoroughbred broodmare.
McMaster, M. Spirito, M. Munsterman, A.
Journal of Equine Veterinary Science; 2014. 34(11/12):1333-1337.
[Journal article]
AN: 20153031939
A 9-year-old multiparous Thoroughbred broodmare presented for evaluation of acute signs of colic. The patient had a 4-month history of poor appetite, weight loss, and decreased body condition after parturition, despite appropriate feeding by the farm to minimize weight loss associated with increased nutrient requirements. The patient was diagnosed with a diaphragmatic hernia through transabdominal and thoracic ultrasonography. The diaphragmatic hernia was repaired surgically under general anesthesia.
Publisher
Elsevier
Location of Publisher
New York
Country of Publication
USA

55.
Pathophysiology of equine neonatal septicemia. [Spanish]
Ospina Chirivi, J. C. Ronderos Herrera, M. D.
Revista de Medicina Veterinaria; 2014. (28):117-125. 30 ref.
[Journal article]
AN: 20143402000
Neonatal septicemia is a major cause of mortality and morbidity in horses in their first seven days of life and within their pathophysiology. It is important to consider the extrinsic and intrinsic predisposing factors which make foals susceptible to agents of primarily bacterial etiology. However, other types of infectious etiology (viruses and fungi) should be considered too, as well as noninfectious etiologies. The paper mentions a wide variety of mechanisms that produce different injuries that must be addressed with measures of critical neonatal care, so it is imperative for the veterinarian to know the pathogenic mechanisms of the disease, its clinical presentation and anatomo-pathological lesions. Thus, systemic inflammatory response syndrome (SIRS), multiple organ dysfunction syndrome (MODS), and peripheral circulatory collapse or shock are some of the elements defined as the pillars of the pathophysiology of neonatal septicemia, extensively studied in equine medicine. This paper presents a short review of the triggering mechanisms of neonatal septicemia highlighting the importance of epidemiological investigations in Colombia. It shows the need for retrospective and prospective studies and for divulgation of some of the preventive measures of the disease in horses.

Publisher
Universidad de la Salle
Location of Publisher
Bogota
Country of Publication
Colombia

56.
Prospective survey of veterinary practitioners' primary assessment of equine colic: clinical features, diagnoses, and treatment of 120 cases of large colon impaction.
Jennings, K. M. Curtis, L. Burford, J. H. Freeman, S. L.
BMC Veterinary Research; 2014. 10(Suppl. 1):S2. 33 ref.
[Journal article. Conference paper]
AN: 20143282841
Background: Large colon impactions are a common cause of colic in the horse. There are no scientific reports on the clinical presentation, diagnostic tests and treatments used in first opinion practice for large colon impaction cases. The aim of this study was to describe the presentation, diagnostic approach and treatment at the primary assessment of horses with large colon impactions. Methods: Data were collected prospectively from veterinary practitioners on the primary assessment of equine colic cases over a 12 month period. Inclusion criteria were a diagnosis of primary large colon impaction and positive findings on rectal examination. Data recorded for each case included history, signalment, clinical and diagnostic findings, treatment on primary assessment and final case outcome. Case outcomes were categorised into three groups: simple medical (resolved with single treatment), complicated medical (resolved with multiple medical treatments) and critical (required surgery, were euthanased or died). Univariable analysis using one-way ANOVA and Tukey's post-hoc test, Kruskal Wallis with Dunn's post-hoc test and Chi squared analysis were used to compare between different outcome categories. Results: 1032 colic cases were submitted by veterinary practitioners: 120 cases met the inclusion criteria for large colon impaction. Fifty three percent of cases were categorised as simple medical, 36.6% as complicated medical, and 9.2% as critical. Most cases (42.1%) occurred during the winter. Fifty nine percent of horses had had a recent change in management, 43% of horses were not ridden, and 12.5% had a recent/current musculoskeletal injury. Mean heart rate was 43 bpm (range 26-88) and most cases showed mild signs of pain (67.5%) and reduced gut sounds (76%). Heart rate was significantly increased and gut sounds significantly decreased in critical compared to simple medical cases ($p<0.05$). Fifty different treatment combinations were used, with NSAIDs (93%) and oral fluids (71%) being administered most often. Conclusions: Large colon impactions typically presented with mild signs of colic; heart rate and gut sounds were the most useful parameters to distinguish between simple and critical cases at the primary assessment. The findings of seasonal incidence and associated management factors are consistent with other studies. Veterinary practitioners currently use a wide range of different treatment combinations for large colon impactions.
Publisher
BioMed Central Ltd
Location of Publisher
London
Country of Publication
UK

57.
Atypical presentation of caecal perforation in two horses.
Gray, S. N. Dechant, J. E. Yamout, S. Devine, D. V. Schoonover, M. J.
Equine Veterinary Education; 2014. 26(8):422-425. 13 ref.
[Journal article]
AN: 20143275248

This case report describes retroperitoneal and subserosal emphysema as the primary indication of a caecal perforation associated with an episode of colic. Feed contamination was not noted on repeated peritoneal fluid samples or within the peritoneal cavity at the time of surgery; however, subserosal and retroperitoneal emphysema at the base of the caecum was identified during surgical exploration, which later corresponded to retroperitoneal caecal perforation at necropsy examination.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

58.
Trauma and wound management: gunshot wounds in horses. (Special Issue: Emergency and critical care.)
Munsterman, A. S. Hanson, R. R.
Veterinary Clinics of North America, Equine Practice; 2014. 30(2):453-466.
[Journal article]
AN: 20143257391
Bullet wounds in horses can cause a wide array of injuries, determined by the type of projectile, the energy of the bullet on entry, and the type of tissue the bullet encounters. Treatment includes identification of all structures involved, debridement of the permanent cavity, and establishing adequate drainage. Bullet wounds should be treated as contaminated, and broad-spectrum antibiotics, including those with an anaerobic spectrum, are indicated. Although musculoskeletal injuries resulting from gunshots are most common in horses, they carry a good prognosis for survival and return to function.
Publisher
Elsevier Inc.
Location of Publisher
New York
Country of Publication
USA

59.
Evaluation of the colic in horses: decision for referral. (Special Issue: Emergency and critical care.)
Cook, V. L. Hassel, D. M.
Veterinary Clinics of North America, Equine Practice; 2014. 30(2):383-398.
[Journal article]
AN: 20143257386
This article presents an overview of key factors that should alert the practitioner toward referral of a colic patient to a facility capable of surgical exploration or intensive medical management. Discussion includes a review of important aspects of colic history, signalment, physical examination findings, and diagnostic test results that indicate that a more serious medical or surgical condition exists, and advanced therapy is necessary.
Publisher
Elsevier Inc.
Location of Publisher
New York
Country of Publication
USA

60.
Ultrasound of the equine acute abdomen. (Special Issue: Emergency and critical care.)
Jeune, S. le Whitcomb, M. B.
Veterinary Clinics of North America, Equine Practice; 2014. 30(2):353-381.
[Journal article]
AN: 20143257385
Abdominal ultrasound is an invaluable aid in the evaluation of the colic patient but can be heavily influenced by patient preparation, individual horse-to-horse variation, availability of ultrasound transducers, technique, experience level of the examiner, and complexity of the abdominal disorder. This article describes ultrasonographic anatomy of the normal equine abdomen and technique for examination of the equine colic patient. Common abnormalities of the stomach, small intestine, large intestine, and peritoneal cavity are described along with other abnormalities that may be discovered with abdominal ultrasonography of the colic patient, such as masses, urolithiasis, cholelithiasis, and thoracic or cardiac lesions.
Publisher
Elsevier Inc.
Location of Publisher
New York
Country of Publication
USA

61.
Is it the systemic inflammatory response syndrome or endotoxemia in horses with colic? (Special Issue: Emergency and critical care.)
Moore, J. N. Vandenplas, M. L.
Veterinary Clinics of North America, Equine Practice; 2014. 30(2):337-351.
[Journal article]
AN: 20143257384
Some veterinarians describe particularly sick horses or neonatal foals as being endotoxemic, whereas others refer to the same animals as having the systemic inflammatory response syndrome. This article reviews the basis for the use of each of these terms in equine practice, and highlights the mechanisms underlying the response of the horse's innate immune system to key structural components of the microorganisms that initiate these conditions, including how some of those responses differ from other species. Current approaches used to treat horses with these conditions are summarized, and caution advised on extrapolating findings from other species to the horse.
Publisher
Elsevier Inc.
Location of Publisher
New York
Country of Publication
USA

62.
Update on the management of neonatal sepsis in horses. (Special Issue: Emergency and critical care.)
Palmer, J.
Veterinary Clinics of North America, Equine Practice; 2014. 30(2):317-336.
[Journal article]
AN: 20143257383
Despite advances in neonatal intensive care sepsis, severe sepsis and septic shock remain the biggest killers of neonatal foals. Management of this severe syndrome remains difficult, requiring intensive intervention. Key aspects of management include infection control, hemodynamic support, immunomodulatory interventions, and metabolic/endocrine support. Infection control largely consists of early antimicrobial therapy, plasma transfusions, and local therapy for the infected focus. In cases with severe

sepsis or septic shock, hemodynamic support with fluids, vasoactive agents, and respiratory support insuring oxygen delivery to vital organs is important. Nutritional support is important, but close monitoring is needed to avoid hyperglycemia and hypoglycemia.
Publisher
Elsevier Inc.
Location of Publisher
New York
Country of Publication
USA

63.
Field triage of the neonatal foal. (Special Issue: Emergency and critical care.)
Carr, E. A.
Veterinary Clinics of North America, Equine Practice; 2014. 30(2):283-300.
[Journal article]
AN: 20143257381
The purpose of this article is to provide a quick reference for field triage of the sick neonatal foal. Therefore, information is focused toward diagnostics and treatments that can be performed in the field. When evaluating a weak, recumbent, or lethargic foal on a farm, it is often difficult to make a definitive diagnosis. Therefore, the approach should be to treat what is treatable and prevent what is preventable. In many cases, the goal will be to stabilize a foal before referral to a tertiary care facility where more intensive and continuous treatment can be performed.
Publisher
Elsevier Inc.
Location of Publisher
New York
Country of Publication
USA

64.
Atypical myopathy: epidemiology of cases in Europe. (La myopathie atypique.) [French]
Patarin, F. Galen, G. van Pitel, C. Votion, D.
Pratique Veterinaire Equine; 2014. 46(182):12-14. 8 ref.
[Journal article]
AN: 20143251211
This paper summarises the epidemiological characteristics of 133 considered highly probable or confirmed cases of atypical myopathy that occurred in the autumn of 2013 to January 2014. The data from these cases are consistent with the results of previous case studies.
Publisher
Newsmed
Location of Publisher
Paris
Country of Publication
France

65.
Prognostic value of echocardiographic and Doppler parameters in horses admitted for colic complicated by systemic inflammatory response syndrome.
Borde, L. Amory, H. Grulke, S. Leroux, A. A. Houben, R. M. Detilleux, J. Sandersen, C. C.
Journal of Veterinary Emergency and Critical Care; 2014. 24(3):302-310. 48 ref.

[Journal article]
AN: 20143250084
Objective: To assess the prognostic value of echocardiographic parameters of left ventricular (LV) function in horses with systemic inflammatory response syndrome (SIRS). Design: Prospective observational study. Setting: Veterinary teaching hospital. Animals: Forty-one horses admitted for colic with clinical evidence of SIRS. Interventions: All horses underwent Doppler echocardiographic examination on admission. LV echocardiographic parameters, including pulsed-wave tissue Doppler imaging parameters, were compared between nonsurvivors (n=29) and horses that survived to discharge (n=12). Measurements and Main Results: With comparable heart rate and LV preload estimate, LV stroke volume index, the velocity time integral, deceleration time, ejection time of Doppler aortic flow, and peak early diastolic myocardial velocity were lower in the nonsurviving than in the surviving horses, while pre-ejection period to ejection time ratio (PEP/ET) of Doppler aortic flow and the peak early diastolic filling velocity to peak early diastolic myocardial velocity ratio (E/Em) were higher (P<0.05). A cut-off value of 0.26 for PEP/ET predicted mortality with 100% sensitivity and 42% specificity (area under the receiver operating characteristic curve: 0.71), whereas a cut-off value of 2.67 for E/Em predicted mortality with 100% sensitivity and 83% specificity (area under the receiver operating characteristic curve: 0.89). Conclusions: Echocardiography may provide prognostic information in colic horses with clinical evidence of SIRS. Especially, PEP/ET and E/Em could be useful markers of systolic and diastolic dysfunction, respectively, to detect horses with a high risk of death requiring more intensive cardiovascular monitoring as it has been reported in human patients with septic shock.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

66.
Factors affecting the incidence of postpartum fever in heavy draft mares.
Aoki, T. Yamakawa, K. Ishii, M.
Journal of Equine Veterinary Science; 2014. 34(5):719-721. 14 ref.
[Journal article]
AN: 20143241023
Postpartum metritis is a common problem in many animal species. In equine medicine, sequelae of postpartum metritis vary from delay in uterine involution to development of systemic acute metritis (SAM), toxemia, and laminitis. Heavy draft mares potentially have higher risk of suffering from SAM than light breed mares. Postpartum fever (PF) mostly appears as a sign of SAM. The purpose of this study is to analyze the factors affecting the incidence of PF in 158 foalings from 62 heavy draft mares by multiple logistic regressions. The objective variable was the incidence of PF, and the explanatory variables were year foaled, month foaled, age of mare, breed of mare (crossbred heavy draft horse vs. Percheron), gestation length, foaling difficulty (easy delivery vs. dystocia), retained fetal membranes, stillbirth, and sex of offspring. Twenty-four out of 158 mares were diagnosed with PF. Stepwise regression analysis showed that breed of dams and foaling difficulty were significant risk factors for PF. Percheron mares had higher risk than crossbred mares (odds ratio: 3.4). Dystocia had higher risk than easy delivery (odds ratio: 3.3). Percheron mares had higher incidence of PF than crossbred mares even in the cases of easy delivery. Risks for damage and contamination of birth canal will be increased especially if the fetal delivery needs assistance. The results of this study suggest that it is necessary to consider the foaling difficulty and the breed of dams for earlier detection of PF in peripartum heavy draft mares.
Publisher
Elsevier
Location of Publisher
New York
Country of Publication
USA

67.
Sepsis in foals. [Polish]
Dembek, K. Zalewski, K.
Zycie Weterynaryjne; 2014. 89(6):484-488. 23 ref.
[Journal article]
AN: 20143210316
This paper aims at the presentation of serious, life threatening generalized bacterial infection in foals. Sepsis, defined as a systemic inflammatory response to pathogenic microorganisms or their toxins present in blood is the number one cause of foal mortality. The prognosis of affected foals survival ranges from 30 to 60%. Animal's response to septicemia is variable, depending on the duration and intensity of the septic insult. Therefore, knowledge of normal foal behavior and clinical/laboratory parameters are essential for early recognition of the sepsis. Based on its definition, a positive Wood culture is often considered the "gold standard" and diagnostic proof of septicemia, but it needs at least 24 hours to get results. This means the delay, which predudes a timely diagnosis - crucial for successful treatment. Thus, sepsis score has been developed to facilitate accurate and rapid diagnosis of sepsis. The most common complications of septicemia include: septic shock, multiple organ dysfunction syndrome and hormonal dysfunctions such as relative adrenal insufficiency (RAI) also known as critical illness related corticosteroids insufficiency (CIR-CI). Here the possible treatments with broad-spectrum antimicrobials, plasma transfusion, fluid therapies, anti-inflammatory drugs and, in some cases, hydrocortisone are recommended for septic foals.
Publisher
Krajowa Izba Lekarsko Weterynaryjna
Location of Publisher
Warszawa
Country of Publication
Poland

68.
Does intraoperative low arterial partial pressure of oxygen increase the risk of surgical site infection following emergency exploratory laparotomy in horses?
Costa-Farre, C. Prades, M. Ribera, T. Valero, O. Taura, P.
Veterinary Journal; 2014. 200(1):175-180. 39 ref.
[Journal article]
AN: 20143206006
Decreased tissue oxygenation is a critical factor in the development of wound infection as neutrophil mediated oxidative killing is an essential mechanism against surgical pathogens. The objective of this prospective case series was to assess the impact of intraoperative arterial partial pressure of oxygen (PaO2) on surgical site infection (SSI) in horses undergoing emergency exploratory laparotomy for acute gastrointestinal disease. The anaesthetic and antibiotic protocol was standardised. Demographic data, surgical potential risk factors and PaO2, obtained 1 h after induction of anaesthesia were recorded. Surgical wounds were assessed daily for infection during hospitalisation and follow up information was obtained after discharge. A total of 84 adult horses were included. SSI developed in 34 (40.4%) horses. Multivariate logistic regression showed that PaO2, anaesthetic time and subcutaneous suture material were predictors of SSI (AUC=0.76, sensitivity=71%, specificity=65%). The use of polyglycolic acid sutures increased the risk and horses with a PaO2 value <80 mmHg [10.6 kPa] and anaesthetic time >2 h had the highest risk of developing SSI (OR=9.01; 95% CI 2.28-35.64). The results of this study confirm the hypothesis that low intraoperative PaO2 contributes to the development of SSI following colic surgery.
Publisher
Elsevier Ltd
Location of Publisher
Oxford
Country of Publication
UK

69.
Monitoring equine visceral pain with a composite pain scale score and correlation with survival after emergency gastrointestinal surgery.
Loon, J. P. A. M. van Jonckheer-Sheehy, V. S. M. Back, W. Weeren, P. R. van Hellebrekers, L. J.
Veterinary Journal; 2014. 200(1):109-115. 34 ref.
[Journal article]
AN: 20143205995
Recognition and management of equine pain have been studied extensively in recent decades and this has led to significant advances. However, there is still room for improvement in the ability to identify and treat pain in horses that have undergone emergency gastrointestinal surgery. This study assessed the validity and clinical application of the composite pain scale (CPS) in horses after emergency gastrointestinal surgery. Composite pain scores were determined every 4 h over 3 days following emergency gastrointestinal surgery in 48 horses. Inter-observer reliability was determined and another composite visceral pain score (numerical rating scale, NRS) was determined simultaneously with CPS scores. CPS scores had higher inter-observer reliability (r=0.87, K=0.84, P<0.001), compared to NRS scores (r=0.68, K=0.72, P<0.001). Horses that survived without complications had significantly lower CPS and NRS scores compared to horses that were euthanased or had to undergo re-laparotomy (P<0.001). Breed and the location in the intestinal tract (small or large intestine) did not influence pain scores. In conclusion, the use of the CPS improved objectivity of pain scoring in horses following emergency gastrointestinal surgery. High inter-observer reliability allows for comparisons between different observers. This will be of great benefit in larger veterinary hospitals where several attending clinicians are often involved in the care of each case.
Publisher
Elsevier Ltd
Location of Publisher
Oxford
Country of Publication
UK

70.
Diagnostic value of tissue monensin concentrations in horses following toxicosis.
Bautista, A. C. Tahara, J. Mete, A. Gaskill, C. L. Bryant, U. K. Puschner, B.
Journal of Veterinary Diagnostic Investigation; 2014. 26(3):423-427.
[Journal article]
AN: 20143205547
Two separate incidents of monensin exposure in horses resulting in toxicosis provided insight into the diagnostic value and interpretive criteria of various biological samples. In case 1, 25 horses broke into a shed and ingested feed that was supplemented with 800 g/ton (880 micro g/g) of monensin. Within 48 hr, 1 horse had died, 2 developed cardiac arrhythmias, lethargy, and recumbency, and another was euthanized due to severe deterioration. Minimal histologic lesions were noted in the horse that died peracutely, while another showed characteristic lesions of acute cardiomyocyte degeneration and necrosis. Stomach content, heart, liver, urine, and serum revealed various detectable concentrations of monensin in clinically affected and unaffected horses with known exposure. In case 2, a pastured horse had access to a mineral mix containing 1,600 g/ton (1,760 micro g/g) of monensin. Within 48 hr, the horse became symptomatic and was euthanized because of severe respiratory distress. Histologic cardiac lesions were minimal but detectable amounts of monensin were found in blood, heart, liver, and stomach contents. In both cases, monensin toxicosis was confirmed with toxicological analysis. These cases demonstrate an overall lack of correlation of monensin concentrations in various biological samples with clinical outcome. However, serum, urine, blood, liver, heart, and stomach content can be tested to confirm exposure. More importantly, the consistently higher concentrations found in heart tissue suggest this is the most useful diagnostic specimen for postmortem confirmation of toxicosis in horses especially in cases in which associated feed cannot be tested for monensin or in cases with no histologic lesions.
Publisher
American Association of Veterinary Laboratory Diagnosticians

Location of Publisher
Davis
Country of Publication
USA

71.
Management and transportation of fractured equine patients. [Portuguese]
Rosa, G. dos S. Dearo, A. C. de O.
Arquivos de Ciencias Veterinarias e Zoologia da UNIPAR; 2013. 16(2):169-183. 27 ref.
[Journal article]
AN: 20143178200
The emergency care and transportation of fractured equine patients to trained veterinary hospitals are fundamental procedures for the success of its recovery. After the stabilization procedures, wound management, and, if possible, radiographic evaluation on the patient, external immobilization of the fracture is performed depending on the place where the fracture is located, in order to better neutralize the acting forces. The immobilization of appendicular skeleton fractures consists on basically using Robert-Jones' bandage, overlapped with one or more splints positioned on the dorsal, lateral, medial or caudal/palmar/plantar aspect. Skull fractures may cause neurological and ocular disorders, both temporary or permanent, and frequently affect nasal cavity and paranasal sinuses, leading to respiratory problems. The transportation of fractured patients must be carried out in the safest way as possible, in order to avoid further complication to the patient's condition. Thus, greater recovery possibility and better prognosis for these animals are obtained.
Publisher
Universidade Paranaense
Location of Publisher
Umuarama
Country of Publication
Brazil

72.
Characterization of Clostridium perfringens in the feces of adult horses and foals with acute enterocolitis.
Gohari, I. M. Arroyo, L. MacInnes, J. I. Timoney, J. F. Parreira, V. R. Prescott, J. F.
Canadian Journal of Veterinary Research; 2014. 78(1):1-7. 22 ref.
[Journal article]
AN: 20143036471
Up to 60% of cases of equine colitis have no known cause. To improve understanding of the causes of acute colitis in horses, we hypothesized that Clostridium perfringens producing enterotoxin (CPE) and/or beta2 toxin (CPB2) are common and important causes of severe colitis in horses and/or that C. perfringens producing an as-yet-undescribed cytotoxin may also cause colitis in horses. Fecal samples from 55 horses (43 adults, 12 foals) with clinical evidence of colitis were evaluated by culture for the presence of Clostridium difficile, C. perfringens, and Salmonella. Feces were also examined by enzyme-linked immunosorbent assay (ELISA) for C. difficile A/B toxins and C. perfringens alpha toxin (CPA), beta2 toxin (CPB2), and enterotoxin (CPE). Five C. perfringens isolates per sample were genotyped for the following genes: cpa, cpb, cpb2 consensus, cpb2 atypical, cpe (enterotoxin), etx (epsilon toxin), itx (iota toxin), netB (necrotic enteritis toxin B), and tpeL (large C. perfringens cytotoxin). The supernatants of these isolates were also evaluated for toxicity for an equine cell line. All fecal samples were negative for Salmonella. Clostridium perfringens and C. difficile were isolated from 40% and 5.4% of samples, respectively. All fecal samples were negative for CPE. Clostridium perfringens CPA and CPB2 toxins were detected in 14.5% and 7.2% of fecal samples, respectively, all of which were culture-positive for C. perfringens. No isolates were cpe, etx, netB, or tpeL gene-positive. Atypical cpb2 and consensus cpb2 genes were identified in 15 (13.6%) and 4 (3.6%) of 110 isolates, respectively. All equine C. perfringens isolates showed far milder cytotoxicity effects than a CPB-producing positive control, although cpb2-positive isolates were slightly but significantly more cytotoxic than negative isolates. Based on this studied population, we were unable to confirm our hypothesis that CPE and

CPB2-producing C. perfringens are common in horses with colitis in Ontario and we failed to identify cytotoxic activity in vitro in the type A isolates recovered.
Publisher
Canadian Veterinary Medical Association
Location of Publisher
Ottawa
Country of Publication
Canada

73.
Accession Number
20143257382
Author
Jokisalo, J. M.; Corley, K. T. T.
Title
CPR in the neonatal foal: has RECOVER changed our approach? (Special Issue: Emergency and critical care.)
Source
Veterinary Clinics of North America, Equine Practice; 2014. 30(2):301-316.
Publisher
Elsevier Inc.
Location of Publisher
New York
Country of Publication
USA
Abstract
RECOVER was created to optimize survival of small animal patients from cardiopulmonary arrest. Several findings from this study are applicable to cardiopulmonary resuscitation in the neonatal foal. In particular, chest compressions should be a priority with no pauses and a "push hard, push fast" approach. The importance of ventilation is minimized with short, infrequent breaths at a rate of 10 to 20 per minute recommended.
Publication Type
Journal article.

74.
Validation of two behaviour-based pain scales for horses with acute colic.
Sutton, G. A. Paltiel, O. Soffer, M. Turner, D.
Veterinary Journal; 2013. 197(3):646-650. 29 ref.
[Journal article]
AN: 20133407902
Two behaviour-based scales for evaluating abdominal pain in horses (Equine Acute Abdominal Pain Scales, EAAPS-1 and -2) and a numerical rating scale (NRS) were compared for reliability and validity. Forty-one equine veterinarians randomly assigned into three groups were each presented a different set of 28 moving picture films randomly chosen among 36 films of horses with colic and four controls. One randomly chosen film was embedded twice within each set. The first (n=15) and the second (n=16) groups scored pain with the EAAPS-1 and EAPPS-2, respectively, while the third (n=10) used the NRS. The intra-class correlations (ICC) for EAAPS-1 (0.80) and EAAPS-2 (0.76) vs. NRS (0.67) indicated superior inter-rater reliability for both EAPPS scales. The intra-rater reliability of the EAAPS-1 was superior to both the other scales (weighted kappa =0.9) vs. (0.5 and 0.7 for EAAPS-2 and NRS, respectively). The convergent validity between both EAAPS scores and the NRS scores was substantial (weighted kappa =0.64). Both EAAPS scales discriminated well between extreme groups (areas under the receiver operating characteristic curve, ROC, area under the curve, AUC, >0.9) to differentiate severe from mild pain, as judged by the NRS. Both EAAPS

scales showed predictive validity comparable to NRS (AUCs for dichotomous treatment modality) (none and medically treated vs. surgically treated or euthanased) and with mortality (dead vs. alive) between 0.6 and 0.7 for all three scales. EAAPS-1 was the most reliable of the three scales and both EAAPS scales demonstrated validity comparable to the NRS scale.
Publisher
Elsevier Ltd
Location of Publisher
Oxford
Country of Publication
UK

75.
Emergency management of fractures of the phalanges - identifying fractures and assessing fitness for transport. [German]
Gerhards, H.
Praktische Tierarzt; 2013. 94(11):992-998. 6 ref.
[Journal article]
AN: 20133390030
This article discusses the causes and incidence of fractures of the phalanges in horses. The typical case histories, clinical symptoms and types of fractures are described as well as the clinical radiographic examination results in horses with suspected fracture of phalanges. The various emergency treatments and possible and practical measures for external stabilization of the toe bones before hospital admission are presented. Furthermore, indications for hospital admission and animal welfare aspects in training and transport of injured horses are discussed.
Publisher
Schlutersche Verlagsgesellschaft GmbH & Co. KG
Location of Publisher
Hannover
Country of Publication
Germany

76.
Risk of general anesthesia in horses - a retrospective study on 1.989 cases. [German]
Czupalla, I. Gerhards, H.
Pferdeheilkunde; 2013. 29(6):729-738. many ref.
[Journal article]
AN: 20133383546
Purpose of the study: To determine the incidence of fatalities in horses undergoing general anesthesia for examinations or surgical procedures from 2006 to 2011 at an Equine University Clinic (Munich), to differentiate between fatalities occurring in the time period from induction of anesthesia to recovery (anesthesia-related fatalities) and fatalities occurring after recovery but before discharge from the clinic (anesthesia-associated perioperative fatalities), and to identify risk factors for complications of general anesthesia. Material and Methods: Out of 2,440 anesthesia and medical records 1,989 anesthesia cases could be used for statistical evaluation. The evaluation covered the time period from induction of anesthesia to discharge from the clinic or until death. Based on documented clinical findings in the records, each horse patient was classified according to the American Society of Anesthesiology specialist (ASA-classification). 93.5% were healthy horses and 6.5% were high risk patients. The anesthesia record included 89.2% inhalation anesthesia, and 10.8% injectable anesthesia. 93.2% were elective surgeries. 6.8% were emergency procedures. Results: Ten of 1,989 anesthesia cases had a fatal outcome. Thus, the overall anesthesia related mortality rate was 0.5%. No horse died during maintenance of anesthesia (induction to placement in the recovery box). Four of the 1,989 (0.2%) horses died or had to be euthanatized during recovery. One horse died because of cardiac arrest. Three other horses had to be euthanized due to

prolonged recumbency in the recovery stall after colic surgery, myelomalacia and a fracture of the proximal humerus. Six of the 1,985 horses which had survived general anesthesia and recovery died in the postoperative period after recovery but before discharge, the anesthesia-associated perioperative mortality rate being 0.3%. Two of these 6 horses died from colitis x, one had a fatal pleuropneumonia, and another horse died from a large colon torsion. One mare became recumbent because of severe ataxia as a result of an activated severe facet joint arthrosis. The sixth patient had colic surgery and subsequently died of peracute circulatory collapse. By excluding the high risk patients, the overall mortality rate decreased to 0.3% (6/1,859). For horses with a poor general condition (ASA 2-5) the mortality rate was to 3% (4/130). In horses with colic and an ASA 4-5 risk, the mortality rate increased to 3.6% (2/55). A reduced general condition ($p=0.004$) and a long anesthesia time ($p=0.002$) lead to a high risk for perioperative mortality. Older horses were more frequently affected by harder recoveries ($p<0.001$). Horses with a reduced general condition suffered more frequently from intraoperative hypotension ($p<0.001$) and harder recoveries ($p<0.001$). In addition, there was a significant correlation between a reduced general condition and the development of nerve paralysis ($p=0.009$). Soft tissue surgeries also caused intraoperative hypotension ($p<0.001$). Surgeries on the head and neck led to the highest proportion of uncontrollable hemorrhage ($p<0.001$). Horses in dorsal recumbency significantly more often ($p<0.001$) developed a drop in blood pressure, as did horses with a long anesthesia time ($p<0.001$). A long duration of anesthesia effected also bradycardia ($p<0.001$) as well as nerve paralysis and more difficult recoveries ($p<0.001$). The application of acepromazin caused intraoperative hypotension ($p=0.003$) and hypoventilation ($p<0.001$).
Publisher
Hippiatrika Verlag GmbH
Location of Publisher
Stuttgart
Country of Publication
Germany

77.
Approach to the adult horse with chronic diarrhoea.
McGovern, K.
Livestock; 2013. 18(5):189-194. 32 ref.
[Journal article]
AN: 20133327598
Chronic diarrhoea in adult horses can be very frustrating both for the veterinarian and the client. The horse is often bright with a good appetite which is quite different from the acute diarrhoea case where the horse is often dull, endotoxic and sick. A range of diagnostic tests can be performed and it is not uncommon that a diagnosis is still not reached. Findings are often non-specific and could be representative of many diseases. Symptomatic treatment can be used in cases of idiopathic diarrhoea to which horses often respond well. When inflammatory disease is the cause, the prognosis is often more guarded.
Publisher
MA Healthcare Limited
Location of Publisher
London
Country of Publication
UK

78.
Emergency procedures on a race course. [French]
Paul-Jeanjean, S.
Bulletin des G.T.V.; 2013. (70):65-76. 19 ref.
[Journal article]
AN: 20133319081
The racecourse veterinary surgeon works in a different environment to that of routine veterinary medicine and should be thoroughly prepared with: professional liability insurance, a specialised medical kit and a good relationship with the competition organisers. He faces many types of injuries (wounds, fractures, bleeding,

tendonitis ...) and medical conditions (heat stroke, myositis, colic ...) of varying severity. A horse lying on the track is one of the most difficult emergencies to manage and a strict protocol must be followed. There are several causes: the horse is "out of breath", cardiovascular collapse, severe musculoskeletal injuries, traumatic brain or spinal cord injuries. General anaesthesia and euthanasia may be necessary in some cases.
Publisher
Societe Nationale des Groupements Techniques Veterinaires
Location of Publisher
Paris
Country of Publication
France

79.
A clinical approach to the diagnosis and treatment of retained fetal membranes with an emphasis placed on the critically ill mare.
Canisso, I. F. Rodriguez, J. S. Sanz, M. G. Silva, M. A. C. da
Journal of Equine Veterinary Science; 2013. 33(7):570-579. 38 ref.
[Journal article]
AN: 20133304617
Retained fetal membranes (RFMs) in mares can be defined as the failure of partial or complete release of the allantochorion by 3 hours after parturition. The incidence of RFM ranges from 2% to 10% of foalings in light breed-type mares, and it has been reported to be as high as 30%-54% in Friesian mares. This peripartum problem occurs specially after dystocia, prolonged gestation, cesarean section, fetotomy, hydropsy, and induced delivery. Uncomplicated abortion, stillbirth, and twinning are not necessarily associated with RFM, unless dystocia also occurs. Occasionally, RFM can occur after an apparent normal foaling for unknown reasons. Many predisposing factors have been postulated: uterine inertia and fatigue, calcium/phosphorus imbalance, selenium deficiency, abnormal hormonal environment, physical mechanical intervention, fescue toxicosis, aging, individual predisposition, and placentitis. This condition can lead to severe problems in mares, including metritis, laminitis, and death. The treatment for this condition can be addressed at three different major levels: uterine clearance, control of shock and endotoxemia, and treatment and prevention of laminitis. This manuscript reviews some of the most relevant articles addressing this reproductive problem and offers the authors' clinical experience on dealing with RFM.
Publisher
Elsevier
Location of Publisher
New York
Country of Publication
USA

80.
Effects of gastric distension on intraabdominal pressures in horses.
Barrett, E. J. Munsterman, A. S. Hanson, R. R.
Journal of Veterinary Emergency and Critical Care; 2013. 23(4):423-428. 20 ref.
[Journal article]
AN: 20133294252
Objective: To determine the effect of gastric distension on intraabdominal pressures (IAP) measured directly from the intraperitoneal space. Design: Prospective, experimental study. Setting: A university-based equine research facility. Animals: Ten healthy adult horses, 5 males and 5 females. Interventions: Intraabdominal pressures were measured through an intraperitoneal cannula zeroed at a height midway between the height of the tuber ishii and point of the shoulder at 6 time points: at rest, after placement of a nasogastric tube, and after instillation of each 5 L increment up to a total of 20 L of water. Simultaneously, mean arterial pressures (MAP) were obtained using a tail cuff, and abdominal perfusion pressures (APP) were calculated using the measured IAP minus the measured MAP. Measurements and Main Results: Baseline direct IAP

measurements were subatmospheric (-4.5+or-3.0 cm H2O). IAPs were not significantly affected by placement of a nasogastric tube (-2.69, 95% CI [-3.24, -2.14], P=0.4195), but were significantly increased after placement of 5 L (-1.73, 95% CI [-2.28, -1.18], P=0.0015), 10 L (-0.54, 95% CI [-1.09,0.01], P=0.0001), 15 L (0.89, 95% CI [0.34, 1.44], P=0.0001), or 20 L (3.08, 95% CI [2.53, 3.63], P=0.0001) of water into the stomach. APPs were not significantly different for any volume of fluid infused into the stomach (P=0.05 for all comparisons). Conclusion: IAPs were significantly increased when >5 L of water was infused into the stomach. These results indicate the need for further research in clinical cases to determine the relationship between gastric pressures and the development of intraabdominal hypertension in horses.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

81.
In equine grass sickness, serum amyloid A and fibrinogen are elevated, and can aid differential diagnosis from non-inflammatory causes of colic.
Copas, V. E. N. Durham, A. E. Stratford, C. H. McGorum, B. C. Waggett, B. Pirie, R. S.
Veterinary Record; 2013. 172(15):395.
[Journal article]
AN: 20133216860
Equine grass sickness (EGS) is a debilitating and often fatal neurodegenerative disease. A presumptive diagnosis of EGS may be made on the basis of clinical signs and subjective ancillary tests, but a definitive antemortem diagnosis can only be made following histopathological examination of intestinal biopsies. It has previously been reported that horses with EGS may show clinical and clinicopathological signs of systemic inflammation. The objective of this study was to (a) quantify acute inflammatory markers in bipod samples collected from acute, subacute and chronic EGS cases, and (b) compare them with (i) clinically normal horses co-grazing with acute EGS cases (co-grazers), (ii) horses with other causes of colic and (iii) healthy horses. Serum amyloid A (SAA), serum activin A and plasma fibrinogen were quantified. There were marked increases in SAA and fibrinogen in EGS cases compared with healthy horses, co-grazers and non-inflammatory colic cases. The concentrations of SAA and fibrinogen in EGS cases were not significantly different from inflammatory colic cases. When concentrations of SAA, fibrinogen and activin A in each EGS subgroup were compared, no significant differences were detected. Activin A concentrations were significantly elevated in EGS cases and co-grazing horses; this could reflect the presence of subclinical disease in some horses that do not develop clinical signs of EGS, and suggests widespread exposure to the aetioiogical agent. When faced with sparse antemortem diagnostic techniques, identification of marked increases in acute phase protein concentrations may help to differentiate EGS from other causes of abdominal pain, such as intestinal obstructions; however, there could be diagnostic difficulty in differentiating other inflammatory abdominal conditions, such as peritonitis or enteritis.
Publisher
BMJ Publishing Group
Location of Publisher
London
Country of Publication
UK

82.
Accession Number
20133193718
Author
Haggett, E.
Title
Support of the collapsed neonatal foal.

Source
In Practice; 2013. 35(5):243-250.
Publisher
BMJ Publishing Group
Location of Publisher
London
Country of Publication
UK
Abstract
Management of the collapsed foal can be achieved with excellent results, provided a systematic approach to the problem is adopted. Appropriate measures are reviewed in this article. They include: a thorough history and physical examination (particularly of the cardiothoracic and gastrointestinal systems, as well as the foal's neurological status), resuscitating the animal with adequate oxygen and fluid delivery, and instituting adequate maintenance supportive care including an intravenous supply of energy to raise glucose values and antibiotics to treat sepsis, one of the primary causes of neonatal disease.
Publication Type
Journal article.

83.
Management of cases suffering from atypical myopathy: interpretations of descriptive, epidemiological and pathophysiological findings. Part 2: Muscular, urinary, respiratory and hepatic care, and inflammatory/infectious status.
Galen, G. van Votion, D. M.
Equine Veterinary Education; 2013. 25(6):308-314. 45 ref.
[Journal article]
AN: 20133201817
Atypical myopathy is highly fatal, but about a quarter of affected horses survive. This highlights the need for provision of supportive treatment for these patients. This review is a practical guideline for equine practitioners and includes suggestions for close monitoring of involved organ systems and discusses options of supportive treatment based on current knowledge of the condition. Part 2 covers the muscular, urinary, respiratory and hepatic systems, and the general inflammatory/infectious status of the case.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

84.
Emergency care of soft tissue injuries in the toe area of the horse. [German]
Bartmann, C. P.
Praktische Tierarzt; 2013. 94(4):322...328.
[Journal article]
AN: 20133139303
The clinical aspects, diagnosis/techniques, therapy (hoof correction and orthopaedic fitting), and veterinary management during emergencies involving soft tissue injuries in the toe areas of horses are discussed.
Publisher
Schlutersche Verlagsgesellschaft GmbH & Co. KG
Location of Publisher
Hannover
Country of Publication
Germany

85.
Management of cases suffering from atypical myopathy: interpretations of descriptive, epidemiological and pathophysiological findings. Part 1: First aid, cardiovascular, nutritional and digestive care.
Galen, G. van Votion, D. M.
Equine Veterinary Education; 2013. 25(5):264-270. many ref.
[Journal article]
AN: 20133152701
Atypical myopathy is highly fatal, but about a quarter of affected horses survive. This highlights the need for provision of supportive treatment for these cases. This review is a practical guideline for equine practitioners and includes suggestions for close monitoring of involved organ systems and discusses options of supportive treatment based on current knowledge of the condition.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

86.
Code red for colic: decision-making for acute abdominal pain in the horse.
Freeman, S. Issaoui, L.
Equine Veterinary Education; 2013. 25(5):245-246. 27 ref.
[Journal article]
AN: 20133152698
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

87.
Anesthesia for the horse with colic. (Special Issue: Topics in equine anesthesia.)
Boesch, J. M.
Veterinary Clinics of North America, Equine Practice; 2013. 29(1):193-214.
[Journal article]
AN: 20133127516
This article discusses anesthesia for horses with colic from acute gastrointestinal disease. Emphasis is placed on new developments in pre-, intra-, and immediate postoperative management over the last decade, including early goal-directed therapy (EGDT) in the resuscitation of septic patients, the controversy over the optimal fluid type to administer, and the management of complications, such as cardiovascular depression, hypoventilation and hypoxemia, and decreased colloid oncotic pressure (COP). An update on analgesia is also provided; older drugs such as ketamine and lidocaine are increasingly being recognized both for their analgesic properties and other potentially beneficial effects in endotoxemic horses.
Publisher
Elsevier Inc.
Location of Publisher

New York
Country of Publication
USA

88.
Interpreting lactate measurement in critically ill horses: diagnosis, treatment, and prognosis.
Tennent-Brown, B. S.
Compendium Continuing Education for Veterinarians; 2012. 34(1):unpaginated. 40 ref.
[Journal article]
AN: 20133053495
In hospitalized horses, hypovolemia and the resulting decrease in tissue perfusion is the most common cause of hyperlactatemia. Therefore, measurement of blood lactate concentration can be a useful tool for guiding fluid therapy. Similarly, measuring blood lactate concentration can be used to assess the need for and adequacy of transfusions in horses receiving whole blood. Inflammatory leukocytes within closed body cavities consume glucose and produce lactate. Simultaneous measurement of blood lactate concentration and lactate concentration of peritoneal, pleural, or synovial fluid has been used to help differentiate septic from nonseptic effusions. A fluid lactate concentration higher than the blood lactate concentration provides evidence for a bacterial cause of the effusion. In horses evaluated for colic, a peritoneal lactate concentration higher than the simultaneously measured blood lactate concentration is indicative of intestinal strangulation and ischemia. Veterinary studies have suggested that serial blood lactate measurements might be a more useful prognostic indicator than a single lactate measurement. In hospitalized adult horses and foals, blood lactate concentration is higher at all time points in nonsurvivors compared with survivors, although the differences tend to be subtle. Measuring the rate at which lactate concentrations return to normal might also prove useful in equine medicine, but this requires further investigation.
Publisher
Veterinary Learning Systems
Location of Publisher
Yardley
Country of Publication
USA

89.
Traditional and quantitative assessment of acid-base and shock variables in horses with atypical myopathy.
Galen, G. van Cerri, S. Porter, S. Saegerman, C. Lefere, L. Roscher, K. Marr, C. Amory, H. Votion, D. M.
Journal of Veterinary Internal Medicine; 2013. 27(1):186-193. 34 ref.
[Journal article]
AN: 20133044925
Background: Descriptions of acid-base disturbances in atypical myopathy (AM) are limited. Objectives: Describe and compare traditional and quantitative acid-base abnormalities and cardiovascular shock status in horses with AM at admission. Animals: 34 horses with AM, 15 healthy controls. Methods: Retrospective case-control study. Records were searched for shock variables (packed cell volume [PCV], blood urea nitrogen [BUN], heart and respiratory rate) and acid-base variables (venous blood gas analysis, electrolytes, total protein, lactate) on admission. Base excess (BE) of free water (BEfw), chloride (BEcl), total protein (BEtp), and unidentified anions (BEua), anion gap (AG), measured strong ion difference (SIDm), and concentration of total nonvolatile weak acids ([Atot]) were calculated. Acid-base classifications, using simplified strong ion model and traditional approach, and shock grades were assigned. A 2-sample Wilcoxon rank-sum test and Bonferroni correction compared variables in AM cases versus control horses. Significance was P<.05/16 for acid-base and P<.05/5 for shock variables. Results: Tachycardia, tachypnea, and normal to increased PCV and BUN were common in AM cases. Respiratory, metabolic acid-base alterations, or both were mainly caused by respiratory alkalosis, lactic acidosis, and SIDm alkalosis, alone or in combination. Evaluated variables (except pH, potassium concentration, total protein, and related calculations) were

significantly different (P<.001) between AM cases and control horses. The strong ion model provided a more accurate assessment than the traditional approach and identified mixed derangements. Conclusions and clinical importance: Acid-base derangements should be evaluated in horses with AM and this preferably with the strong ion model.
Publisher
Wiley-Blackwell
Location of Publisher
Boston
Country of Publication
USA

90.
Presumptive bacterial translocation in horses with strangulating small intestinal lesions requiring resection and anastomosis.
Hurcombe, S. D. Mudge, M. C. Daniels, J. B.
Journal of Veterinary Emergency and Critical Care; 2012. 22(6):653-660. 20 ref.
[Journal article]
AN: 20133001032
Objective: To document whether presumptive bacterial translocation (PBT) occurs in horses with small intestinal strangulation (SIS). Design Prospective clinical cohort study. Setting: University tertiary care facility. Animals Thirty-six adult horses with SIS (clinical cases) and 10 adult horses without gastrointestinal disease (control cases). Interventions Sterile collection and bacterial culture of samples from peripheral venous blood, mesenteric venous blood, mesenteric lymphatic tissue, and intestinal aspirates from horses with SIS and control horses without gastrointestinal disease. Measurements and Main Results Five of 36 (13.8%) horses with SIS had at least 1 sample yield a positive result. Shorter SIS bowel segments were more likely to yield a positive culture result. (P<0.01). Two of 10 of control horses had positive culture results with different bacterial species identified compared to horses with SIS. Antimicrobial usage did not influence bacterial culture status (P=0.31). There were no differences between culture-positive and culture-negative horses with SIS regarding admission, clinical, or clinicopathologic variables. Conclusions: PBT occurs in normal horses and in horses with SIS. Bacterial genera differed between groups. A low incidence of PBT occurs in horses with SIS suggesting postoperative morbidity in some cases may be due to other factors.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

91.
Surgical treatment for acute small intestinal obstruction caused by Parascaris equorum infection in 15 horses (2002-2011).
Tatz, A. J. Segev, G. Steinman, A. Berlin, D. Milgram, J. Kelmer, G.
Equine Veterinary Journal; 2012. 44(s43):111-114. 17 ref.
[Journal article. Conference paper]
AN: 20133000692
Reasons for performing study: There is a consensus in the veterinary literature that Parascaris equorum (ascarid) impaction carries a poor prognosis. Hence surgery is often delayed and foals are often subjected to euthanasia after diagnosis of ascarid impaction is established. Our clinical impression was that ascarid impaction carries a better prognosis than previously reported. Objectives: Our expectation was that manually evacuating the impaction into the caecum, thus refraining from opening the small intestine, would improve the prognosis for survival of horses with ascarid impaction. The aim of this study was to examine medical records of horses treated surgically for ascarid impaction, record their clinical findings and evaluate the association of outcome with the method of relieving the impaction. Methods: The medical records of all

horses presented to our hospital between October 2002 and December 2011 that underwent exploratory celiotomy for ascarid impaction were reviewed. Information retrieved from the medical record included surgical findings, surgical technique, complications, short- and long-term survival. The association between categorical variables was assessed using the Fisher's exact test. A P value <0.05 was considered statistically significant. Results: Fifteen horses fulfilled the inclusion criteria. Eighty percent of horses (12/15) survived to discharge and 60% (6/10) survived for at least one year. Five horses are doing well but are still in convalescence. Horses that underwent small intestinal enterotomy or resection and anastomosis (n=5) were less likely to survive to discharge (P=0.022). Conclusions: In our study, manual evacuation of ascarid impaction into the caecum, while refraining from opening the small intestine resulted in significantly improved survival in horses with ascarid impaction. Potential relevance: Refraining from opening the small intestine may be the key to improving surgical outcome in horses with ascarid impaction.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

92.
Antimicrobial use in horses undergoing colic surgery.
Schaer, B. L. D. Linton, J. K. Aceto, H.
Journal of Veterinary Internal Medicine; 2012. 26(6):1449-1456. 43 ref.
[Journal article]
AN: 20123404522
Background: Recommendations for antimicrobial prophylaxis for surgery are well-described in human medicine, but information is limited for veterinary practice. Objective: To characterize antimicrobial use in horses undergoing emergency colic surgery. Animals: A total of 761 horses undergoing emergency colic surgery (2001-2007). Methods: Retrospective case review. Antimicrobial dose and timing, surgical description, and duration of treatment were collected from medical records. Associations between antimicrobial use and the occurrence of fever, incisional inflammation or infection, catheter-associated complications, or Salmonella shedding during hospitalization were analyzed using rank-sum methods and logistic regression. Results: A total of 511 (67.2%) horses received an inappropriate amount of drug preoperatively. Median time from preoperative dose to incision was 70 (IQR 55-90) minutes; median total surgery time was 110 (IQR 80-160) minutes. Seventy-three horses were euthanized under anesthesia because of poor prognosis. Of 688 horses, 438 should have been redosed intraoperatively based on the duration of surgery. Only 8 (1.8%) horses were redosed correctly. Horses remained on perioperative antimicrobials a median of 3 (IQR 2-4.5) days. Antimicrobial therapy was reinstituted in 193 (28.9%) horses, and median days of total treatment were 3.8 (IQR 2-6). Signs that led to reinstituting therapy were fever (OR 3.13, P=.001) and incisional inflammation/infection (OR 2.95, P=.001). Horses in which treatment was reinstituted had 2.3 greater odds of shedding Salmonella (P=.003). Increased surgical time was associated with longer duration of antimicrobial therapy (OR 1.02, P=.001). Conclusions and Clinical Relevance: Despite published recommendations regarding antimicrobial prophylaxis, compliance is poor; improvement might reduce postoperative complications.
Publisher
Wiley-Blackwell
Location of Publisher
Boston
Country of Publication
USA

93.
Emergency splinting techniques for stabilizing equine fractures.
Horse Report; 2011. 29(3):6-8.

[Journal article]
AN: 20123229629
This article describes the different fractures in horses and the appropriate splinting techniques for stabilizing the injured limbs. Focus is given on distal forelimb, mid-forelimb, mid-forearm, proximal forelimb, proximal limb, distal hindlimb, mid-hindlimb and mid-proximal-hindlimb fractures.
Publisher
Centre for Equine Health, School of Veterinary Medicine, University of California
Location of Publisher
Davis
Country of Publication
USA

94.
Emergency first aid and stabilization techniques.
Galuppo, L.
Horse Report; 2011. 29(3):4-5.
[Journal article]
AN: 20123229628
First aid and emergency splinting (stabilization) techniques for fractures in horses are presented and described. The importance of performing immediate and correct stabilization techniques in the successful outcome of treatment for the injury is discussed. Focus is given on initial management of horses with fractures, stabilization of fractures using splints, transporting injured horses and decision making before definitive treatment.
Publisher
Centre for Equine Health, School of Veterinary Medicine, University of California
Location of Publisher
Davis
Country of Publication
USA

95.
Equine fractures: improving the chances for a successful outcome.
Horse Report; 2011. 29(3):1-3.
[Journal article]
AN: 20123229627
This article discusses the importance of giving the proper first aid in horses suffering from fractures or trauma on the successful outcome of treatment. An example is given wherein a Kimzey splint has been applied to the injured hindleg of a horse injured during a race in order to prevent further damage.
Publisher
Centre for Equine Health, School of Veterinary Medicine, University of California
Location of Publisher
Davis
Country of Publication
USA

96.
Evaluation of L-lactate and cardiac troponin I in horses undergoing emergency abdominal surgery.
Radcliffe, R. M. Divers, T. J. Fletcher, D. J. Mohammed, H. Kraus, M. S.

Journal of Veterinary Emergency and Critical Care; 2012. 22(3):313-319. 42 ref.
[Journal article]
AN: 20123227698
Objective: To evaluate changes in plasma cardiac troponin I (cTnI) and L-lactate (LLt) as prognostic indicators in horses undergoing emergency abdominal surgery. Design: Prospective observational study. Setting: Veterinary teaching hospital. Animals: Thirty-four horses undergoing emergency abdominal surgery. Interventions: Serial blood sampling during various times during hospitalization (hospital admission, and 12, 24, 48, and 72 h postoperatively) evaluating cTnI and LLt concentrations. Measurements and Main Results: All horses required surgery for correction of a strangulating (n=29) or nonstrangulating obstruction (n=5) of the small or large intestine. Twenty-seven horses survived to discharge; 7 were euthanized either during (n=1) or after (n=6) surgery due to disease severity or systemic complications associated with the primary gastrointestinal lesion. Preoperative cTnI concentrations were increased above the normal reference interval in 24% of horses (8/34, median=0.01 ng/mL, range=0-12.23 ng/mL), whereas LLt concentrations were increased above the normal reference interval in 88% of horses (30/34, median=3.37 mmol/L, range=0.77-13.26 mmol/L). The LLt concentration was significantly higher (P<0.05) in nonsurviving compared with surviving horses at admission, and at 24 and 72 hours postoperatively. No significant difference in the cTnI concentration was detected between groups at admission. However, the cTnI concentration was significantly higher (P<0.05) in nonsurviving compared with surviving horses at all time points postoperatively. Conclusions: Measurement of both LLt and cTnI concentrations may provide information for prognostication in surgical colic horses. Marked increases in admission concentrations of LLt (median 7.56 mmol/L) and even moderate postoperative increases in cTnI concentration (median 0.97 ng/mL) may both indicate a poor prognosis in critically ill horses following abdominal surgery.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

97.
Acute pancreatitis in two five-day-old Appaloosa foals. (Special Issue: Equine perinatology.)
Ollivett, T. L. Divers, T. J. Cushing, T. Priest, H. Dawson, D. R. Peters, R. Stokol, T.
Equine Veterinary Journal; 2012. 44(s41):96-99. 31 ref.
[Journal article]
AN: 20123072328
Severe acute pancreatitis (SAP) in foals is rare and treatment has not been documented. This paper describes the clinical, haematological and ultrasonographic findings as well as attempted treatment of SAP in two 5-day-old Appaloosa fillies. Clinical signs, including colic, diarrhoea and coma, may be mistaken for sepsis or neonatal encephalopathy. Hyperlipaemic serum and peritoneal fluid, and elevated serum and peritoneal fluid amylase and lipase activities aided the diagnosis. Severe acute pancreatitis should be included as a differential in an acutely ill foal with diarrhoea, colic, cerebral cortical dysfunction and hyperlipaemia.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

98.
Accession Number
20093134439

Author
Javsicas, L. H.; Giguere, S.
Title
How to perform cardiopulmonary resuscitation in neonatal foals.
Source
Proceedings of the 54th Annual Convention of the American Association of Equine Practitioners, San Diego, California, USA, 6-10 December 2008; 2008. 513-519. 12 ref.
Publisher
American Association of Equine Practitioners (AAEP)
Location of Publisher
Lexington
Country of Publication
USA
Publication Type
Book chapter
Conference paper.

99.
Accession Number
20083122856
Author
Hollis, A. R.; Boston, R. C.; Corley, K. T. T.
Title
Plasma aldosterone, vasopressin and atrial natriuretic peptide in hypovolaemia: a preliminary comparative study of neonatal and mature horses.
Source
Equine Veterinary Journal; 2008. 40(1):64-69. 43 ref.
Publisher
Equine Veterinary Journal Ltd
Location of Publisher
Ely
Country of Publication
UK
Abstract
Reasons for performing study: Neonatal foals succumb rapidly to hypovolaemic shock in comparison to mature horses; they do not consistently increase their heart rate in response to hypotension and respond differently to fluid administration. The hormonal responses to hypovolaemia in the horse and foal require investigation. Hypothesis: The hormonal responses to hypovolaemia and fluid administration differ between mature and neonatal horses. Methods: Five mature horses and 5 neonatal foals fulfilling predetermined criteria for hypovolaemia, were included in the study. A blood sample was taken at admission and after normalisation of fluid balance. These were analysed for plasma aldosterone, vasopressin (AVP) and atrial natriuretic peptide (ANP). Normally distributed variables were compared using the Student's t test and nonparametric data using the Mann-Whitney U test. Results: ANP, AVP and aldosterone were higher before fluid resuscitation than after fluid resuscitation in mature horses. Aldosterone was higher before than after fluid resuscitation in foals, and was higher in foals both before and after fluid resuscitation than in mature horses. ANP was lower in mature horses after fluid resuscitation than in foals. No other comparisons were significantly different. Conclusions: The hormonal responses of the mature and neonatal horses are different during hypovolaemia and following fluid resuscitation. Potential relevance: The differences in the hormonal responses to hypovolaemia and fluid resuscitation may be important when considering fluid resuscitation of hypovolaemic horses and foals, and warrants further investigation.
Publication Type
Journal article.

100.
Accession Number
20073127209
Author
Palmer, J. E.
Title
Neonatal foal resuscitation. (Trauma and emergency care.)
Source
Veterinary Clinics of North America, Equine Practice; 2007. 23(1):159-182. 45 ref.
Publisher
W.B. Saunders
Location of Publisher
Philadelphia
Country of Publication
USA
Abstract
The most important step in neonatal foal resuscitation is thorough preparation. The techniques ranging from basic to advanced life support are outlined in an effort to prepare the practitioner to meet the challenge of the moment of crisis with tools that result in successful outcome. Printed algorithms with drug doses in terms of amounts in milliliters needed for the typical foal should be readily available.
Publication Type
Journal article.

101.
Accession Number
20053206812
Author
Corley, K. T. T.; Axon, J. E.
Title
Resuscitation and emergency management for neonatal foals. (Neonatal medicine and surgery.)
Source
Veterinary Clinics of North America, Equine Practice; 2005. 21(2):431-455. 75 ref.
Publisher
W.B. Saunders
Location of Publisher
Philadelphia
Country of Publication
USA
Abstract
Early intervention can dramatically alter the outcome in foals. Cardiopulmonary cerebral resuscitation can be successful and clinically worthwhile when applied to foals that arrest as part of the birthing process. Readily available equipment and an ordered plan starting with addressing the respiratory system (airway and breathing) followed by the circulatory system (circulation and drugs) are the keys to success. Hypoglycaemia is common in foals that are not nursing and in septic foals. Support of serum glucose can be an important emergency treatment. Respiratory support with oxygen therapy should be considered in all foals following resuscitation and dystocia. Other foals that are likely to benefit from oxygen are those that are dyspnoeic, cyanotic, meconium-stained after birth or recumbent. Emergency therapies, applied correctly, are expected to result in decreased mortality and morbidity.
Publication Type
Journal article.

102.
Accession Number
20053206803
Author
Sanchez, C. L.
Title
Neonatal medicine and surgery. (Neonatal medicine and surgery.)
Source
Veterinary Clinics of North America, Equine Practice; 2005. 21(2):i-xii + 305 pp. many ref.
Publisher
W.B. Saunders
Location of Publisher
Philadelphia
Country of Publication
USA
Abstract
This issue covers: immunological disorders in neonatal foals; equine neonatal sepsis; foal diarrhoea; nondiarrhoeal disorders of the gastrointestinal tract; maturity of the neonatal foal; orthopaedic disorders; neurological disorders; equine neonatal thoracic and abdominal ultrasonography; resuscitation and emergency management; ventilatory support for critically ill foals; nutritional support; and abdominal surgery.
Publication Type
Journal issue.

103.
Accession Number
20043161803
Author
Fielding, C. L.; Magdesian, K. G.
Title
Cardiopulmonary cerebral resuscitation in neonatal foals. (Special issue: Neonatology.)
Source
Clinical Techniques in Equine Practice; 2003. 2(1):9-19. 45 ref.
Publisher
W.B. Saunders
Location of Publisher
Philadelphia
Country of Publication
USA
Abstract
Cardiovascular or pulmonary system failure in neonatal foals requires rapid recognition and initiation of cardiopulmonary cerebral resuscitation (CPCR). Foals may require resuscitation immediately after birth or after arrest from progression of a disease process such as severe sepsis or septic shock. Initial treatment is aimed at establishing an airway and providing ventilation. Circulation is provided by closed-chest compressions. Circulatory access is important to provide intravenous fluid and pharmacologic therapy for cardiovascular support. Ventricular fibrillation and pulseless ventricular tachycardia are arrhythmias not commonly recognized with arrest in foals, whereas asystole and cardiovascular collapse are frequently encountered. Training of personnel, preparation of supplies, and organization during CPCR is essential to a successful outcome. Most of the information used for CPCR in neonatal foals is derived from human medical research and clinical medicine. As new advances are made in human neonatal and paediatric CPCR, many of these treatments and techniques can be applied to foals. This article reviews currently available CPCR guidelines in foals and highlights new perspectives in human medicine that may be applicable to foals.
Publication Type
Journal article.