

Surgical Management of Mandibular Hematoma in Local Breed Ox: A Rare Case Report

Jiregna Dugassa Kitessa^{1*} and Kisi Bekele Terefe²

¹Assistant Professor, Department of Clinical Studies, College of Veterinary Medicine and Agriculture, Addis Ababa University, Bishoftu, Ethiopia

²Veterinary Clinical Practitioner at Hiddi Veterinary Clinic, Ada'a District, East Shoa Zone, Oromia, Ethiopia

***Corresponding Author:** Jiregna Dugassa Kitessa, Assistant Professor, Department of Clinical Studies, College of Veterinary Medicine and Agriculture, Addis Ababa University, Bishoftu, Ethiopia.

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Abstract

An 8-years-old local breed cattle was Presented to the AAU Veterinary Teaching Hospital with swelling of the left mandible, loss of appetite, and physical condition. A thorough physical examination and palpation of the swelling revealed; fluctuating fluids and soft contents. Suction with a sterile 16 gauge needle was introduced into the area of the dependent area. As a result, a cascade of light red serous fluids was found. After removing the liquid, the cavity was rinsed with gauze soaked in antiseptics. Finally, the ox was successfully recovered from the case two weeks later without recurrence.

Keywords: Drainage; Hematoma; Mandible; Ox

Introduction

Hematomas are the perivascular accumulation of blood in the subcutaneous, inter muscular or intramuscular connective tissue resulting from vascular lesions [1]. It is a local swelling or collection of blood, usually in the form of fluid in the tissue. This is different from ecchymosed and bruising, where blood spreads under the skin in a thin layer in the former [2]. While, bruising can occur in different places and animals with varying degrees. Although rare in adult cows and calves it can be occurred due to bruising in the form of jaw hematomas [3].

Most hematomas can be confused with hemangiomas, a rare and common in newly borne human child mostly extra vascular [4]. Hematoma is caused by damage to the wall of a blood vessel (artery, vein, or capillary) and leakage of blood into tissues where it is not involved. Before diagnosing and detecting mandibular hematoma, it should also be ruled out by disease conditions: abscesses and seroma, which may be characterized by the presence of pus and clear fluid, respectively, but hematoma, may be identified by the presence of hemorrhagic fluid [5].

Case History and Clinical Examinations

An eight-years-old native bull was presented at AAU Veterinary Teaching Hospital with mandibular swelling on the left side (Figure 1A), loss of appetite and body condition. Due to inaccessibility, radiograph and ultrasound were rejected for diagnosis. The other

physiological parameters were within normal range except for the discovery of pale mucous membranes and sunken eyelids. To check the swelling an aspiration with a 16.0 gauge sterile needle was inserted into the area of the dependent part (Figure 2B). As a result, a small amount of serous fluid was expelled from the swelling in the form of a cascade of water. Blood from the ear vein was also taken for PCV test. Accordingly, the result was read by 24%. In addition, the fluid sample was cultured on the blood agar and there were no grown microorganisms (Figure 2). Based on laboratory results and clinical findings the case was diagnosed as a mandibular hematoma and underwent surgical removal of the content.

Preoperative preparations and animal control: After controlling the animal with physical control and scalp extension, washing of the swelling with thin chlorhexidine solution is applied and followed by shaving and scrubbing well.

Surgical correction and treatment: After the area is prepared aseptically a small incision was made over the dependent portion and the hematoma was drained, rinsed thoroughly with an antiseptic (weak iodine solution) and soaked with gauze impregnated with weak iodine solution. From there, the wound was left open to limit fluid, subsequent wound lavage and dressings (Figure 1B).

Post operative care and outcome: The opening was managed as an open wound by dressing and flushing for three consecutive days. In addition, animals were given penicillin (24 mg / kg) and dihydrostreptomycin sulfate (30 mg/kg) (Pen and Strep® Norbrook UK) intramuscularly for three days to avoid secondary bacterial complications. Following the management, the animal was recovered to normal in two weeks without postoperative complications and was seen 1 months later (Figure 1C).



Figure 1: Mandibular Hematoma in local breed Ox. A) Large and fluctuate swelling on mandible B) Drainage of hematoma on progress. C) After one month with complete healing.



Figure 2: Bacteriological culture from bovine mandibular hematoma on blood agar.

Result

No growth of bacteria on Blood agar showing the fluid is merely accumulation of blood in the cavity.

Discussion

Generally, hematomas should not be incised as much as possible. It takes time (2 to 3 weeks) to absorb depending on the condition. If there is no solution, only the incision will be resorted [6]. However, in this case, the hematoma was mature enough for drainage. A hematoma is a collection of blood under the skin that has a wound-like mechanism, but usually blood accumulates deep in the tissue and causes swelling in one area. The skin itself is not damaged, but the tissues and blood vessels under the skin are damaged causing mild internal bleeding. Because blood is limited to one area, this area spreads disproportionately. Most bovine hematomas are regressed by the system, but some require drainage. Like other animals horses, can also affected by hematomas due to their loose skin and angiogenic epidermal layers [8].

Subcutaneous mandibular hematoma is often caused by trauma or damage to the superficial blood vessels under the skin of the mandibular area, leading to the formation of hematomas in the subcutaneous layer [9]. The symptoms associated with a hematoma vary and depend on both the location of the hematoma and its size. The most noticeable symptom is usually the presence of a soft lump that can grow in size and grow anywhere on the bovine body [10].

Conclusion

Normally bovine mandibular hematoma is rare compared to other domestic animals such as pets. In any hematoma, conservative treatment using fluid aspiration and anti-inflammatory drugs can be performed before proceeding with surgery. But there are instances where surgical management is recommended. Thus, if the hematoma is matured and cannot respond to maximal medical treatment immediate opening of the swelling and flushing of the cavity with dilute antiseptics followed by systemic administration of antibiotics are recommended for good prognosis and early recovery.

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