Metabolic Causes and More.

Feather damaging behaviour (FBD), is also referred to as feather picking or feather plucking. If you want to expand your trivial pursuit veterinary vocabulary the medical term is **pterotillomania**. A mouthful, but what can we do to stop a mouthful or beakful of feathers in our avian patients. The underlying medical cause will require a full history, physical examination paying particular attention to the skin as well as other diagnostic tests. It will be necessary to include a full behavioural assessment as part of initial work-up. The main categories of confirmed self-inflicted FBD are husbandry, underlying medical condition, behavioural problems or a combination of the aforementioned issues.

Each patient will potentially need a variety of diagnostic tests aimed at specifically looking at the skin and feathers. These can include skin scrapings, swab or impression smear cytology, feather pulp cytology, cultures, fine needle aspirates and biopsies of unaffected and affected skin and follicle to rule out infectious, inflammatory or neoplastic skin disorders.

Systemic and metabolic evaluation with include a complete blood count, biochemistry profile as well as lipid profiles. Categories of FBD have included infectious versus non-infectious, inflammatory versus non-inflammatory and medical versus behavioural. The problem with choosing just one of these categories is it leaves out many other possibilities and one must go back to the DAMNIT V algorithm or VITAMIN D algorithm approach to differentials depending on when you graduated.

Let's go for the sunny VITAMIN D algorithm approach. 😉

Vascular - Artherolsclerosis. This should be higher on the radar if the patient is older, female and a African Grey, Amazon parrot or cocktail.
Inflammatory - encompassing **infectious** and **immune** (hypersensitivity reactions) or **inherited** (feather cysts). Infectious will include ectoparasites such as mites as well as endoparasites such as *Giardia* in cockatiels. The latter is based on circumstantial evidence. Numerous bacteria including mycobacterium, fungal (generally noted as uncommonly involving the skin) and viruses (e.g. lovebirds with circovirus) are possible and a full description is beyond the scope of this newsletter. See reference below.
Traumatic- leading to skin or soft tissue damage, cysts, chronic fracture or luxation. **Toxin** - such as inhalants, topicals or heavy metals are noted as being implicated anecdotally.
Anomalous - Hamartoma.
Metabolic - Liver disease related feather damage can involve the ventrum or be more generalized. The underlying pathophysiology in birds in not exactly known. Renal disease and pancreatitis have been associated with FBD. Breeding season has been associated with FBD and investigation to rule out reproductive disorders may be needed. Acute and chronic stress is also a consideration.
Iatrogenic - inappropriate flight feather trim.
Idiopathic - chronic ulcerative dermatitis, polyfolliculitis.
Neoplastic - various.
Nutritional - various deficiencies with circumstantial evidence.
Degenerative -Osteoarthritis.

Reference:
Langlois I. Medical Causes of Feather Damaging Behavior. Vet Clin North Am Exot Anim Pract. 2021 Jan;24(1):119-152. doi: 10.1016/j.cvex.2020.09.005. PMID: 33189247.