A Possible Inflammatory Polyp in a Sulphur Crested Cockatoo

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Case:

Fred, a 12 year old female Sulphur Crested Cockatoo *(Cacatua galerita)*, presented with a fleshy mass protruding from her R ear canal. She was obese, with a concurrent left lateral vent lipoma, and on an inadequate diet (seeds only, with a large proportion of sunflower seeds). She lived in an aviary adjacent to another female Sulphur Crested Cockatoo, who was not presented. The rest of the examination, including faecal examination, revealed no other abnormalities.

The bird was admitted to hospital a few days later for a general anaesthetic and biopsy. Isoflurane and oxygen was administered via mask, and the mass arising from the ear canal further examined. It proved to be pedunculated and was inadvertently broken at the base during manipulation. Some caseous material was present lining the ear canal and this was debrided. No further pieces of the mass could be visualised or removed. The tympanic membrane appeared within normal limits, and the left ear was completely normal. No abnormalities were detected in the oral cavity. Fred was discharged later that day, with no medication. The mass was submitted to for histology.

The pathologist considered the mass to be highly vascular and of epithelial origin. There was considerable necrosis and haemorrhage of the sample sent, but the mass appeared to be an aggregation of serous, haemorrhagic and suppurative inflammatory debris and bacterial colonies, overlying hyperplastic and extremely hyperkeratotic squamous epithelium. The keratin and the epithelium were the most distinctive components. No evidence of neoplasia was found in the sections.

Three weeks later, Fred represented with a recurrence of the mass. She was again anaesthetised, and the mass removed. This time, the pedicle appeared to remain with the body of the mass during removal. There was less caseous exudate, and the ear was flushed with a dilution of lincospectin (Lincospectin Injectable Solution, 50mg Lincomycin:100mg Spectinomycin per ml, UpJohn). Fred was discharged with lincospectin powder to add to the drinking water for use at home (she could not be medicated any other way).

Five weeks later, there has been no apparent recurrence, according to the owner, although she has not returned to the clinic for a follow up examination.

Inflammatory Polyps:

Inflammatory polyps are non-neoplastic masses most common in the cat, and originate from the nasopharyngeal, auditory tube or middle ear mucosa. The aetiology is uncertain, but some evidence has suggested chronic infection (eg viral) or other inflammatory focus as the initiating cause. Other reports suggest growth from some congenital remnant of the branchial arches. The polyps then extend from the middle ear into either the nasopharynx via the auditory tube, or the ear canal. Clinical signs in cats depend on the area to which the polyp extends – nasal discharge, voice

change, dyspnoea and dysphagia characterise nasopharyngeal masses; otorrhoea, head shaking or ear irritation characterise ear canal masses. Middle ear involvement can lead to otitis media or interna (Pope, 1995).

The histology is usually a either stratified squamous or columnar epithelium overlying a well-vascularised fibrous connective tissue core. Inflammatory cells are usually scattered throughout the tissue, but are particularly prominent in the submucosal area (Pope, 1995). Ulceration and necrosis are variable (Harvey & Goldschmidt, 1978).

Treatment in the cat is best achieved by surgical removal, which can involve bulla osteotomy. Grasping and removing by simple traction is associated with a much higher recurrence rate. Horner's syndrome (miosis, ptosis and nictitating membrane protrusion) can be a complication of removal of inflammatory polyps, even with simple traction (Pope, 1995).

Anecdotally, cases of polypoid otic masses in other species have been reported, although histologic confirmation is often lacking. These include a female budgie with a periaural mass that was found to originate from a pedicle extending into the ear canal, and a guinea pig and a rat, both with polypoid ear masses and respiratory distress (VIN message board archives). Scattered cases have also been reported in canine patients (Fingland et al, 1993).

The avian ear differs from the mammalian (specifically dog and cat) by lacking a fleshy pinna, and having only an external ear opening covered by feathers. The middle ear has only one bone to perpetuate sound instead of three, and the auditory portion of the inner ear has a short lagena instead of a coiled cochlea duct. The auditory canals open in birds via a single median ostium rather than a bilateral orifice in the nasopharynx, as in birds
(Evans, 1996).

Discussion:

This case is bound to be unsatisfying, because the diagnosis remains open.

However, inflammatory polyps are not unheard of lesions in species other than cats, and this lesion does bear many similarities to the feline inflammatory polyp.

Grossly, the appearance of this lesion (once removed) was very similar to those described for feline inflammatory polyps, especially those arising from the ear canal. The biologic behaviour of this mass is also similar (although it is very early after the second removal to be prognosticating), with no evidence of malignant behaviour. Histologically, although neoplasia was ruled out, diagnoses other than inflammatory polyps are still possible.

A complicating factor for the first histologic evaluation was the infection and haemorrhage superimposed on the vascular, fibrous lesion. The lesion was not noticed by the owner until it was of such a size as to be traumatised by the bird, and produce noticeable exudate in the periaural areas. It is therefore unknown if the bird had an underlying otitis externa, which precipitated the lesion, or whether all of the infection and haemorrhage was secondary.

Given the caseous exudate in the ear canal after the first procedure, use of antibiotics at that point may well have been advisable.

Unfortunately, more aggressive diagnostics such as radiographs and bloodwork were not financially possible. This left histology as the cornerstone of diagnosis, and treatment. In cats, aggressive and complete surgical excision of these masses is recommended, although some do respond to simple traction and removal.

The rapid regrowth of the lesion after the first surgery has not been mirrored (apparently) after the second surgery. This could be due to a more complete removal of the mass (feline inflammatory polyps need a certain amount of the pedicle base to be removed to stop regrowth), or the commencement of an antibiotic regimen. Given the nature of the bird, it was elected to flush the ear with a solution of lincospectin, and then rely on the in-water antibiotics to complete antibiosis. Obviously, in-water medication is not a precise method of delivering medication, so it is uncertain if the bird actually received an appropriate dose.

Obviously, more time is needed to see if the mass will recur a second time

Repeat histology on the second sample would have been interesting, and may have provided a more complete diagnosis. Unfortunately, finances constrained repeating histopathology.

This bird also had nutritional problems, caused by at least 12 years of a high-fat, high carbohydrate, multivitamin deficient diet. It is impossible to address the possible role of nutrition on this mass. Measures have been taken to introduce a more balanced diet, much to the disgust of Fred!

This case seeks to highlight an unusual (and inconclusively diagnosed) case of pedunculated, non-neoplastic mass protruding from the ear canal of a psittacine, and raises the possibility of it being an inflammatory polyp.

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