

Management of horn gore injury and urticaria in a dairy cow: A case report

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ABSTRACT

This paper reports how a 4-year old Friesien-Sahiwal cross cow weighing 380 kg with horn gore injury on the left labia of the vulva was managed at the Large Animal Clinic, University Putra Malaysia. The lacerated wound measuring about 4-cm long was originated as a result of horn goring from another cow two weeks prior presentation of the cow to the clinic. Physical examination of the cow incidentally revealed urticaria on the left ventro-lateral aspect of the neck suspected to be sequel of hypersensitivity. The wound was treated by topical application of a mixture of Iodine, Benacillin LA, Biomectin 1% and Ilium Dermapred made into cream. While the urticaria was treated by intramuscular injection of Chlorpheniramine maleate at 0.5 mg/kg bwt. Animal management, housing design and presence of sharp horns are some of the factors that can lead to physical traumatic injuries in dairy cows.

Keywords

Cow, Gore injury, Horn, Urticaria

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INTRODUCTION

Horns of cattle or buffaloes can cause injuries of various shapes, sizes and directions, and have been reported to be violent and goring in nature (Rau, 1982). The wounds may be caused from contusions,

lacerations, penetration of body cavities, and rarely fractures (Senthilkumar et al., 2014). Subcutaneous tissues and muscles are commonly affected but visceral organ injuries are also frequent (Rani et al., 2010). Onoja et al. (2011) reported severe lacerations of the skin and muscles in bull and lamb due to horn gore injury. Ventral herniation may result from goring injury and is most common in the region of the flank where the muscle is thin (Al-Sobayil and Ahmed, 2007). In humans, bull gore injuries are among the commonest accidents in rural areas. The most common site of injury in bull gore cases in humans is the abdomen and perineal region (Senthilkumar et al., 2014). Several management factors such as animal husbandry, housing design, and characteristics of individual cows may lead to traumatic injuries in dairy cows (Busato et al., 2001).

Urticaria (also known as hives, heat bumps and angioedema) is poorly understood and the allergens are usually not known (Blowey and Weaver, 2011). In cattle, urticaria is associated with drug hypersensitivity (especially penicillins), insect and arthropods stings and bites, infections, vaccination, foods, plants and dermatographism. It also occurs as part of a generalized hypersensitivity condition in high producing dairy cows (especially Jersey and Guernsey) (Jubb, 2013). Urticaria is characterized by multiple plaque-like eruptions that are formed by localized edema in the dermis and that often develops and disappears suddenly. It may occur in all domestic animals but most commonly found in horses (Stephen, 2013). Acute urticaria usually disappears spontaneously. Rapid-acting glucocorticosteroids like,

hydrocortisone sodium succinate or prednisolone sodium succinate or hemisuccinate are reported to be useful in its alleviation, Dexamethasone (0.1 mg/kg bwt) has been reported to be useful in dogs, cats, and horses, while Epinephrine may be given in life-threatening situations (Stephen, 2013). This case report documents how a case of horn gore injury in a dairy cow with incidental urticaria was successfully managed at the Large Animal Clinic, Universiti Putra Malaysia.

CASE HISTORY

A 4-year old Friesien-Sahiwal cross dairy cow weighing 380 kg with the history of a lacerated wound on the left vulva labia was presented to the Large Animal Clinic, Universiti Putra Malaysia. The cow acquired the injury from another cow in the paddock as a result of horn goring two weeks prior to present the cow to the clinic. The owner had used topical iodine and ivermectin to treat the wound before reporting the case to the clinic. The cow was managed semi-intensively and was fed with pellets.

CLINICAL EXAMINATION

During physical examination, a 4-cm long lacerated wound was observed on the left labia of the vulva (Figure 1). Foul smelling exudation was present on the lacerated surface. The wound was in slow healing process as granulation tissue was observed on its surface. Incidentally, urticaria was observed on the left vento-lateral aspect of the neck region (Figure 2).

DIAGNOSIS

Based on the history and physical examination, the case was diagnosed as horn goring injury as the lacerated wound could be seen on the left labia of the vulva (Figure 1). Diagnosis of urticaria was also made based on the characteristic lesions observed on the ventro-lateral aspect of the neck (Figure 2).



Figure 1. Four cm long lacerated wound due to horn goring injury.



Figure 2. Urticaria on left ventro-lateral neck region.

TREATMENT

The wound was first cleaned by washing with normal saline, followed by topical application of a cream prepared by mixing (at equal proportion) iodine, Benacillin, long acting antibiotic, Ivermectin and Ilium Dermapred twice daily for 6 days. Chlorpheniramine maleate injection at 0.5 mg/kg bwt was given intramuscularly once.

CLIENT EDUCATION

The owner was advised to apply the cream twice daily after cleaning the wound. He was also advised to isolate the cow from the herd until the wound had healed and the urticarial lesion disappeared. Dehorning of cows with pointed horns was recommended in order to prevent further injuries to other animals in the herd.

DISCUSSION

The lacerated wound due to traumatic injury caused by horn was also reported by Rau (1982) who stated that horns of cattle or buffaloes can cause goring and violent injuries of various shapes, sizes and directions. The lacerated nature of the injury also reported by Senthilkumar et al. (2014), who stated that the wounds produced by horn injuries were contusions, lacerations, penetration of body cavities, and rarely fractures. The location of the wound at the perineal region in the present case report corroborated the reports of Senthilkumar et al. (2014), who reported the commonest site of injury in bull gore cases in humans as the abdominal and perineal regions.

Cases of traumatic horn injuries in animals were not widely documented. However, reports by Al-Sobayil and Ahmed (2007) and Onoja et al. (2011) were among a few cases of traumatic horn injuries reported in animals. Since the wound was managed as an open wound, topical application of a cream mixture of

iodine, Benacillin, Ivermectin and Ilium Dermapred was found as effective in treating the wound.

Though no diagnostic test was conducted to ascertain the cause of the urticarial lesions, it was suspected that it might have caused from a generalized hypersensitivity reaction. This is in consonance with the reports of Jubb (2013), who stated that urticaria might occur as a part of generalized hypersensitivity reaction in high yielding dairy cows (especially Jersey and Guernsey) which were sensitized to autogenous milk proteins. Positive response was observed following administration of antihistamine agent. The treatment with histamine containing agent, Chlorpheniramine maleate (10 mg/mL) showed a reduction in lesions after 15 min of administration. In this case report, antihistamine was prescribed to decrease the intensity of hives and pruritus in the cow, as reported by Stephen (2013).

CONCLUSION

Traumatic horn injury is a common herd management problem observed in dairy herds. Cows with pointed horns may act as a source of injury to other animals in the herd. Dehorning and treatment of horn goring wound with a topical cream mixture of Ilium Dermapred, ivermectin, Benacillin and iodine proved to be successful in the treatment of such wounds.

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