MEDICOSURGICAL MANAGEMENT OF SHARP CUT INJURIES OF FLEXOR TENDONS IN HARROWING BULLOCKS

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INTRODUCTION

Cut injuries of either superficial or deep flexor tendon or both, are frequently encountered in working bullocks employed for agricultural operation during cultivation of cash crops where harrowing blades cause field accidents leading to the crippling condition of the victim putting farmers in problem during the peak preparatory phase of cultivation. In the field accidents invariably the flexor tendons get the trauma or cut injuries either partially severed or completely cut with wide gap due to which the working capacity of the bullocks are markedly impaired depending on the degree of trauma and intensity of the cut injuries to the flexor tendons. Farmers being hopeless are forced to sell their valuable bullocks to the local butchers at the cheapest rate owing to their ignorance about its correction by surgical intervention. Conventional treatment does not yield satisfactory improvement to such accident that met with causing upward movement of the hoof and incapable of weight bearing on the affected limb in question with fet lock touching on the ground. Inspite of treatment some animals are found to develop sepsis (Meshram *et al.* 2006). Present communication reports successful medico-surgical management of complete sharp cut injuries of flexor tendons of three bullocks that restored working capacity.

HISTORY AND CLINICAL OBSERVATIONS

Two fresh cases of flexor tendon severance and one delayed case of complete flexor tendon cut injuries were attended by the authors at farmers doorstep as referral case by the practicing paravets. Fresh cases where accidents occurred during training and or practice of ploughing in the field by the tender aged young bullocks (ages between 3 to 4 years) and the delayed or protracted case occurred in a bullock aged about six years which was treated by the conventional method only applying skin sutures and systemic antibiotic therapy alongwith antiinflammatory analgesics and corticosteroids and local application of antiseptic dressing oil preparations. On these observations it was found that the fetlock was almost touching the ground in all the cases along with upward movement of the hoof. The wound in delayed case of reporting developed sepsis. The fresh cuts were just attended by the paravets where the animals received tight bandaging and parenteral anticoagulant (Inj. Styptovit ®) and Tincture of iodine application locally. On removal of the bandage and on close careful examination of the injury of the fresh two cases it revealed complete flexor tendons severe and it was possible to locate the cut ends of the tendons with a little gap. All the cases were diagnosed to be typically complex severe of flexor tendons which needed mandatory surgical intervention and correction by tenorrhaphy.

MEDICOSURGICAL MANAGEMENT

In each case the animals were sedated with xylazine hydrochloride (Xylaxin ® Indian immunological @ 0.2 mg/kg body weight and surgical procedure were followed and executed as per standard surgical protocol on lateral recumbency. For the old and delayed case of surgical intervention, extra care was taken to remove all dead, devitalized and necrosed tissues and was flushed with normal saline solution (NSS) followed by injectable Metronidazole solution. The wound was freshened and broadened in each case with the help of surgical blade for base of operation and making close apposition of the cut end of the tendons. It was extremely difficult for locating the cut ends of the tendons and also to anastomose the ends and for the said purpose the hoof was moved to enable the cut ends of the severed tendon close enough for case of suturing. In all the cases superficial and deep flexor tendons were sutured separately with 2-0 absorbable suture (Ethicon). Muscles were also sutured properly with simple continuous suturing method and the skin wound was closed properly with silk thread. Post operatively the animals received combination of streptomycin and penicillin, Inj. Munomycin Fort (Glaxo Smithkin) @ 2.5 gm BID dissolved in 7ml of Inj. Pheniramine Maleate (Intervet) along with parenteral administration of Inj. Meloxicam (Melonex ® INTAS) @ 15ml once daily for seven days and regular dressing and topical application of multipurpose gel Charmil

® (Dabur Ayurvet) was done . The sutures from the skin were removed 21 days post operatively.

DISCUSSION

The surgical wounds healed uneventfully within 21 days post surgical correction by tenorrhaphy but it took more than one month to regain apparently normal movement. Neurotropic B-vitamins (Inj. Tribivet) @ 5 ml on alternate day for six occasions and Mag sulf moist hot fomentation were adviced which hastened recovery and normalcy in movement. Flexon of the hoof of the animals was also found possible within one month in fresh two cases and in the protracted cases animal resumed normally in hoof flexion within one and half months. However, working capability of the animals were regained in the next season with a prolong rest and good nursing and sound management. The findings were in close proximity and corroboration with Singh *et al.* (1989), Meshram and Dalvi (2005)and Meshram and Kamble (2006). The response to therapy and surgery was assessed with the normalcy in gait, posture and movement with flexion of hoof. Reunion of the flexor tendons needs maximum caution because it is prone to further tear while on movement. For first seven to ten days, movement was restricted and kept in even ground with soft bedding provisions. Adhesion of tendons, subsequent healing as an adjunct to perfect reunion by suturing helped in uneventful recovery. Flexion of the hoof of the animals restored and animal regained its ability to perform normal work which might be attributed to the reunion and healing of the severed tendons which are in agreement with the findings laid down by Simrat and Bansal (1996).

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