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### RESEARCH ARTICLE

#### ORAL BOTRYOMYCOSIS IN A CANINE: CASE REPORT

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#### Abstract

Botryomycosis is an infection caused by bacteria, especially *Staphylococcus aureus*. It can be cutaneous and manifest as nodules, abscesses and fistulas. Treatment is based on antibiotics for long periods. The case of a canine with excellent response to treatment is presented.

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#### Introduction:-

Botryomycosis is a bacterial, suppurative, granulomatous infection that mainly affects the skin and / or viscera (4). Among the microorganisms isolated most frequently associated with botryomycosis we have *Streptococcus aureus*, *Escherichia coli*, *Staphylococcus* sp, *Pseudomonas* sp. clinically similar to neoplastic or fungal pathologies (1, 2, 4, 7). Its pathophysiology is still unknown, although it is postulated that there would be an immune defect or an unusual response of the affected tissue to contain the bacteria (3). It mainly affects immunocompromised patients, although some cases have been described in immunocompetent patients (8). There are few reported cases, in the summary we present the case of a canine from Asunción, Paraguay.

#### Case Report

Canine, a 7-year-old male, whose owner claimed that his pet was in a nursery for several days. He goes to the consultation due to decay and difficulty eating. On clinical inspection, nodular lesions are observed in the oral cavity with purulent contents. Fig. 1, 2. Cephalic blood samples are taken for hematology, local punch biopsy for histopathology and microbiological culture.



Fig. 1:- Whitish lesion in the region of the labial commissure.

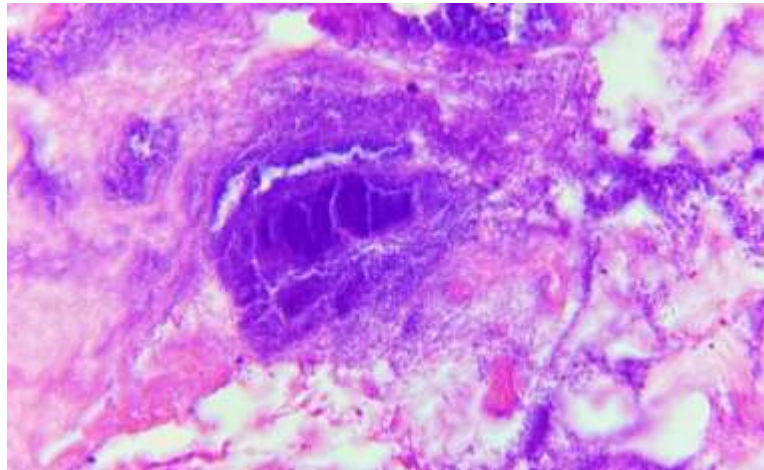
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**Fig. 2:-** Non-delimited whitish masses on the oral mucosa.

Hematology results reveal few abnormalities, mild thrombocytopenia, and elevated GPT. The biopsy reported dispersed neutrophilic abscesses containing accumulations of basophilic granules surrounded by peripheral eosinophilic material "splendorehoeppli reaction" compatible with Botryomycosis. Fig. 3.



**Fig. 3:-** Botryomycosis composed of amorphous basophilic material and surrounded by polymorphonuclear leukocytes. 10XHE.

The microbiological culture reported *Staphylococcus aureus* and *Escherichia coli* sensitive to penicillin. Antibiotic therapy was instituted with total resolution of the lesions.

### **Discussion:-**

The pathogenesis of botryomycosis is not well defined; multiple hypotheses agree that the virulence of strains of the inoculated agent would be the final cause of the disease. With small inoculums, the microorganisms would be phagocytosed and the high virulence would cause tissue necrosis. It is also associated with defects in cellular immunity, particularly in patients with low levels of T lymphocytes (5). It is important to note that the main causative agent *Staphylococcus aureus* is part of the normal microflora of the skin (4). The aforementioned is related to the reported case where the canine was going through a process of stress during the trip of its owner and having a location in the oral cavity, being a place of constant injuries and propitious proliferation of the causative agents.

Clinically, botryomycosis is very similar to mycetomas (eumycetomas, actinomycetomas). Histologically they differ, in the case of actinomycetoma a central basophilic mass with eosinophilic periphery with radial clavas is observed, the eumycetoma because it presents micelle fragments and botryomycosis shows amorphous masses surrounded by neutrophilic infiltrate (6) as observed in Fig. 3.

**Conclusion:-**

Botryomycosis is a rare, underdiagnosed disease that must be taken into account when faced with granulomatous lesions, especially in immunosuppressed patients or those with other predisposing factors such as stress.

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