

## Surgical Management of Canker in a Kathiawari Mare

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### Abstract

Seven years old Kathiawari mare was presented with lameness in both forelimbs having bilaterally cauliflower like growth originating from frog and hyperkeratinization of hoof, which was not responding to routine medicinal management. Clinical examination confirmed canker in both forelimbs. Surgical debridement was performed under general anesthesia, bandaging of hoof with Zinc oxide, antibiotic and Copper sulphate (minor quantity) powder was continued for fifteen days. Animal showed uneventful recovery and symptoms of lameness was also disappeared after thirty days of surgery.

**Keywords:** Canker; kathiawari mare; lameness

### Introduction

Equine canker is also known as proliferative pododermatitis which is a debilitating disease of hoof having chronic hypertrophy of horn-producing tissues mainly in the frog region (Turner, 1988; Stashak, 2002; Goble, 2003). In thrush there is destruction of horn tissue in sulci of the frog where as in canker proliferative disease affecting horn of the frog anywhere throughout its structure (O'Grady and Madison, 2004). Higher prevalence of canker has been reported in the hind limbs (Whitton *et al.*, 2000; Furst and Lischer 2006), although canker is also observed in forelimb (Whitton *et al.*, 2000; O'Grady and Madison, 2004). The canker is most commonly occurred in draught horses (Goble, 2003; O'Grady and Madison, 2004), but other breeds can be also affected (Furst and Lischer, 2012). Etiology of canker include infectious agents such as bacteria, viruses, fungi and spirochetes have been suggested, but environmental conditions like wet and unhygienic environment also blamed as stimulating factors (Stashak *et al.*, 2002; O'Grady and Madison, 2004; Nagamine *et al.*, 2005; Brandt *et al.*, 2010). Moreover, even an immunological aetiology has been hypothesized (Jongbloets *et al.*, 2005). Present report describes surgical management of canker in Kathiawari mare which might be developed due to unhygienic and muddy floor.

### History, Clinical Signs and Diagnosis

A seven years old Kathiawari mare was presented with history of lameness having bilateral cauliflower like growth was originating from frog of both forelimbs

and hyperkeratinization of hoof involving tissue with discharge from one limb (Fig. 1 and 2). Mare was treated by local veterinarians before presentation but didn't show any improvement. Mare was kept routinely on muddy and unhygienic floor. The growth of both forelimbs was increasing gradually, showed remarkable signs of lameness. Based on physical and clinical examinations of mare, case was confirmed as proliferative pododermatitis (Canker) and planned for surgical debridement in both forelimbs under general anesthesia.

### Surgical Treatment

Mare was prepared for surgery after standard pre-operative preparation *viz* off feed, off water for 24 and 12 hours respectively. Both hoofs were cleaned with mild PP water and brushed to remove debris and mud. The mare was anesthetized by Xylazine 1.1 mg/kg and Ketamine 2.2 mg/kg b.wt. for induction and equal mixture of Ketamine Hcl and Xylazine were used for maintenance throughout procedure. Surgical debridement with BP blade and overgrown tissue were excised by hoof cutter (Fig. 3). Bandaging with Zinc oxide, antibiotic and some trace of copper sulphate (minor quantity) powder was performed in both limbs. Advice was given to owner for bandage changing every alternate day till healing. 30 days of post-operative care, mare was observed for outcome and showed improvement with no sign of lameness. Post-operative antibiotics (Streptopenicillin 5 gm), analgesic (Flumixin Meglumine 1.1 mg/kg) for five days and Tetanus toxoid 5 ml IM before surgery and local wound dressing for fifteen days were instituted. Animal showed uneventful recovery and the lameness was also showed progressive resumption of normally.

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### Canker in mare



Fig. 1 and 2: Growth in left and right fore limb before surgery

Fig. 3: After surgical debridement

### Results and Discussion

In present study Kathiawari mare was surgically treated for canker in both forelimbs, although canker most frequently occurs in hind limbs. Many authors also reported canker in forelimb like this case (Whitton *et al.*, 2000; Goble, 2003; O'Grady and Madison, 2004). There is no association between sex, breed and hospitalization of horse for development of canker (Oosterlinck *et al.*, 2011). Goble, 2003 and Furst and Lischer 2006 stated prevalence of canker is higher in draught horses. Negligence or delay in treatment of canker will increase chances of reoccurrence. Debridement was performed under general anesthesia, excessive growth which was originating from frog and horn producing tissue of hoof were removed carefully. Washing sole and frog with antiseptic solution and bandaging hoof after application of gauze having antibiotic powder. Similar procedure was also suggested by Rigert *et al.*, 2009 and Oosterlinck *et al.*, 2011. In present case mare was kept in muddy floor and unhygienic environment which might be culprit for development of canker which was also earlier stated by Stashak *et al.*, 2002 and Brandt *et al.*, 2010.

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