A CLINICAL CASE REPORT ON AURAL HEMATOMA IN A GERMAN SHEPHERD DOG

Submitted by

Sadia Pervin

Roll no. 19/13

Intern ID: 06

Reg. No: 03215

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Author

Sadia Pervin

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Supervisor

Dr. Mohammad Mejbah Uddin

Professor

Dept. of Anatomy and Histology

Chattogram Veterinary and Animal Sciences University

Khulshi, Chattogram-4225

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ABSTRACT

An eight year old male German Shepherd dog with 32 kg body weight was brought to Teaching and Training Pet Hospital and Research Center (TTPHRC), Purbachal, Dhaka, Bangladesh with a complain of soft swelling at the inner surface of the pinna with a history of violent shaking of the head and persistent left ear scratching. Physical examination findings revealed a hematoma in the left ear. Initially medicinal treatment was tried but didn't succeed. A surgical operation was carried out to prevent recurrence. An S-shaped incision was made on the concave side of the pinna of the left ear. Hematoma and fibrin clots were removed. An ample number of sutures were given to minimize space for fluid accumulation. At follow-up, the dog developed myiasis due to improper management. This case emphasizes the significance of early detection and suitable care for aural hematomas in elderly dogs with surgery being the most successful long-term cure.

CHAPTER I: INTRODUCTION

An aural hematoma is characterized by an accumulation of blood within the cartilage plate of the ear. Aural hematoma, sometimes called auricular hematoma, is a condition that frequently affects dogs' external ears (Evangelista et al., 2012) and occasionally in cats' (Silva et al., 2018). According to previous reports, it is characterized by a purplish, rounded, hard enlargement of the external ear due to blood accumulation in the interstitial space (Fossum, 2007; Lanz and Wood, 2004; Brown, 2010).

Aural hematomas are the most frequent physical damage to the pinna and they are most noticeable on the concave surface of the pinna. When a pet shakes their head or scratches their ears, the blood vessels and capillaries in the pinna burst due to head trauma (Slatter, 2003). When these blood vessels burst, a hematoma is formed when blood collects in the area between the skin and cartilage. The exact cause of the bleeding is unknown, however it is thought to be caused by branches of the major auricular veins and arteries that are situated inside, underneath or between the cartilages layers (Reddy & Kumar, 2020). This syndrome might be bilateral but is frequently unilateral. It is important to remove hematomas as soon as possible. If left untreated, fibrin production can cause fibrosis, contraction, and thickening, potentially resulting in a distorted cauliflower-like ear (Asinga, 2006).

The risk factors for aural hematomas in small animals have already been discussed. The etiology of this disease is complex due to the mutual dependence of elements involved in its development (Mikawa et al., 2005). Though there is currently no concrete proof, the cause of aural hematomas is believed to be traumatic events (Vigneswari et al., 2000). It has occasionally been linked to allergic dermatitis and external otitis (Blattler et al., 2007 and Ahiwrar et al., 2007). The issue seems to affect older patients and adults as well as dogs with pendulous ears (Rosychuk & Merchant, 1994). Dogs that are middle-aged to older are more prone to acquire aural hematoma because of cleavage of the cartilage plate as aging-related cartilaginous alterations may contribute to the cartilage disruption that causes AHs (Kazuhiro et al., 2005). The occurrence of hearing-related diseases that cause sudden head movements as a result of pain, itching or severe ear inflammations like otitis also seems to be a trigger for aural hematomas in this species (Evangelista et al., 2012; Rodrigues et al., 2016). Aural hematoma is a frequent problem observed in medium to large breed dogs particularly in those with floppy, pendulous ears such as the Labrador

Retriever, Cocker Spaniel, Golden Retriever, Basset Hound, German Shepherd, Boxer, Pit Bull, and Spitz breeds as noted by (Hassan et al., 2002; Győrffy and Szijártó, 2014).

The clinical symptoms of aural hematoma are head tilting with shaking, otitis externa, pinna damage, pinna thickening with moderate morphological changes, pinna thickening with notable morphological changes and mild edema (Hassan et al., 2002). Diagnosis is made based on history, clinical signs or symptoms, and physical examination. There are several surgical techniques described in the literature. Surgery is the most commonly performed treatment for chronic or recurrent hematomas in cats and dogs (Hall et al., 2016).

The present case report describes the surgical treatment of aural hematoma in dogs presented to Teaching and Training Pet Hospital and Research Center (TTPHRC). The purpose of surgery is to remove the blood that has accumulated in the pinna and prevent fluid from developing later.

CHAPTER II: MATERIALS AND METHODS

2.1. Case history and diagnosis

An eight year old male German shepherd dog named ‘loki’ of 32 kg body weight was presented to Teaching and Training Pet Hospital and Research Center (TTPHRC), Purbachal, Dhaka, Bangladesh with a history of fluid filled fluctuant ear pinna. The clinical examination showed normal heart rate, respiration rate, and temperature. Physical examination revealed a fluid-filled, soft, and fluctuant swelling on the concave surface of the pinna on the left ear. The dog was diagnosed with left aural hematoma and had surgical treatment.

2.2. Anesthesia and control

The dog was premedicated with xylazine @ 1mg/kg body weight intramuscularly. Following restraining, the incision site was shaved. The operative site soaked with tincture iodine and alcohol. The surgical site was aseptically prepared for the procedure. Ketamine @ 8mg/kg body weight and Diazepam @ 0.2mg/kg body weight was administered intravenously as general anesthetic.

2.3 Operation procedure

The dog was positioned in lateral recumbency with the afflicted ear facing the surgeon. The pinna was prepared aseptically. An S-shaped incision was made from the hematoma's distal edge to its proximal edge on the concave side of the pinna on the left ear. The hematoma was drained and fibrin clots were removed by using gauze sponge or mosquito forceps. After irrigating the cavity with normal saline, 2-0 non absorbable sutures were put on the concave surface of the left ear. An ample number of sutures were placed to minimize space for fluid accumulation. Following surgical repair, owner was recommended to apply an E collar.



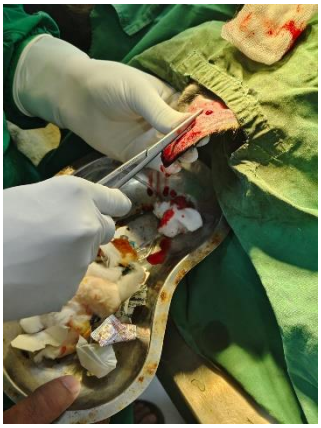

Figure 1: Surgical procedure of aural hematoma in dog(S shaped incision, removal of fibrin clot, ample number of suture was given).

2.4. Post-operative Care

After surgery, medication was provided to the dogs. A course of antibiotic (clindamycin @ 10mg/kg body weight) was given orally for 7 days to prevent bacterial infection and anti-inflammatory (Prednisolone @ 0.2mg/kg body weight was administered orally for 7days. Owner was recommended to clean the ear daily and topical antiseptics was suggested to apply on the ear. During follow up, suture was removed and the dog developed myiasis post-surgery as a consequence.

Figure 2: Myiasis developed in the dog following surgery due to poor management.

CHAPTER III: DISCUSSION

An aural hematoma (AH) is an accumulation of blood in the ear between the skin and cartilage as well as inside the cartilage (Kuwahara, 1986). Untreated auditory hematoma can lead to significant auricular deformity. Early drainage is crucial for maintaining the look and healing of aural hematomas within the auricular cartilage as they are not quickly absorbed and replaced by granulation tissue as contracture proceeds (Dye et al., 2002; Lanz and wood, 2004). Surgical or conservative techniques try to remove blood from the pinna and prevent fluid buildup (Lanz and wood, 2004; Brown, 2010). The primary post-operative problems as reported by (Hassan et al., 2002) are edema, inflammation, oozing, discharge, redness, dehiscence and disturbances to the drain sheath, sutures and staples. In many cases, aural hematomas result in cauliflower-like auricle shrinkage (Harvey et al., 2004).

This report describes the use of surgical treatment to treat aural hematoma. The S-shaped incision that was used in this study was simple to perform. Another report (Reddy and Kumar, 2020) also performed S shaped incision and the dog recovered well. In the present study this complication was occurred due to owner's poor management. Owner was recommended to dressing daily. Inappropriate dressing caused myiasis to develop as a consequence. The outcome of this case highlights the significance of wound care and the possible necessity of follow-up procedures as part of post-operative treatment.

CHAPTER IV: CONCLUSION

A German shepherd dog was presented to TTPHRC with fluid filled swelling on the ear with a history of head shaking. Following physical and clinical examination, the dog was diagnosed with an aural hematoma and underwent surgery. However, due to inadequate post-operative care by the owner, the dog developed myiasis as a complication that may have been avoided with careful wound treatment. The present case highlights the significance of clearly communicating with pet owners about the need for strict aftercare such as regular dressing and monitoring of the surgical site. Follow-up visits are essential to identify problems early and avoid complications. Appropriate post-surgical care is crucial for dogs who have undergone aural hematoma surgery to recover fully.

CHAPTER V: LIMITATION

The owner was unwilling to provide post-surgery information regarding progress.

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