Tail Amputation in Cattle : A Case Report

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Tail Amputation in Cattle : A Case Report

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ABSTRACT

The trauma of the tail is not a very popular case in our country. Trauma is an initial factor for fracture and other clinical conditionsas like as gangrene, necrosis etc. Medicinal management in most cases was not successful and needed a surgical approach. This study describe a tail amputation case of a 2-year-old cow caused by necrosis and gangrene and followed a surgical approach for correction. The surgery was successful without any complications by the regular use of post-surgical medicine. The clinical case report concluded that Amputation of the tail in case of tail affections like fracture, or gangrene is better than medicinal treatment.

Keywords: Necrosis of tail, Cattle, Medicinal treatment, Surgical correction.

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CHAPTER I: INTRODUCTION

A pathologicaldcondition known as gangrene occurs when saprophytic and typically putrefactive bacteria infiltrate necrotic tissue (Smith. and Jones., 1963). So, it is said that necrosis leads to gangrene most of the time. According to gross appearance, gangrene has two types, one is Dry gangrene and another is Moist gangrene. Dry gangrene is a gradual process due to less blood supply in the affected area characterized by a dark shrunken areawith a leathery or mummified appearance and a line of demarcation. Moist gangrene occurs due to bacterial infections with a rapid progression and is characterized by a high moisture affected area with foul odor with a appearance of dark-red, purplish or greenish-black, edematous and discolored (Thomson., 1978). There are found some tail affection those prone to raise different complexity in animal. Though tail have normal anatomy like other part of body, it face more risk of trauma, fracture, gangrene, necrosis, paralysis, luxation etc (Nuss and Fiest, 2011). The tail protect the anal region from different Ectoparasites nesting and other violence (Alam *et al*., 2010).There are many factor are responsible for fracture. The initial reason mostly started by some form of Trauma (Singh and Kumar, 2001). Fracture in coccygeal vertebra most commonly due to trapped of tail between two fixed object (Singh and Kumar, 2001).

There are also many factors responsible for tail amputation such as secondary infection leads to gangrene, necrosis etc. Tail gangrene in buffaloes and cows is common, several possible causes can be identified, such as *Corynebacterium bovis,* deficiency of fatty acids, and microfilaria (George *et al*., 1970).

According to a study by (Zh, *et al.*,1986), metabolic abnormalities in the dermis and epidermis have been found to be a risk factor for the necrosis of the tail's last vertebr ae. In many severe case tail affection leads to spread disease to spinal cord ,decrease milk production and mortality of animal.

This report describe a surgical case tail amputation and post operative treatment of a cattle.

CHAPTER II: MATERIALS AND METHODS

II.I. Case Presentation

A 3 years cow of 200-250 kg body weight was brought to Rangunia upazilla veterinary hospital with the complain of tail injury. The history of the cattle was traumatized tail with the tree 2 weeks ago. Physical examination was done. The case was diagnosed based on the gross lesion and it had necrosis of the tail at the middle. (fig 1).

In this situation, the animal's condition was discussed with the owner and a decision was made to amputee the affected part of the tail.

II.II. Anesthesia and Surgical Correction

For surgery purposes, the animal withheld the feed 8 hours ago. As pre-anesthetic, the animal was sedated with Diazepam @ 0.5mg/kg body weight. It maintained a calm and quiet state and facilitated the anesthetic protocol.

As an anesthetic, 5ml 2% Lidocaine Hydrochloride was used for low epidural block. It facilitated the desensitization of the peri-anal region and surgery procedure. The anesthetic side (first Inter coccygeal space) was palpated with the tip of the finger by moving the tail up and down in standing condition. The side was prepared aseptically and 18 G Hypodermic needle was introduced at the angle of 45-degreeangle. The proper side of the introduction was tested by the Hanging drop method. Then inject the 5ml 2% Lidocaine slowly. The desensitization area was poked by the needle to check the sensitivity in this area. After that, a tourniquet was applied at the base of the tail. Then the disarticulation area was palpated and fixed at the exact point. The area was clipped and the asepsis with a disinfectant solution. There is a parallel incision at the distal part of the 3rd inter-coccygeal space. The hemorrhage was checked by releasing a tourniquet and ligated by artery forceps if there was bleeding. Finally, disarticulation of the fixed side and trimming of excessive skin part. After that, the apposition of sutured skin there were used horizontal mattress suture to close the incision site. Finally, the sutured area protected with bandage after dressing the wound aseptically.

Fig1: Necrosis of last part of tail

Fig 2: Local anesthesia after clearing

Fig 3:Tie tourniquet at the head of tail

Fig 4: Desection of affected tail

Fig 5:Suturing of cutting edge

Fig 6:Dressing andbandage the wound

CHAPTER III: RESULT AND DISCUSSION

Post-surgery treatment was antibiotic (Ceftriaxone, 20ml, 7 days), anti-histaminic (Hista vet, 20 ml, 7 days) antipyretic and analgesic (Fixin vet, 8.5ml, 7 days) The wound was dressed up for 10-12 days with Ointment Viodin 5% (Povidone-Iodine)

Fig 7: Healing of amputated tail within 12 days

The study discussed about the importance of surgical tail amputation in tail affections. The animal recovered without any complications around 13 days after the continued course of post-surgery medicine (Fig. 7). According to affection type, it may take more time to heal the wound, such as the healing time of gangrened tail amputationthan only necrosed tail (Dasari *et al*., 2021).In cases of necrosis of the tail, amputation is the more effective treatment (Dhillon and Singh, 2003). Tail amputation and antibiotics are used in Ontario beef feedlot cattle as therapeutic and preventive measures (Drolia *et al*., 1996).There were suggestions for a cranial amputation of the tail in the affected area (Akioye *et al*., 2010; Nuss and Fiest, 2011).Though a surgical approach is more successful than medicine, in some cases, medicinal treatment has been successful with a long course of medicine. According to (Satyanarayana *et al*.,2014), the treatment of necrosis in buffaloes with

fomentation in the morning and evening for 25 days, local streptopencillin at 250 mg above the seat of the lesion, and topical Loraxene application was found successful. (Hokonohara *et al.*, 2016) used Oxy-G (oxytetracycline-gentanian violet) to treat tail necrosis.There is an association between gangrene and necrosis; so it is a must to amputate the tail. Surgical amputation of the affected tail part is a must for the treatment of a moist, severe form of tail necrosis, where treatment consists of early amputation combined with intensive antimicrobial therapy. (Radostitis *et al.*, 2007). In a few rare cases, necrosis and gangrene of the tail were cured with a medicinal treatment containing powders of zinc oxide, kaolin, and boric acid poured on the tail (Dillon and Singh, 2003). From the above discussion,we can say that medicinal treatment is more time-consuming than a surgical approach. In some cases, the success rate is also less. As a result, surgical tail amputation is more successful in tail affections.

CHAPTER IV: CONCLUSION

The case report focus the tail amputation at the field level in an easy way as well as save of animal from different difficulties like asspread of disease to the spinal cord, decreased milk production, and in rare cases, caused animal death. Considering all the circumstances and significant impact on the economic welfare of a farmer, amputation of the tail would be popular with the veterinarian in the near future.

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Biography

I am Somaiya Nasrin, daughter of Md Edris Meah and Joynab Begum. I have passed my Secondary School Certificate Examination from CUET School and College, Chattogram with GPA -5.00, and Higher Secondary Certificate Examination from Chattogram Govt. Women College with GPA- 4.50. Now, I am an Intern student at Chattogram Veterinary and Animal Sciences University, Bangladesh under the Faculty of Veterinary Medicine. I became interested in animal healing because it is a noble profession that is respected throughout the world, and I want to devote a lot of time to improving the lives of livestock, people, and the planet as a whole.