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Surgical Management of Extensive Lacerated Wound in a Horse

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Abstract: A horse with lacerated wound on the antero lateral aspect of right arm involving brachiocephalicus, deltoideus and anconeus muscles. They were sutured using chromic catgut and skin with silk. It was administered tetanus toxoid, and ATS to prevent onset of tetanus. Early presentation of the case, proper approximation of wound edges and good post operative care made the case successful.
Keywords: Horse, deep lacerated wound, suturing, tetanus toxoid.

INTRODUCTION

Wound is defined as a separation or discontinuity of skin, mucous membrane or tissue surface caused by physical, chemical or biological agents[1]. Such wounds may be superficial or deeper involving muscles, tendons[2], ligaments[3] and even joints[4]. Risk of cutaneous injuries on limbs was more in working horses and those causing lameness were as high as 17.32% in the age group of 2-4 years [5]. Local signs like haemorrhage, pain and gaping of edges and remote signs like traumatic neuralgia can be observed in such wounds. These wounds normally heal by 1st intention if fresh and by 2nd intention if delayed. Several factors influence wound healing of which, time of presentation of the case, extent of infection are of utmost importance. Approximation of wound edges and topical medicaments hasten the wound healing. Here we report a case of extensive avulsive and lacerated wound and its surgical management in a mare.

CASE HISTORY AND OBSERVATIONS

A mare, aged about 8 years belonging to Sri Venkateswara Dairy Farm, Tirupati was reported to have met with an extensive skin injury on fore limb while crossing barbed wire fencing. It was bleeding heavily and was unable to stand and walk properly.

On reaching the site the mare was alert, stood on its own but, limping on its right forelimb and not allowing even the rider. It had extensive, lacerated and avulsion wound at shoulder region which was bleeding heavily (Fig-1). With great difficulty it was restrained and sedated with triflupromazine hydrochloride @ 0.3 mg/kg BW. On close observation, the wound was painful with swollen edges measuring 2" deep, extending obliquely 14" from mid scapula to anterior 1/3rd of humerus and horizontally 9" from anterior 1/3rd of humerus to just before point of elbow. It was a fresh bleeding wound with less contamination.

TREATMENT AND DISCUSSION

The horse was casted on left lateral recumbency and area around the wound was prepared asceptically. Intra muscularly 10 ml of styptochrome was injected. The wound was thoroughly irrigated with potassium permanganate solution to remove the debris and dust, haemostasis was achieved by ligatures using chromic catgut no 1. The wound was dusted with streptopenicillin powder and irregularly torn muscles (brachiocephalicus, deltoideus, anconeus, and a part of superficial and pectoral muscles) were sutured with chromic catgut no. 2 in proper approximation. Skin was sutured with braided silk in horizontal mattress pattern. Suture line was well padded after applying mixture of zinc oxide and tincture iodine ointment (Fig 2). It was administered 6 ml of tetanus toxoid, 15 ml of enrofloxacin, 15 ml meloxicam and this regimen was followed for next 5 days. Sutures were removed on 12th day and wound healing was uneventful.

In horses wounds mostly occur due to accidents, gore injuries, while crossing fence, etc. There was no relevance to age of occurence of wounds but Mistry *et al*. [5] reported more incidences in age group of 2-4 yrs. Here it was of 8 yrs age and resultant of trauma by barbed wire. Presentation of the case was more congenial for 1st intention healing which was reported within 2 hrs after injury otherwise (if exceeded more than 6 hrs) it might have lead to sepsis [1]. Streptopenicillin powder dusted on the wound would have helped in combating infection. Mixture of zinc oxide and tincture iodine was used as topical

medicament as zinc oxide was proved to accelerate wound healing by reepithelialisation[6]. Different people used different agents topically for hastening the healing like fibrin glue[7]. There were no complications of wound healing except formation of proud flesh which was common in horses. Kumar[8] reported similar case of lacerated wound on hind limb of horse. Wound healing is restoration of normal anatomic continuity to a disrupted area of tissue. For this, many factors like early presentation of the case, correct approximation of skin edges, post operative management facilitated success of this case.

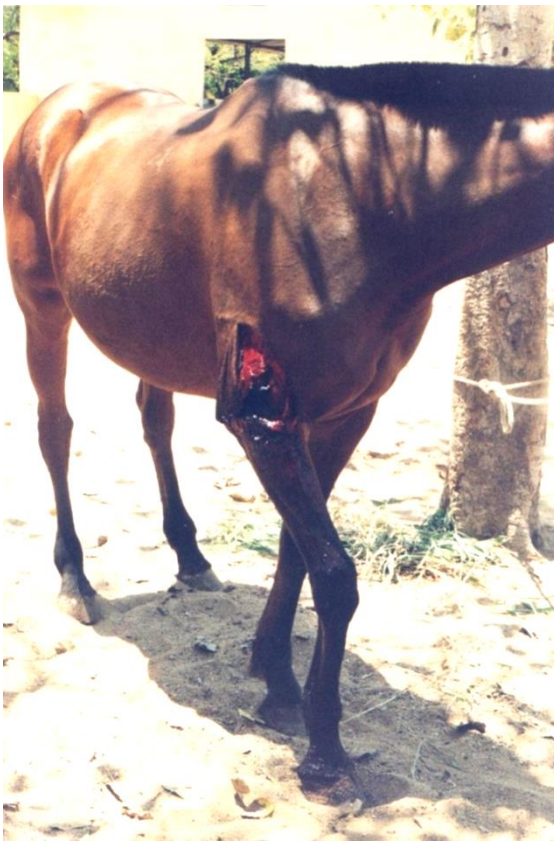

Fig 1: Lacerated wound on antero- lateral aspect of right arm. (Before surgery)

Fig 2: Wound after Suturing and ointment application

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