

SURGICAL MANAGEMENT OF NASAL POLYP IN A JERSEY CROSSBRED COW - A CASE REPORT

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ABSTRACT

A 3-year-old Jersey crossbred was presented to the Large Animal Surgery unit of VCRI Namakkal with the history of growth in the left nostril for the past 3 months. On clinical observation the animal was found to be normal. On examination of the nasal region, a growth of mass around 6 cm was noticed in the Left nostril. Radiographic examination of the skull and thorax were normal. The case was diagnosed as benign nasal polyps and surgical correction was advocated. Post-operatively, the animal was treated with antibiotics for five days and analgesics for 3 days. The animal made an uneventful recovery following the surgical resection.

Keywords: Nasal polyps, infra orbital nerve block, Jersey crossbred.

INTRODUCTION

Polyps can be defined as discharge, open mouth breathing, exercise intolerance. Macroscopically, polyps are granulomatous growth of small masses of cells comprising fibrous connective tissue covered with blood vessels and epithelium attached to the base with stalk, usually benign in nature, may become malignant in rare cases (Zope *et al.*, 2009). Nasal polyps occur infrequently in animals and it is a less commonly reported disorder in cattle. (Nigam *et al.*, 1981). The aetiology of nasal polyp is unknown. It arises as a consequence of conditions which cause chronic inflammation in the nose and nasal sinuses (Krishnamurthy, 1993). While many aspects have been documented to support this theory, the initiating cause remains unknown and may be different in many cases. There are no characteristic clinical signs and usually include increased respiratory effort, nasal obstruction, sneezing, watery discharge, unilateral or bilateral epistaxis, exercise intolerance. Histologically, polyps are characterized by

oedematous fibrous tissue covered by regular respiratory epithelium or stratified squamous epithelium and by a lymphocytic inflammatory infiltrate (Wilson and Dungworth, 2002). Treatment is usually by surgical resection.

CASE HISTORY AND DIAGNOSIS

A three-year-old Jersey crossbred cow was presented to the Veterinary Clinical Complex, Veterinary College and Research Institute, Namakkal, with a history of a growth in the left nostril for the past three months, causing dyspnea and abnormal respiratory sounds. On physical examination of the nasal region, a pedunculated mass approximately 6 cm in size was observed, occluding the left nostril (Fig 1). The mass had a firm, fibrous texture on palpation, with no evidence of nasal discharge or hemorrhage. Although the mass completely obstructed the nostril, it was possible to pass a finger into the nasal passage by manipulating the mass. All physiological parameters were within normal limits. Radiographic examination of the thorax revealed no signs of metastasis (radiographic image). Nasal washings and fecal samples were collected to rule out schistosomal infection, and the results were negative. Based on physical examination, clinical findings, radiographic imaging, and other diagnostic techniques, possible differential diagnoses were ruled out, and the case was diagnosed as a benign nasal polyp.

SURGICAL PROCEDURES AND TREATMENT

The animal was fasted for 24 hours and deprived of water for 12 hours prior to surgical intervention. Sedation was achieved using xylazine at 0.05 mg/kg body weight. An infraorbital nerve block was performed (Fig 2), followed by local infiltration of 2% lignocaine around the base of the polyp (Fig 3). The stalk of the polyp was palpated with a finger and resected at its base. Hemostasis was achieved by tamponing the nasal cavity with gauze and administering tranexamic acid parenterally. A noticeable improvement in

respiratory function was observed after the removal of the mass (Fig 4). The resected polyp, measuring approximately 6 cm in length (Fig 5), was sent for histopathological examination.



Fig 1: Nasal polyp in left nostril



Fig 2: Infraorbital nerve block



Fig 3: Local infiltration of lignocaine



Fig 4 : Post operatively



Fig 5: Resected polyp

CASE DISCUSSION

Nasal polyps are pedunculated growths of fibrous connective tissue that arise unilaterally or bilaterally in the nasal mucosa as a result of chronic inflammation. It is a less frequently reported condition in cattle. In this case, the animal presented with signs of dyspnea, abnormal respiratory sounds, and a firm, fibrous growth in the nostril, which were consistent with the findings of Tanwar *et al.*, 2016. Radiography, endoscopy, histopathology, and laboratory tests can aid in ruling out differential diagnoses and establishing a confirmatory diagnosis. Tanwar *et al.*, 2016 and Zope *et al.*, 2009 successfully managed nasal polyps in a cow and a bullock, respectively, using local lignocaine infiltration and mass resection, with both animals

recovering uneventfully without complications. Proper diagnosis and prompt surgical intervention are crucial for a successful outcome. Surgical resection of the mass under standing sedation with local infiltration of 2% lignocaine can be performed, as described in this case. Postoperative care, including antibiotics and analgesics, is essential for preventing infections and managing pain.

CONCLUSION

Early diagnosis and surgical resection are key to successfully managing nasal polyps in cattle. This case demonstrated that surgical removal under sedation with local anesthesia is effective, with an uneventful recovery following proper postoperative care.

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