



# Multiple and single feather follicular cysts in a canary and a toucan.



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## INTRODUCTION:

Cutaneous cysts may be defined as a non-neoplastic sac cavity with an epithelial wall and keratinous to amorphous contents. Classification of cutaneous cysts depends on identification of lining epithelium of the pre-existing structure from which the cysts arose.

Follicular cysts are usually classified according to the type of epithelial wall into infundibular, isthmocatogen, matrical and hybrid types. Particularly, the infundibular type is very common in dogs, and less frequent in others mammals such as cats, horses, and sheep. On the contrary, in pet birds, feather follicular cysts are even less frequent and primarily reported in canaries, parakeets and macaws. The condition is thought to be hereditary, especially in canaries. However, this cyst may be also secondary to trauma.

## CASES PRESENTATION:

Case No.1- A 2-year-old male canary bird was present to the clinic with multiple dermal nodules of approximately 3 months of evolution. There were no others clinical complaints. Given the anatomic locations and

poor prognosis the animal was euthanized. Grossly, multiple nodules from different sizes (0.02 to 0.70 cm) were found mainly on the wings and cloacae (Fig.1). Microscopically, the nodules had a cavity which was lined by a thin layer of squamous epithelium. The cavity contained flaky keratin and some feather fragments (Fig.2,3).

Case No.2- A toucan (age and gender unreported) was brought with a soft subcutaneous mass in the right radio-ulna, with indication of trauma a month before. Physical examination showed no other abnormalities. Initially a fine needle aspiration biopsy was taken and stained with Giemsa, showing slightly blue nucleated and anucleated cells. The mass was removed surgically; measuring 2.50 x1.50 x 1.0 cm (Fig.4). After formalin fixation, the cut surface was soft, with brown and white colors (Fig.5). Microscopically, the wall of the cyst was lined with squamous non-pigmented epithelium. Inside the cyst a keratinic necrotic cells mixed with large structures similar to feathers were present (Fig.6). Additionally, an area of granulomatous inflammatory reaction with giant cells also was present.



Fig.4. A surgical excision. The gross aspect of the nodule.



Fig.5. A cut surface, after formalin fixation. Structures similar to feathers are present.



Fig.1. Dorsal view showing multiples nodules, especially in the anus area.

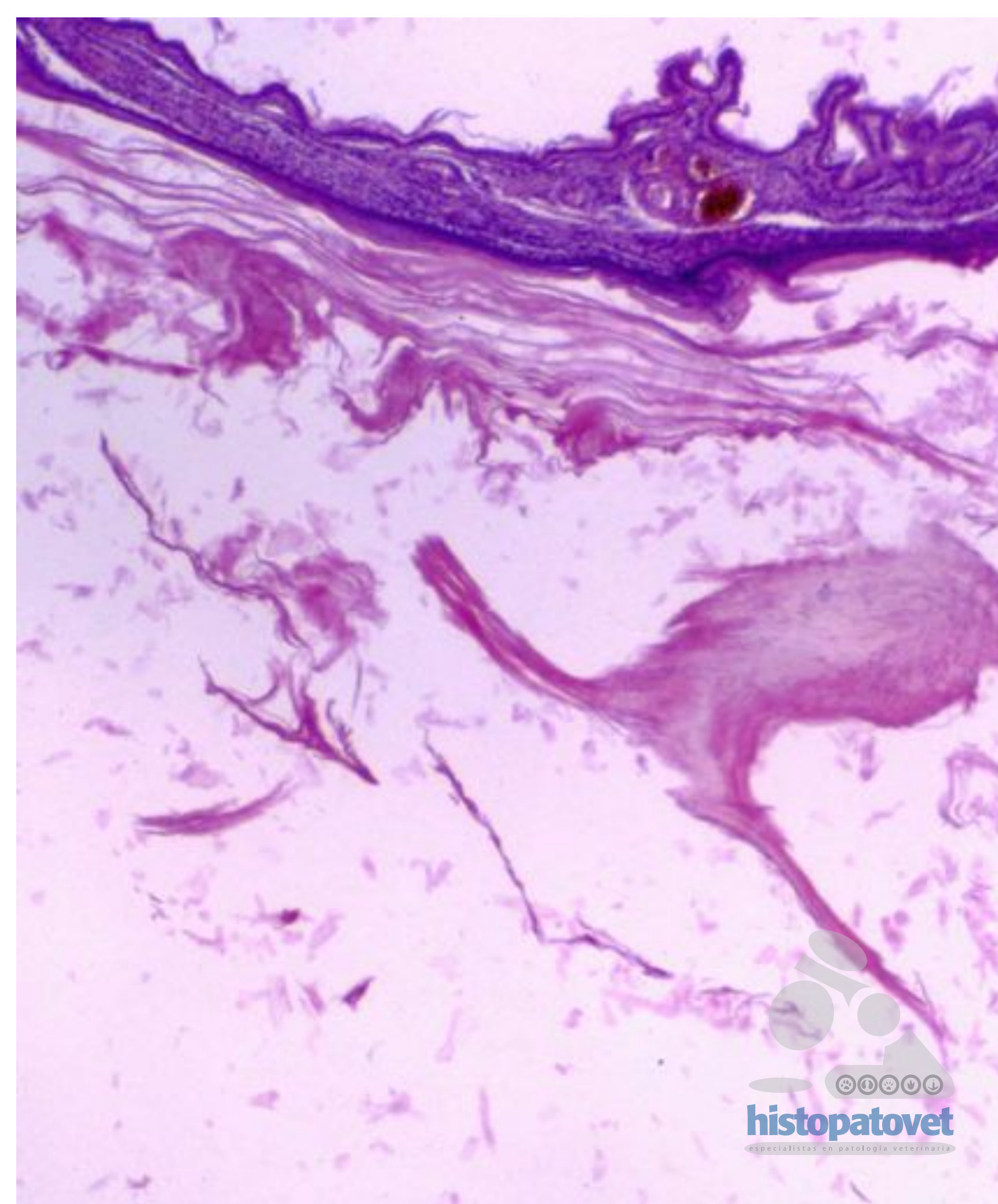


Fig.2. A cyst cavity with keratinous luminal material and the epidermal wall. 10x H.E.

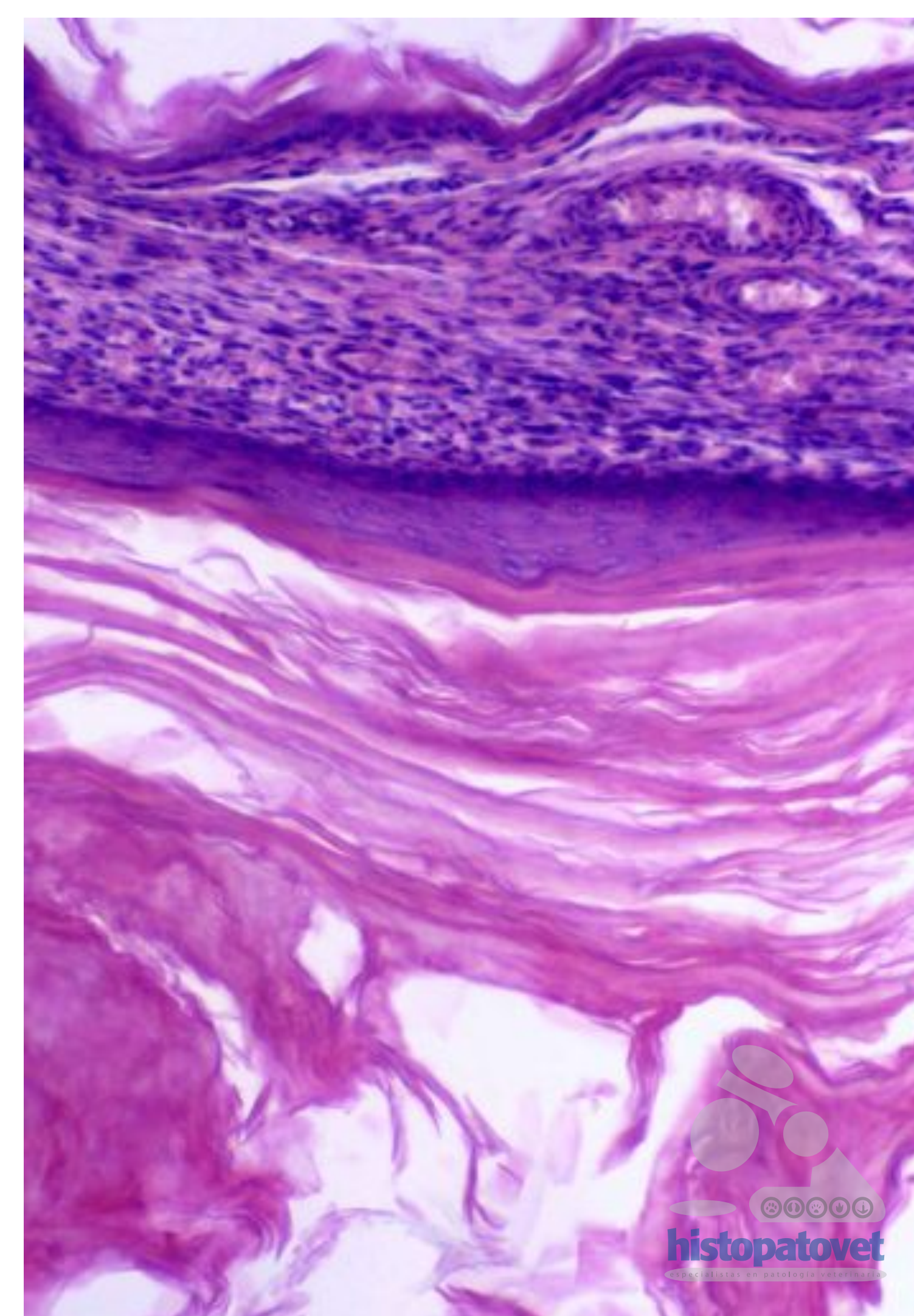


Fig.3. The upper layer is the normal epidermis, then dermis and the cyst epidermal wall.40x H.E.

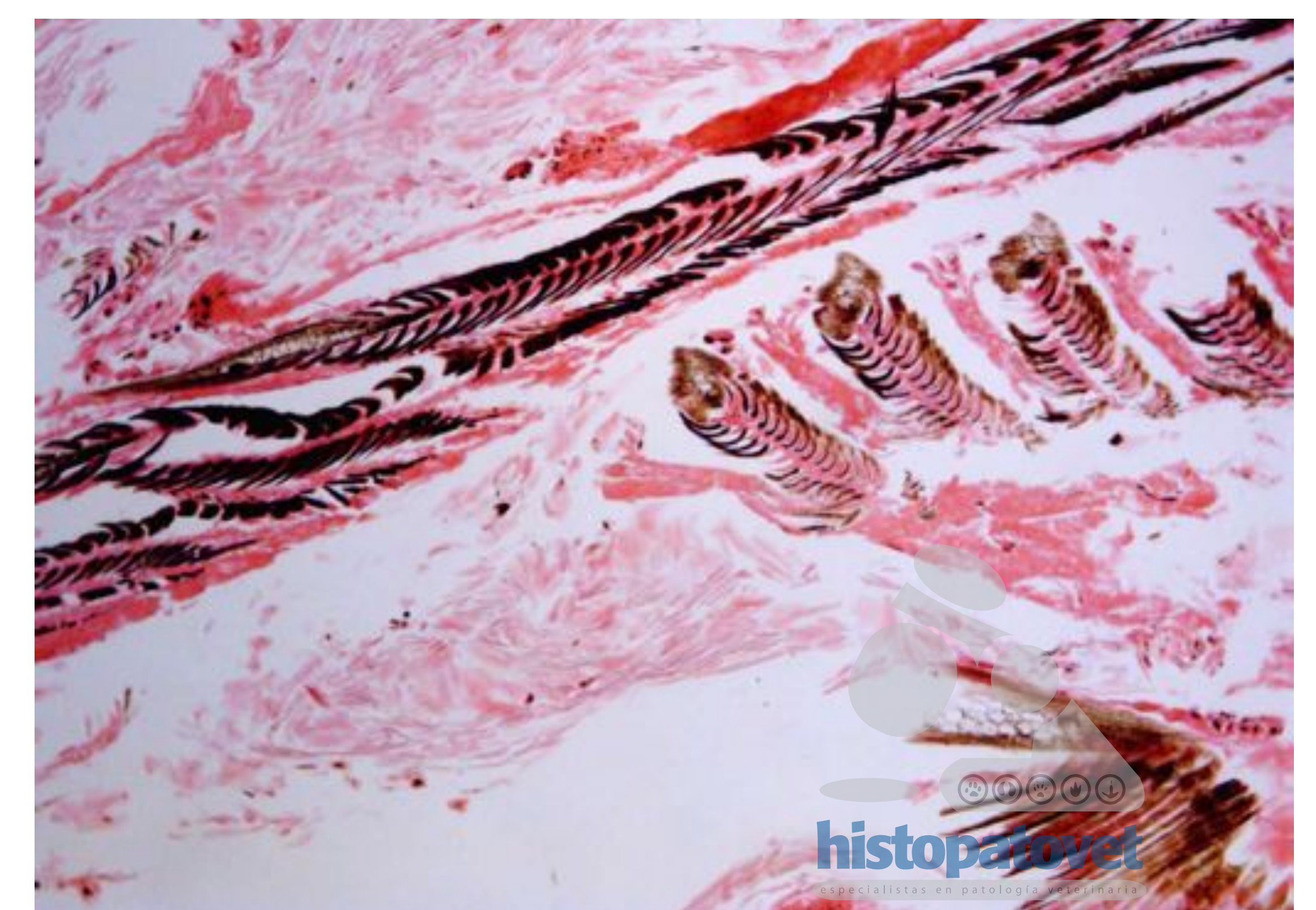


Fig. 6. The luminal contents composed of feathers and keratina material. 20x H.E.

## DISCUSSION:

Both clinical presentations solitary and multiple nodules have already reported primary in pet birds. However, this is the first time that feather cyst is reported in toucans.

Base on the microscopic features both cases were diagnosed as a feather follicular cysts. Nevertheless, other etiologies, such as neoplasia (folliculoma) and ectoparasites like Harpirhynchus nidalans should be considering in the differential diagnosis of these nodular conditions.

## REFERENCES:

- Literák I, Chytil J et al. Subalar cutaneous cysts with Harpirhynchus nidalans in bearded tits and hawfinches in Central Europe. Avian Pathology (February 2005); 34(1), 26-28.
- Mutinelli F, Corro M et al. Multiple Feather Follicular Cysts in a Moroseta Hen (Gallus gallus). Avian Diseases,2008;52:345-347.

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