A selection of references on wound management

Search Strategy:

1. "wound therapy" or "wound management" or "wound care" [mp=abstract, title, original title, broad terms, heading words] (478)
2. from 1 keep 1,5,11-12,19,22,24,26-27,29,31,42-43,45,47,49,60,62,64-65,67,69-73,81,85,90-92,98 (32)

**<1>**
Accession Number
20143257391
Author
Munsterman, A. S.; Hanson, R. R.
Title
Trauma and wound management: gunshot wounds in horses. (Special Issue: Emergency and critical care.)
Source
Publisher
Elsevier Inc.
Location of Publisher
New York
Country of Publication
USA
Abstract
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.
Publication Type
Journal article.

**<2>**
Accession Number
20143224247
Author
Pitt, K. A.; Stanley, B. J.
Title
Negative pressure wound therapy: experience in 45 dogs.
Source
Veterinary Surgery; 2014. 43(4):380-387. 63 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK

Abstract
Objective: To report experience with negative pressure wound therapy (NPWT) in 45 consecutive dogs admitted with extensive cutaneous wounds and to determine if NPWT is feasible in veterinary hospital practice. Study Design: Prospective descriptive study. Animals: Dogs (n=45). Methods: Collected data were organized into 6 categories: patient data, wound data, NPWT data, adjunctive treatments, complications, and final outcome. Results: Wounds (53 in 45 dogs) were largely traumatic in origin, and distributed fairly evenly to the trunk, proximal and distal aspects of the limbs. Most wounds (34 dogs, 76%) had no granulation tissue and were treated a mean of 4.2 days after wounding, whereas 11 dogs had granulating wounds that were initially treated a mean of 87 days after wounding. Median NPWT use was 3 days with a mean hospitalization of 7.8 days. Most wounds (33; 62%) were closed surgically after NPWT and were healed by 14 days. The other 18 wounds healed (mean, 21 days) by second intention after hospital discharge. Overall, 96% of the wounds healed; 2 dogs died before definitive closure could be attempted. Conclusion: NPWT is applicable to a wide variety of canine wounds, is well tolerated, allows for several days between dressing changes, and can used to optimize the wound bed for surgical closure or second intention healing.

Publication Type
Journal article.

<3>
Accession Number
20143185682
Author
Schoonover, M. J.
Title
Platelet-rich plasma therapy in wound management.
Source
Publisher
North American Veterinary Community (NAVC)
Location of Publisher
Gainesville
Country of Publication
USA
Publication Type
Conference paper.

<4>
Accession Number
20143185432
Author
Hottinger, H.
Title
Open wound management: ways to help (not hinder) mother nature.
Source
Publisher
North American Veterinary Conference
Location of Publisher
Gainesville
Country of Publication
USA
Publication Type
Conference paper.

Reconstructive surgery in traumatic wound care in small animals. [Portuguese]


Abstract
The term reconstructive surgery, refers to using techniques of tissue reconstruction, like grafts, flaps, to correct traumatic skin defects, when primary closure is not possible due to excess tension. The grafts can be done as a lot of shapes, or just using relieving tension sutures. The retails can be done as axial patterns or as the pad pattern, though the first been the most efficient. Independently of the technique used, some pre and post operator care must be taken, to sure the surgical success, like a soundly, non traumatic, avoiding surgical tension, distortion, hematomas, retail infection and flap circulatory compromise. At the time of the surgical technique choice, should be taken into account the wound area, location, tension lines, skin availability and surgeons preference. The use of cadavers for the study and development of anaplasty technique is indicated, since the main factor for flap necrosis is the error in the surgical option. Surgical oncology demands imagination, skills, good anatomy knowledge. Reconstructive surgery has been routinely used in Veterinary Medicine, for its use in returning the tissue function and acceptable esthetics.

Publication Type
Journal article.

A novel bioelectric device enhances wound healing: an equine case series.

Varhus, J. D.

Abstract
The term reconstructive surgery, refers to using techniques of tissue reconstruction, like grafts, flaps, to correct traumatic skin defects, when primary closure is not possible due to excess tension. The grafts can be done as a lot of shapes, or just using relieving tension sutures. The retails can be done as axial patterns or as the pad pattern, though the first been the most efficient. Independently of the technique used, some pre and post operator care must be taken, to sure the surgical success, like a soundly, non traumatic, avoiding surgical tension, distortion, hematomas, retail infection and flap circulatory compromise. At the time of the surgical technique choice, should be taken into account the wound area, location, tension lines, skin availability and surgeons preference. The use of cadavers for the study and development of anaplasty technique is indicated, since the main factor for flap necrosis is the error in the surgical option. Surgical oncology demands imagination, skills, good anatomy knowledge. Reconstructive surgery has been routinely used in Veterinary Medicine, for its use in returning the tissue function and acceptable esthetics.
The use of low-level microcurrents for accelerated wound healing is well documented. A case series was conducted to assess wound healing outcomes following the application of a wireless, current-generating bioelectric wound care device in 10 equines that presented with traumatic injuries in the lower extremity. Wounds were treated with a bioelectric device held in place with standard bandaging twice a week. At each follow-up visit, wounds were photographed and assessed for signs of epithelialization. All presented wounds were reduced in size or achieved complete wound closure, with an average 1.3% wound healing per day. The results of this case series demonstrate the safety and efficacy of a bioelectric device as a management option for traumatic lower-extremity wounds in equines and hold significant promise in promoting enhanced healing rates and improved aesthetic outcomes.

Publication Type
Journal article.

<7>
Accession Number
20143127636
Author
Best, E.
Title
Negative pressure wound therapy in a slow healing distal extremity.
Source
Veterinary Times; 2014. 44(14):6, 8. 6 ref.
Publisher
Veterinary Business Development Ltd
Location of Publisher
Peterborough
Country of Publication
UK
Abstract
A distal extremity wound in a young cat, resulting from a crushing injury, failed to granulate appropriately. Negative pressure or vacuum-assisted wound therapy was used to stimulate wound granulation as well as support a free skin graft that was applied subsequently.
Publication Type
Journal article.

<8>
Accession Number
20143130270
Author
Caldwell, F.
Title
How to select an appropriate wound dressing.
Source
The Veterinary Nurse; 2014. 5(2):102-107. 17 ref.
Publisher
MA Healthcare Limited
Location of Publisher
London
Country of Publication
UK
Abstract
Wound management forms a vital part of nursing practice. With such a vast variety of wound dressings available on the veterinary market, the registered veterinary nurse (RVN) should ensure they are familiar with
the function and purpose of the dressings they are applying to their patients. Over recent years, wound care has advanced with the introduction of dressings with anti-microbial properties along with an improved understanding of the science behind wound dressings. This article aims to provide the RVN with a basic knowledge of the different varieties of wound dressings available for our veterinary patients, along with a brief overview of their main functions and applications.

Publication Type
Journal article.

<9>
Accession Number
20143128320
Author
Knapp-Hoch, H.; Matos, R. de
Title
Negative pressure wound therapy-general principles and use in avian species. (Special Issue: Advances in clinical therapeutics.)
Source
Publisher
Elsevier
Location of Publisher
New York
Country of Publication
USA
Abstract
Negative pressure wound therapy (NPWT) is an adjunctive wound management modality that has been shown to augment the treatment of acute and chronic dermal and subdermal wounds in human and veterinary medicine. The proposed effects of NPWT are multifactorial and include improvement of wound perfusion, reduction of interstitial edema and substances inhibitory to wound healing, enhancement of granulation tissue formation, and reduction in bacterial contamination from a wound bed. Together, the proposed benefits of NWPT can lead to enhanced efficiency of wound healing when this treatment modality is applied to a wound. In this article, the authors provide an overview of the mechanism of action of NPWT. Case selection, system application and management, as well as contraindications to NPWT therapy are presented. Potential uses, practical application, and limitations of use of NPWT in avian species are discussed.

Publication Type
Journal article.

<10>
Accession Number
20143111889
Author
Woodlands, C.
Title
Wound management in veterinary practice.
Source
Veterinary Nursing Journal; 2014. 29(3):83-89.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
Abstract
Wound management is a wide-ranging topic with a variety of methods available to treat the different kinds of wound that are seen in veterinary practice. Aspects that are covered in this article include different types of wound, the wound healing process and the methods and products available to assist with the process of wound healing.

Publication Type
Journal article.

Negative pressure wound therapy (NPWT) or vacuum-assisted closure (VAC) of wounds is a treatment modality that consists of applying sub-atmospheric, or negative, pressure to a wound resulting in wound protection, drainage and accelerated wound healing. NPWT systems are constructed by the use of commercial or improvised systems; the wound is packed with open cell polyurethane foam or gauze, covered with adhesive drape and connected with tubing to an adjustable suction device. Recently, more portable, single-use systems have been developed, that make them more versatile for use, particularly in veterinary patients.

Publication Type
Journal article.
The procedure and use of negative pressure wound therapy to aid in skin defects during healing, wounds or septic peritonitis are described.

Publication Type
Journal article.
considerable attention to this natural product. Numerous reports on laboratory research, experiments, clinical case studies and randomised controlled clinical trials have been published providing evidence of its effectiveness. In addition, biomedical research has been able to explain how honey produces such convincing results. Unfortunately, there have been no objective clinical trials in small animal veterinary medicine reporting on the efficacy of honey. An important part of the scientific and clinical interest is attributed to the antibacterial properties of honey as with the rise in the prevalence of antibiotic-resistant bacteria and with the research and development of novel antibiotics lagging behind, alternative antimicrobial strategies for topical wound care are urgently needed. Honey’s broad-spectrum antibacterial activity is multifactorial in nature: its high sugar concentration, its low pH, and the presence of hydrogen peroxide (H₂O₂), methylglyoxal (MGO) and the very recently identified peptide bee defensin-1 are all considered to be very important interacting compounds. But honey may have very differing concentrations of H₂O₂, MGO and bee-defensin-1 depending on its floral source and even on the batch. Since medical-grade honey was first licensed for treating wounds in Australia in 1999, the clinical use of wound care products containing honey has extended to other countries such as Germany. To encourage veterinary practitioners involved in professional wound care to use certified honey as an alternative treatment approach in wounds of different origin and types, this article provides an overview of the medically significant compounds present in honey, their mode of action, the safety requirements concerning medical-grade honey, its clinical significance and the clinical indications for the topical application of medical honey.

Publication Type
Journal article.
A 42-year-old female Testudo graeca was referred with a five-month history of a non-healing carapacial wound. Previous treatment had involved long-term antibiotic therapy and conscious debridement of necrotic tissue. On presentation an extensive deep wound with purulent discharge was visible on the right side of the carapace. A computed tomographic scan was performed to assess the extent of the wound. This revealed a large carapacial deficit with two underlying soft tissue masses. Surgical debridement was performed under general anaesthesia resulting in an even larger defect. Because of the extensive nature of the deficit, negative pressure wound therapy was applied to aid wound healing. A negative pressure of approximately 120 mmHg was maintained and bandages were changed every third day. Wound healing progressed rapidly and a healthy granulation bed was formed within 16 days.

Negative pressure wound therapy (NPWT) offers great potential for the treatment of wounds, with a wide variety of configurations and aetiologies. The technique is used to decrease wound-healing time and facilitate wound care in situations that might otherwise be considered difficult or non-healing. Numerous applications have been reported in several species including acute and chronic wounds, wounds with exposed bone, tendon or implants, open fractures and osteomyelitis. NPWT has been shown to increase dermal perfusion, reduce oedema and interstitial tissue fluid, stimulate granulation tissue formation, achieve reverse tissue expansion and reduce bacterial colonisation. As a result, NPWT has been shown to reduce periods of open wound management and stimulate chronic non-healing wounds to return to normal healing progression. The three stages of NPWT application - contact layer selection, creating an airtight seal and application of the vacuum - are described in this article with practical tips to help new users ascend the learning curve with this technique. While complications have been reported associated with NPWT, many of these are avoidable if guidelines of application and maintenance are followed. NPWT adds another option to our wound management arsenal and may facilitate successful, cost-effective results in notoriously difficult to manage scenarios.
Effects of negative pressure wound therapy on healing of free full-thickness skin grafts in dogs.

Objective: To compare healing of free, full-thickness, meshed skin grafts under negative pressure wound therapy (NPWT) with bolster dressings in dogs. Study design: Randomized, controlled experimental study, paired design. Animals Dogs (n=5). Methods: Full-thickness skin wounds (4 cm x 1.5 cm) were created bilaterally on the antebrachia of 5 dogs (n=10). Excised skin was grafted to the contralateral limb. Grafts were randomized to NPWT or bolster dressings (control; CON). NPWT was applied continuously for 7 days. Grafts were evaluated on Days 2, 4, 7, 10, 14, and 17, biopsied on days 0, 4, 7, and 14, and had microbial culture on Day 7. Outcome variables were: time to first appearance of granulation tissue, percent graft necrosis, and percent open mesh. Significance was set at P<.05. Histologic findings, culture results, and graft appearance were reported. Results: Granulation tissue appeared earlier in the NPWT grafts compared with CON grafts. Percent graft necrosis and remaining open mesh area were both greater in CON grafts compared with NPWT grafts at most time points. Histologic results showed no significant difference in all variables measured, and all cultures were negative. Conclusions: Variables of graft acceptance were superior when NPWT was used in the first week post-grafting. Fibroplasia was enhanced, open meshes closed more rapidly and less graft necrosis occurred with NPWT application. More preclinical studies are required to evaluate histologic differences.
reduce periods of open wound management and stimulate chronic non-healing wounds to return to normal healing progression. The three stages of NPWT application - contact layer selection, creating an airtight seal and application of the vacuum - are described in this article with practical tips to help new users ascend the learning curve with this technique. While complications have been reported associated with NPWT, many of these are avoidable if certain guidelines of application and maintenance are followed. NPWT adds another option to our wound management arsenal and may facilitate successful, cost-effective results in notoriously difficult to manage scenarios.

Publication Type
Journal article.

<20>
Accession Number
20133245041
Author
Bertran, J.; Farrell, M.; Fitzpatrick, N.
Title
Successful wound healing over exposed metal implants using vacuum-assisted wound closure in a dog.
Source
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
An eight-month-old Labrador retriever was presented with a grade IIIb open shearing injury of the left tarsus. Acute severe surgical site infection developed 2 days after pan-tarsal arthrodesis, resulting in wound dehiscence. Vacuum-assisted wound therapy was carried out for 12 days to treat an extensive full-thickness soft tissue defect with exposure of metal implants. New granulation tissue formation covering most of the defect was achieved by day 10 of this therapy. Epithelialization was achieved by second intention healing with open wound management. To the authors’ knowledge, this is the first veterinary clinical case report documenting complete healing over exposed metal implants without any requirement for surgical revision.

Publication Type
Journal article.

<21>
Accession Number
20133217004
Author
Knottenbelt, D. C.; Braun, M.
Title
Skin diseases of the horse - impaired wound healing in the distal limbs. [German]
Source
Praktische Tierarzt; 2013. 94(Suppl. 3):13-19. 4 ref.
Publisher
Schlutersche Verlagsgesellschaft GmbH & Co. KG
Location of Publisher
Hannover
Country of Publication
Germany
Abstract
This article presents the causes and treatment of impaired wound healing in horses, particularly wounds located in the distal limbs. The factors that hinder or delay wound healing are given focus, such as wound infections, foreign bodies/materials present or remaining in the wound, necrotic tissue, relative mobility, impairment of perfusion or blood flow to the wound, inadequate oxygen supply to the wound, health status of the horse and iatrogenic (improper pretreatment of wound) and local factors (moisture content, pH, fluid retention and tension). Emphasis is also given on proper care of wounds located at the distal limbs (diagnosis, wound management, wound cleaning, topical treatment with antibiotics and antiseptics and wound dressing).

Journal article.

Accession Number
20133225574
Author
Tobias, K.
Title
The essential wound care series: practical tips - vacuum-assisted closure.
Source
Publisher
North American Veterinary Conference
Location of Publisher
Gainesville
Country of Publication
USA
Publication Type
Conference paper.

Accession Number
20133225573
Author
Tobias, K.
Title
The essential wound care series: practical tips - wound lavage.
Source
Publisher
North American Veterinary Conference
Location of Publisher
Gainesville
Country of Publication
USA
Publication Type
Conference paper.
The essential wound care series: practical tips - maggot therapy.


The essential wound care series - Part 2.


This is the final article in a series of three individual wound management case studies. It covers one of the common complications that can occur following the application of long-term dressings - decubitus ulcers ('pressure sores'). Ideally bandaging should be problem-free, but in reality pressure sores can, and do, occur. This raises issues on how to continue to manage the primary problem - invariably a broken bone - as well as dealing with the pressure sore. In this case, by the time the pressure sore had fully developed, the original injury had been managed; so the main focus could be switched to the pressure sore. The author has found that once the pressure is relieved, a dramatic improvement in the wound can be seen relatively quickly when moist wound management is implemented, as this article shows.

Abstract

Dressings have played a vitally important role in wound management since the 1960s. More recently as we see more evidence of antimicrobial resistance, there has been an increase in the number of antimicrobial dressings available, and in use. Antimicrobials differ from antibiotics in their mode of action against bacteria;
meaning bacterial resistance is less likely. The current range of antimicrobials commonly incorporated into dressings includes silver, honey and polyhexamethylene biguanide (PHMB), with iodine being less commonly used in companion animal practice.

Publication Type
Journal article.

<29>
Accession Number
20133118652
Author
Calder, C.
Title
Wound management - Part 2: postoperative wound breakdown.
Source
Veterinary Nursing Journal; 2013. 28(3):94-98. 1 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
This is the second article in a series of three individual wound-management case studies. It charts the progress of a surgical wound which suffered the setback of two wound breakdowns, which considerably lengthened the healing time. This article also explores the factors involved in wound breakdown and charts the progress following the second breakdown when the wound was then managed conservatively by maintaining a moist wound environment.

Publication Type
Journal article.

<30>
Accession Number
20133112069
Author
Dar, L. M.; Hussain, S. A.; Abdullah, S.; Rashid, A.; Parihar, S.; Rather, F. A.
Title
Maggot therapy and its implications in veterinary medicine: an overview.
Source
Journal of Advanced Veterinary Research; 2013. 3(1):47-51. 30 ref.
Publisher
Faculty of Veterinary Medicine, Assiut University
Location of Publisher
Assiut
Country of Publication
Egypt
Abstract
Alternative therapies to conventional wound management are available now-a-days to help facilitate faster wound healing without any complications. Among various alternative therapies, it has been well established that maggot therapy can be used successfully to treat chronic long-standing infected wounds which have previously failed to respond to conventional treatment. Maggot therapy employs the use of freshly emerged, sterile larvae of the common greenbottle fly, Phaenicia (Lucilia) sericata, and is a form of artificially induced myiasis in a controlled clinical situation. Maggot therapy, however, is used relatively little in veterinary
Nevertheless, concern over antibiotic resistance and the increase in demand for organic husbandry and residue-free meat and milk, suggest that it is an option which merits further consideration. In this review article, authors' discuss the role of maggots and their preparation for veterinary medical use.

Publication Type
Journal article.

<31>
Accession Number
20133111380
Author
Hadley, H. S.; Stanley, B. J.; Fritz, M. C.; Hauptman, J. G.; Steficek, B. A.
Title
Effects of a cross-linked hyaluronic acid based gel on the healing of open wounds in dogs.
Source
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Objective: To compare effects of a cross-linked hyaluronic acid (HA) based gel (CMHA-S) to a standard wound management protocol on the healing of acute, full-thickness wounds in dogs. Study Design: A prospective, controlled, experimental study. Animals: Purpose-bred, adult, female beagles (n=10). Methods: Two 2x2 cm wounds were surgically created bilaterally on the trunk of each dog and each side randomized to treatment (CMHA-S) or control (CON) groups. Total and open wound areas were measured with digital image planimetry at 15 time points. From these data, percent contraction and percent epithelialization were calculated. Tissue biopsies were obtained at 6 time points and histologic features were scored. Results: Total wound area was significantly larger and percent contraction was significantly less in CMHA-S compared to CON wounds at all data points between days 9 and 18. At day 25, and for the remainder of the study, CMHA-S wounds were smaller and contracted more than CON wounds, reaching significance at day 32. Percent epithelialization was significantly less in CMHA-S compared to CON wounds at all data points after day 11. Histologically, fibroblastic cellular infiltration was significantly higher in CMHA-S wounds at day 21. Conclusions: CMHA-S wounds healed more slowly than CON wounds. This HA-based gel is not indicated in acute, full-thickness skin wounds in dogs as administered in this study. However, treatment may be beneficial in the mid-to-late repair stage of healing, or if scar minimization is desired. Further studies to evaluate the effects of the CMHA-S gel on canine wounds are indicated.
Publication Type
Journal article.

<32>
Accession Number
20133085526
Author
Calder, C.
Title
Wound management - Part 1: stopper pad injury case history.
Source
Veterinary Nursing Journal; 2013. 28(2):48-50. 1 ref.
Publisher
Wiley-Blackwell
Abstract
This is the first in a series of three case studies on different types of wounds. This article focuses on an unusual laceration of a stopper pad and the process of wound healing following initial emergency presentation.

Publication Type
Journal article.