

LATERAL EAR CANAL RESECTION TO TREAT BILATERAL CHRONIC OTITIS EXTERNA IN A DOG

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Abstract: A nine year old male German shepherd dog with recurrent discharges from both the ears was diagnosed to have bilateral otitis externa. Physical examination and radiography of the skull confirmed the diagnosis. The animal was refractory to the topical and parenteral medication and finally responded to lateral ear canal resection. The infection subsided within a couple of weeks and no recurrence was observed during an observation period of six months. The Surgical technique and outcome of the case were discussed.

Keywords: Otitis external, hyperplastic ear canal, otitis media, Zepp'splasty and Resection of lateral ear canal.

Introduction

Otitis externa is one of the common conditions encountered in small animal practice with a prevalence of 5-20% (August,1988). Moist environment present in the ear canal acts as a good medium for replication of microorganisms and may result in inflammation. Sometimes dermatological disease may act as predisposing factor for this condition (Krahwinkel, 2003). This condition can be easily diagnosed by the symptoms exhibited and otoscopic examination. Several techniques are available to repair this inflammatory condition depending upon the extent of infection in the external ear canal and tympanic bulla. In the present paper surgical management of bilateral chronic otitis externa bylateral ear canal resection (Zepp's Plasty) was discussed.

Case history and Observations

A nine year old male German shepherd dog was presented with a complaint of discharges from the both the ears for a period of seven days. It was said to have been treated by the local practitioner for a wound at the tip of the ear pinna of right ear two weeks previously. Physical examination revealed the presence of discharges at the external acoustic meatus of both the ears suggesting the presence of otitis externa. Lateral, ventrodorsal and open mouth oblique radiographs of the head revealed thickening of walls and narrowing of the external ear canals

in both the ears (Fig-1). The tympanic bulla of both ears normal radiographically. Hematological parameters showed mild neutrophilia and no apparent changes were noticed in serum biochemistry. All the physiological parameters were within the normal limits. Based on the findings of physical examination and radiography the condition was diagnosed as Otitis externa and planned for medical therapy.

Treatment and Discussion

Animal was sedated with intramuscular injection of Xylazine Hydrochloride at the dose rate of 1mg/Kg body weight and dressed the ear canals with Ambiflush solution. Animal was administered with Ciplox ear drops in both the ears, three times a day for two weeks and intramuscular injections of Intacefand Meloxicam at the dose rate of 25mg/Kg body weight and 0.2 mg/Kg body weight respectively for three days.

After two weeks of treatment, animal showed no response and showed discharges continuously from the affected ears. Lateral ear canal resection was planned under general anesthesia and prepared the animal for aseptic surgery. Two parallel skin incisions extending from either side of tragus to a point one inch beneath the level of vertical ear canal (Fig-2) and then joined by a horizontal incision and the skin flap is freed and reflected towards the tragus. The underlying fascia was bluntly separated exposing the cartilage of vertical ear canal followed by resection of cartilage on anterior and posterior side using scissors up to the level of horizontal ear canal and reflected downwards. The extra portion of the reflected cartilage is trimmed followed by suturing of cartilage to the skin edged with simple interrupted sutures using nylon suture material (Fig-3). Followed by fifteen days the same surgery was performed over the left ear (Fig-4). Owner was advised for continuous irrigation and drainage of the ear canal with mild antiseptic solutions followed by administration of Ofloxacin ear drops.

Postoperatively the animal was given intramuscular injections of Intacef Tazo at the dose rate of 25mg/Kg body weight and Melonex at the dose rate of 0.2 mg/Kg body weight for 5 days in both the postoperative periods.

Animal showed complete recovery by the end of four weeks after surgery and no recurrence was observed during the observation period of six months.

Wound noticed on the ear pinna was thought to be a predisposing factor for the extension of infection to the right ear canal in the present case and the etiology for the left ear canal infection remained obscure. The causes for otitis externa included primary factors like hypersensitivity disease, external parasites etc, predisposing factors like ear canal

confirmation, ear canal maceration, temperature and humidity etc and perpetuating factors like bacteria, yeast, contact allergens etc. (Rosychuk and Luttgen, 2000; Krahwinkel, *loccit*). Thickened walls were noticed in the external ear canal of the affected ears on a plain radiograph. This could be attributed to hyperplastic epithelial changes in horizontal and vertical ear canals. Smeak and Kerpsack, (1993) opined that, these hyperplastic changes became irreversible once complete occlusion of ear canal happened.

Primary medical treatment given in this case had a poor response which committed the authors to adopt surgical therapy. Doyle *et al.* (2004) reported that, this type of conditions did not respond favorably to the medical treatment and emerged as a chronic condition; whereas Bradley, (1988) and Hobson, (1988) suggested surgical treatment for this type of conditions. Krahwinkel, (*loccit*) mentioned surgical procedures like lateral ear canal resection, vertical ear canal ablation, total ear canal ablation with lateral bulla osteotomy for treatment of otitis. Lateral ear canal resection was planned in the present case as otitis media was ruled out by observing the radiographic signs. Surgical technique followed in the present case aided in the direct administration of medicaments, periodical irrigation and drainage of the ear canal and ensured a good recovery.

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Fig-1: Skiagram showing thickened walls and narrowed external ear canal in right and left ear.



Fig-2: Photograph showing skin incision on either side of tragus extending up to a point one inch below the level of horizontal ear canal



Fig-3: Immediate postoperative photograph for zepp's plasty in right ear



Fig-4: Immediate postoperative photograph for zepp's plasty in left ear