

## **SURGICAL MANAGEMENT OF UDDER GANGRENE CONSEQUENT TO HORN GORE INJURY IN A COW**

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**Abstract:** A Pluriparous Jersey crossbred cow was presented with improperly treated and protracted deep horn gore injury on udder. The open wound was gangrenous and myiatic involving udder parenchyma of right fore quarter. The necrotic tissue was removed under local anaesthesia and dressed with CuSO<sub>4</sub> and zinc oxide. Good antibiotic treatment and post operative care rewarded with better recovery.

**Keywords:** Crossbred Jersey cow, horn gore injury, udder gangrene, CuSO<sub>4</sub>, Zinc oxide.

### **Introduction**

Udder is most important part of animal in economic point of a dairy farmer. Wounds of udder and teats may occur due to barbed wire fences, stampede, biting by the calf, gore injuries, rough handling by milkers, etc. (Singh *et al.*, 1993). In cows, incidence of deep wounds was found to be 1.4% of all udder affections (Abd-El-Hady, 2015). Horn gore injuries are common in closely packed herds. These injuries may be superficial affecting skin and subcutis (Lisie *et al.*, 2008) or deep involving udder parenchyma (Abd-El-Hady, 2015) severely affecting milk production. They should be attended immediately otherwise may lead to heavy economic loss to farmer. The present paper reports successful management of udder gangrene in a cow.

### **Case History and Clinical Observation**

A pluriparous crossbred Jersey cow was presented with a huge open wound in udder region. Anamnesis revealed that it was consequent to horn gore injury by a fellow buffalo 20 day before. Because of improper and untimely treatment, it became septic, gangrenous and myiatic.

The open wound at udder was very large placing the necrotic and oedematous wound edges wide apart with a circumference of 24 inches. Whole parenchyma of right fore quarter

was completely affected except the teat and gland sinus which were displaced to left side. Huge mass of dark, dead and gangrenous tissue infested with maggots found hanging from base of udder, oozing greenish yellow pus. Rest of the udder quarters were unaffected. Two non functional supernumerary teats were observed, one between left quarters and other behind left hind teat.

### **Treatment and Discussion**

The cow was restrained in left lateral recumbency with all four limbs tied together. Local anaesthesia was achieved by ring block using 2% lignocaine hydrochloride. The gangrenous tissue was carefully removed by blunt dissection. The wound was scarified till it bleeds. The bleeders were arrested by ligation using chromic catgut no. 1. Whole cavity was then irrigated thoroughly by KMNO<sub>4</sub> lotion, mopped and dusted with finely ground CuSO<sub>4</sub>. The same was followed for next one week. Later the cavity was smeared with paste of zinc oxide and tincture iodine and lorexane ointment alternatively. It was administered with Inj. ceftriaxone + tazobactam 3.375g, inj. ketoprofen 15ml and inj. Vitamin A 4ml i/m for 5 days. The wound edges measured 15 inches and the teat and gland cistern came to almost normal position on day 15 and the wound completely healed by 3 months.

In the present case the udder lesion was due to a deep horn gore injury. Any wounds related to udder should be attended with utmost care and management; else, it would lead to irreparable damage to its productivity. Horn gore injuries are punctured wounds and heal by substitution by formation of granulation tissue. Presence of inflammation reduces vascular supply, which delays epithelial growth and migration of fibroblasts (Singh and Singh, 1993). After debriding the necrotic tissue the wound healing was hastened with rapid fibroplasia thus forming required granulation tissue to fill the cavity. It was not possible to suture the wound edges as they were very wide apart and necrotic. Application of CuSO<sub>4</sub> helped in debridement of necrotic tissue by its corrosive action and zinc oxide in hastening granulation tissue formation. Daily dressing along with antibiotic treatment resulted in good recovery.

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**Fig 1:** Photograph showing wide open wound with gangrenous udder parenchyma



**Fig 2:** Photograph showing the same wound from left side with hanging gangrenous tissue. Note supernumerary teat between fore and hind quarters



**Fig 3:** Photograph showing the same case after 15 days of treatment. Note the teat and gland cistern in almost normal position

