CASE REPORT

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Severe horn-gore injury in a 5-year-old Bunaji bull and a 10-month-old Yankasa ram-lamb: Case reports

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Abstract
This paper reports two scenarios whereby goring injury sustained by a Bunaji bull and a Yankasa lamb were managed by pastoralists before the cases were presented to the Large Animal Clinic Unit of the Veterinary Teaching Hospital, Ahmadu Bello University, Zaria. Anamnesis of the cases presented was that the bull sustained injury 4 days prior to presentation while attempting to mount a cow. The lamb sustained goring injury inflicted by a bull 3 days prior to presentation. The herdsman unwillingly revealed that he had used procaine penicillin and an herbal preparation (ethnoveterinary medicine) prior to presentation of the bull. 'Man-shanu'was applied topically on the horn-gore injury of the lamb by the client. The skin and muscles of both the bull and lamb were also severely lacerated. Evacuation of the haematoma, herbal (ethnoveterinary) preparation and repair of lacerated tissues were successfully performed in the bull while there was an unsuccessful attempt to manage the goring injury in the lamb. The clients were advised to avoid managing cases themselves and to promptly report cases to a nearby Veterinary Clinic.

Keywords: Goring injury, Hematoma, Trauma.

Introduction:
The injuries caused by horns of cattle or buffaloes are of various shapes, sizes and directions and are goring in nature and violent (Rau, 1982). The wounds produced are contusions, lacerations, penetration of body cavities and, rarely, fractures. Mostly subcutaneous tissues and muscles are affected but visceral injuries are also quite frequent (Rani *et al*., 2010). In animals, it is documented that ventral hernia often results from goring injury and hernia due to a gore is probably commonest in the region of the flank where the muscle is naturally thin (Boden & West, 1998; Al-Sobayil & Ahmed, 2007). There is paucity of documented information on horn-gore injury amongst domestic animals. This prompted the need to report the horn-gore cases handled. Most of these injuries are sustained in villagers while rearing cows and bulls, during feeding and also while tying or milking the cows (Rani *et al*., 2010). Sporting activities involving bulls (bull-fighting) in the west, results in injuries most often and at times the matador is gored in the butt or any other part of the body within the reach of the bull's horn. In Nigeria, fatalities in humans resulting from horn-gore injuries are quite rampant (Ameh, 2000). Injuries from cow gore in adults among Fulani pastoralist are common occurrence (Sabo & Yusufu, 2007). Undoubtedly, animal farmers/herdsmen have been practicing ethnoveterinary medicine for quite some time and it has been of benefit to them (Neils *et al*., 2008).

Case reports
Case 1-Case History
A 5- year-old, 410kg Bunaji bull from a herd of 50 cattle was presented to the Large Animal Unit of the Veterinary Teaching Hospital, Ahmadu Bello University, Zaria with the chief complaint of a goring injury on the lateral aspect of the right thigh (Plate I). The animal sustained the injury 4 days prior to presentation while attempting to mount a cow. The herdsman had used procaine penicillin and a herbal preparation prior to presentation. Physical examination of the bull revealed the following vital parameters; respiratory rate 72 cycles/minute, temperature 39.2^{oC} and pulse 28 beats/minute; all within normal physiologic limits. Further examination of
the goring injury revealed the following problems; localized swelling around injury site, pain on palpation

Plate I. Herbal preparation tucked into the injury (case 1)

Plate II. Puncture injury on the lateral aspect of the right thigh (case 1)

of the area around the injury, putrid exudate from injury and herbal poultice tucked into the injury forming a pouch. Samples were taken routinely and properly labeled. The clinical diagnosis was a goring injury on the lateral aspect of the right thigh. The blood and faecal samples were taken to further evaluate the general health condition of the bull. The result of the faecal analyses showed significant level of gastrointestinal *Strongyle* eggs, and *Coccidia* oocyst. The packed cell volume (PCV) was 42 % and no hemoparasite was seen in the blood film examination. *Escherichia coli* and *Staphylococci* species were isolated from the wound.

Shaving and surgical preparation of the injury site was carefully carried out, followed by the infiltration with local anaesthetic agent, removal of herbal preparation, debriding and lavaging of the wound, obliteration of the dead space (pouch created by the poultice or herbal preparation), skin closure leaving the ventral aspect for good drainage (Plates I & II). Daily wound dressing treatment was carried out for three days, using; hydrogen peroxide (3% solution) and charmil® topical antibiotic wound Spray. On the fourth day post presentation, there was a change in therapy following the outcome of laboratory results, and the discharge of purulent materials from the wound site. The following were the drugs administered; procaine penicillin (20,000 i.u. /kg × 5/7 i.m), streptomycin (10mg/kg × 5/7 i.m), albendazole (10mg/kg per os) and amprolium (10mg/kg × 5/7 per os). This treatment was carried out to take care of the laboratory findings from the specimen submitted. Considering the fact that the wound site was infected, the skin stitches were removed and a decision was made to dress the wound as an open wound. The wound was super oxygenated using hydrogen peroxide (3% solution), covered with charmil® topical antibiotic wound spray and left open until healing.

The wound was managed as an open wound for eight more days before it healed and the animal was discharged.

Case 2 - Case History

A 10-month-old Yankasa ram-lamb weighing 17 kg from a flock of 13 was presented to the Large Animal Unit of the Ahmadu Bello University Veterinary Teaching Hospital, (ABUVTH) Zaria, with the chief complaint of a wound and discharge on the left abdominal wall. History revealed that the injury occurred 3 days prior to presentation following a goring injury inflicted by a bull, when the ram-lamb went to feed from the cattle feeding trough. Ethnoveterinary practice was also carried out on the goring injury site by the application of '*Man-shanu*' by the client prior to presentation.

Physical examination of the ram-lamb revealed the following vital parameters; Respiratory rate 40 cycles/minutes, temperature 39.1^{oC} and pulse 80 Beats/minute; all within normal physiologic limits. Further examination of the goring injury revealed the following problems; hyperpnoea, puncture of the cranial aspect of the left flank and extrusion of ruminal content from the wound. Blood and faecal samples were taken routinely for laboratory analysis and were properly labeled. The clinical diagnosis was a goring injury of the left flank.

The blood and faecal samples were taken to evaluate the general health condition of the ram-lamb. The result of the faecal analyses showed no significant level of gastrointestinal *Coccidia* oocysts and absence of helminth eggs. The blood was free of any hemoparasites.

The packed cell volume (PCV) was 37 % and there was leucocytosis due to neutrophilia.

Shaving of the injury site was carefully carried out, followed by the infiltration of local anaesthetic agent in the form of an inverted 'L'block analgesia, removal of '*Man Shanu*' ethnoveterinary preparation from the surgical site, following proper aseptic preparations of both surgeons and surgical site, the wound was debrided and lavaged, a 14 cm long laparatomy incision was carried out.The traumatised edges of the rumen were cleaned and closed using double rows of continous Lembert sutures. Skin closure using interrupted sutures was carried out after application of subcuticular sutures. The wound site was covered with a topical application of oxytetracycline-gentian violet spray. Procaine penicillin was administered (20,000 I.U./kg BW IM for five days), Streptomycin was also administered (10 mg/kg BW IM for five days) and 5 % dextrose-saline solution (250 ml) was administered intravenously.

Result and Discussion

The animal died the following day at 2.00 p.m. and was quickly taken for post-mortem examination. The following were the post-mortem findings: the carcass was fresh and well fleshed. The heart and liver were neither enlarged nor discoloured. Hyperaemia and congestion of both lungs were observed. There were ingesta in both the trachea and lungs. Severe adhesion occurred between the rumen and the diaphragm in the abdominal cavity. Peritonitis was noticed to have affected the right part of the abdominal cavity. The animal in case 1 responded well to treatment following the dressing of the wound as an open wound. It is very essential to note that putrefaction would have resulted if the wound was left sutured. The animal in case 2 did not respond to management because there was an evidence of peritonitis which had set in before the presentation of the animal to the Veterinary hospital for proper management of the horn-gore injury. The animal died one day post-management following asphyxiation that resulted from ingesta in the lungs. In both cases, the clients were warned sternly to desist from treating their animals when such animals have health problems but to quickly inform a Veterinarian or better still convey the animal to a nearby Veterinary Clinic.

The scenario presented by this report in which an extensive laceration caused by horn-gore in a Bunaji bull was contaminated with poultice made from herbs, locally called '*maganin kaho*' and the ram-lamb which also suffered a goring injury and was treated by its owners with '*Man-shanu*' agrees with Nwude, (1997), that some animal owners have knowledge of ethnoveterinary medicine and they practice it on their animals and it involves the use of medicinal herbs and management practices to prevent and treat a wide range of diseases to keep their animals healthy. Therefore, this may have prompted the clients' use of ethnoveterinary medicine such as the use of poultice or '*maganin kaho*' in case 1 and '*mai shanu*' in case 2. Nevertheless, when such cases become worse, expert medical advice is sought in hospitals as observed in the cases reported. Owing to the undocumented horn-gore injuries inflicted on unsuspecting cattle handlers, there is a need for increased awareness for veterinarians to thoroughly adhere strictly to safety tips during cattle and ram restraint in order to safeguard themselves from different types of penetrating horn injuries which were commonly observed in eleven patients in a survey carried out by Ameh, (2000), at the Ahmadu Bello University Teaching Hospital, Zaria.

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