

Dog Ends – a new treatment for tail tip injuries

Tail tip injuries in dogs appear to be fairly simple injuries. However, they have the potential to develop various complications making successful treatment very difficult. This article describes the use of a new mesh-based dressing developed for the treatment of this injury and also suggests a management approach that allows various wound complications to be successfully controlled.

Introduction

Tail tip injuries in veterinary practice are relatively uncommon, with a reported incidence of 0.23% (Diesel et.al. 2010), although comments on owners websites suggest that many injuries are treated without veterinary involvement. Spaniels and sighthounds such as Greyhounds, whippets and lurchers are at higher risk of tail tip injuries.

Without careful management, tail tip injuries are unlikely to heal and rapidly turn into chronic haemorrhaging wounds, causing pain and suffering for the dog and great difficulties for owners or dog handlers. Blood is sprayed up the walls when the tail is wagged and the wound will literally not heal.



Figure 1 - blood spray from a tail injury

Clinical presentation

Tail tip injuries in dogs start as a small excoriation, typically to the distal tail tip, although they can exist further down the tail. Wagging of the tail against any hard surface exacerbates the wound. Most tail injuries in dogs are impact related – without impact absorption, successful healing is unlikely.



Figure 2 - early tail injury

Various complications including pain, self-trauma and infection are commonly found.

Tail tip injuries should be treated immediately when they are minor skin injuries (Figure 2). Without appropriate treatment, these wounds will rapidly deteriorate (Figure 3). A number of complications are likely to develop. These reduce the chances of successful treatment.



Figure 3 - Chronic tail tip injury

Dog Ends are mesh tubular dressings that are attached to overhang the tail tip. The mesh has been engineered to allow the dressing to flex just sufficiently to absorb impacts without transmitting the force down to the injured area. Their mesh construction allows superb ventilation to the injured area with aids in the reduction of infection risk.



Figure 4 - Dog Ends treatment pack + instructions

Management of an early tail tip injury

Even at this stage, these injuries will bleed profusely. Deep tissue damage or deep skin infection is unlikely at this point, although fractures are possible. Superficial

skin infection is common and culture and sensitivity testing may be useful.

Self trauma from chewing/licking or wagging will play a large part in the deterioration of the wound. It is necessary to prevent the dog chewing the tail or the dressing, normally by using an Elizabethan collar.

The largest issue with these wounds is the continual repeated impacts on the wound area from tail wagging. Without absorbing these impacts the wound will not heal.

Dog Ends applied at this stage are very likely to solve the problem rapidly.

The Dog End dressing should be used until the wound has completely healed – this is normally until the hair has regrown and completely covered the wound area. Hair provides valuable cushioning and for this reason, the tail tip should not be clipped unless it is essential to do so to control infection.

Dog Ends should be applied as shown in the pack instructions – using anchor tape placed proximal to the tail wound to prevent any further skin trauma. (Fig 5,6,7) In some cases, it can be useful to place a sterile primary dressing on the wound first to protect the skin surface. Hydrogel dressings can also be used beneath the primary dressing to encourage tissue repair.

The mesh of the Dog End helps to keep any primary dressings in place and the overhanging tip acts to absorb impact and remove or reduce the trauma. When changing the dressing, it is often possible to leave the anchor tape in place if it is not dirty or peeling. Changing the Dog End takes a few seconds and should be done daily or whenever the Dog End is dirty or damaged.



Figure 5 – anchor tape in position



Figure 6 – primary dressing loosely taped in place



Figure 7 – Dog End dressing providing impact absorption in overhanging area

It should take around two weeks for complete resolution of a tail tip injury, but longer treatment courses are necessary. Dog Ends are often used for prevention of future injuries, for instance with working dogs or during short periods of kennelling.

Management of a chronic tail tip injury

Chronic injuries need to be treated rather differently. Multiple complications are normally present:

- Deep tissue infections – bacteriology and sensitivity tests are very important. Multiple antibiotic resistance may be present if antibiotics have been used ineffectually.
- Deep soft tissue damage is likely. Osteomyelitis may also be present. Radiographs can be used to help to identify osteomyelitis. An appropriate antibiotic should be used if infection is identified.
- Dogs will be used to chewing or traumatising these wounds. This is accentuated by the inevitable pain associated with chronic wounds. Pain relief is essential, coupled with physical wound protection using an Elizabethan collar. Non-steroidal anti-inflammatory drugs (NSAIDs) are normally the most appropriate analgesic agents for this type of wound.
- Impact trauma is always going to be present. As before, Dog Ends will absorb these impacts, eliminating this from the equation. It may be

necessary to use antibiotics, NSAIDs and an Elizabethan collar first for a few days before placing any dressing on the tail. If tail dressings are used immediately, this can cause extra pain.

- In some cases, if the distal tissue is too badly affected, tail tip amputation can be beneficial, to eliminate the chronically diseased tissue. Margins must include all infected or traumatised tissue to be effective, making pre-operative radiography extremely useful. Dog Ends are very useful after amputation to protect the delicate surgical wound. In this situation it is essential to use a sterile primary dressing first to cover the wound, with a Dog End placed over the top.

severe scarring, with swollen granulation tissue and minimal areas of haired skin.

The difficult nature of the condition was explained to the owners, with the need for protracted treatment and potential amputation discussed. A Hound Surround collar (Bonovate, UK) was used to prevent further self-trauma (this collar is smaller than a conventional Elizabethan collar, with superior peripheral vision and ventilation)



Figure 9 - Dog End in place on injured tail after 5 days of analgesic and antibiotic treatment

Case study:

In this case study, the first image shows a chronic tail wound on a 7 year old ex-rescue



Figure 8 - Chronic tissue damage

Staffordshire Bull Terrier with a two year history of intermittent tail tip haemorrhage and self trauma. The tail tip exhibited



Figure 10 - Tail after 2 weeks of treatment. Soft tissue swelling eliminated and hair is starting to regrow

Swabs were taken and submitted for bacteriological culture and sensitivity testing and the dog was started on oral cephalixin

and meloxicam. Dog Ends were used to eliminate impact injuries. Haemorrhage stopped by the following day as the superficial trauma was removed from the equation. After 2 weeks, superficial inflammatory changes were largely eliminated in the injured area. Soft tissue swelling was eliminated and the tail tip could be handled without pain. Hair re-growth was starting but continued wound protection with the Dog ends and collar was still essential.

Amputation might have been considered in this case. However, without very careful protection and pain management, the dog would merely have traumatised the surgical wound, starting the process again.

Conclusion

Tail tip injuries have a complex aetiology. Elimination of any complicating factors, (especially self –trauma) is essential. Dog Ends eliminate the major factor of impact trauma and aid healing.

References

Diesel G, Pfeiffer D, Crispin S, Brodbelt D. Risk factors for tail injuries in dogs in Great Britain *Veterinary Record* 2010;**166**:812-817