Feather Picking in Pet Birds: a Review

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SUMMARY

Feather picking is a condition of captivity most commonly observed in some psittacine birds such as African grey parrots, Amazon parrots, cockatoos, and Galahs. It is important to have a systematic and thorough diagnostic plan (history, signalment, physical examination and other ancillary tests such as haematology, radiographs and culture) for feather picking to follow through whenever possible when investigating the cause of the mutilation behaviour. Feather picking can be due to medical or behavioural causes. Medical causes include allergies, poor environment, feather cysts, infections, endocrine imbalances, neoplasia, malnutrition, parasites, and systemic disease. Behavioural causes which include aggression, attention-getting, boredom, change, crowding, exaggerated preening, irritation, reproductive behaviour, and territorial disputes should only be considered when everything else is ruled out in the diagnostic workup. The best results are usually achieved when the underlying cause is identified and treated. Medical causes of feather picking usually have a greater response to treatment and often resolve uneventfully with appropriate treatment. On the other hand, there is no simple solution for behavioural feather picking and it has to be managed with a combination of therapies.

INTRODUCTION

Feather picking, as with other disorders of the avian integument, is one of the more challenging and frustrating conditions to diagnose and treat in avian veterinary medicine. Feather picking is a condition of captivity. It is generally not seen in birds in the wild.[5,7,12] With the importance of feathers for thermoregulation, flight, and protection against the environmental and climatic extremes, severe self-induced feather damage would be life-threatening to a free-living wild bird.[5,12,19]

Typically, a feather picker has normal healthy head feathers with feather loss and/or damage only in body areas that can be reached with its beak.[11,19] Typical feather picking sites include the propatagium, inner thighs, sternum, and dorsum.[11,12] Feather loss on top of the head is unlikely to be due to feather picking; it can be caused by the bird rubbing its feathers off, another bird(s) picking its feathers off, or a disease other than self-mutilation causing the feather loss. Anything from small patches, to the whole body may be affected. There is an apparent species predilection to feather picking behaviour with African grey parrots, Amazon parrots, Cockatoos and Galahs most commonly affected. Although feather picking is most commonly seen in psittacine birds, it has also been identified in softbills including finches and toucans.[7]

There are many different causes of feather picking. Generally, these can be grouped into medical and non medical (behavioural) causes. Therefore a through investigation may be needed to get an accurate diagnosis for effective treatment. Unfortunately, there is no single "magic cure-all" for feather picking birds.

DIAGNOSTIC PLAN

The diagnosis of feather picking begins with a thorough history and physical examination. The bird's signalment (species, sex and age) is also important consideration when considering the possible causes of the aberrant behaviour. Ancillary tests may involve cytology, culture, crop and faecal examinations, haematology, radiographs and possibly biopsy of the affected areas. See appendix 2 for algorithm for investigation of feather picking (figure 3).

HISTORY

A thorough and concise clinical evaluation is imperative in diagnosing the cause and determination of an appropriate management and treatment plan.[4] This evaluation should begin with a detailed history. A patient questionnaire (see appendix 1- A Hume) filled while waiting to be seen at the consult can be used to facilitate this part of the evaluation process. A thorough history is important to detect psychological stress.[7] A background history including the initial onset, duration, and progression of the problem is necessary.[4,15,16,19]

When did the feather picking begin?[4,13,16] Correlate its onset with any change in events or routine occurring in the household. Birds are creatures of habit and can be very sensitive to changes in their environment or established routine. Stress may occur which is manifested as the obsessive behaviour of feather picking.[4]

When does the picking occur and does the owner observe the behaviour or just see feathers on the cage floor?[4,13,15,16] Birds may pick all day or only at certain times (as in the owner's absence with separation anxiety).[4,11,13,15,16]

Where on the body did the picking start?[11,16]

What came first – the feather picking or the feather loss?[4,11,16]

The history should also document the bird's environment. The cage, cage location, presence or absence of other pets/birds and diet (what bird is consuming versus what food is offered), exposure to infectious diseases, management related practices (humidity, crowding and sanitation) are important considerations.[4,11,12,13,15,16,18,19]

SIGNALMENT

Common causes of feather picking in large psittacine birds include broken feathers, bacterial infection, polyomavirus, psittacine beak and feather disease (PBFD), malnutrition, liver disease, boredom and frustration.[13] Small psittacines commonly pick as a result of malnutrition, broken blood feathers, giardiasis, feather cysts, polyomavirus and PBFD.[13] Polyomavirus and PBFD only affect psittaacine birds. On the other hand, feather picking in passerines often results from cagemate overpreening, aggression, bacterial infection, malnutrition and occasionally mites.[13]

PHYSICAL EXAMINATION

A systematic and thorough physical examination should be conducted to identify the extent of the problem and to identify involvement of other body systems.[4,13,16] In addition to routine observations, special attention should be paid to the type, extent, and distribution of feather damage.[4,15,16] Bilaterally symmetric feather loss is often the result of underlying hormonal or medical etiologies.[4] Random feather loss often occurs with behavioural or psychogenic causes.[4] Feathers should also be examined for the presence of ectoparasites, evidence of chewing, discolouration, dystrophy, and mutilation. Feather follicles are checked for any inflammatory process and folliculitis.[4,19] The skin should be also closely observed for any abrasions, ulcerations, flakiness, erythema, scabs, and inflammation.[4,19] Areas of feather loss are recorded for comparisons during subsequent visits.[4,11,13,16] The presence of subcutaneous fat deposits either focally around the feather follicles or diffusely distributed in regions under the skin often incite moderate to severe pruritis in some birds.[4]

ANCILLARY TESTS (CLINCIAL EXAMINATION)

The clinical examination for the feather picking bird should include the following:

1. Cytology, Stain and Culture
2. Choanal, cloacal, feather pulp, and skin cultures may be taken if an infectious process is suspected. A Gram stain should be done and evaluated for abnormal bacteria, yeast, or fungal organisms prior to sending samples for culture. At the same time, pulp cavity cytology can be used to identify the specific pathogen and determine the nature of cellular infiltrate which may give a clue to the nature of the underlying problem.[4,5,,9,12,15,16,19]
3. Crop and faecal examination
   Crop and faecal samples should be checked for the presence of parasitic organisms including direct examination for flagellates and floatation for parasitic ova.[4,12,16,19]
4. Ectoparasite examination
   The skin and feathers are sampled to examine for evidence of mites and mite eggs.[4] Feathers are placed under a dissecting microscope and examined. Owners can also check at home for ectoparasites. If red mites are suspected, a cloth can be placed over the cage at night and removed and examined the next morning for the presence of red mites which are red from the ingested blood when they feed on the bird at night.[11,19]
5. Haematology
   A complete blood count and serum biochemistry evaluation should also be performed to detect any abnormalities and underlying systemic disease. A bile acid test should be performed in suspected cases of liver disease. Thyroid function tests should be performed in birds which

have poor moults or many worn feathers that are retained beyond their normal expectancy.[4,15] Electrophoresis can be used to determine if inflammatory disease is present.[12] Specific viral blood tests for Psittacine Beak and Feather Disease and/or Avian Polyomavirus should be carried out in birds with feather dystrophies.4,12,16,19

6. Radiographs

Radiographs may also be taken. Internal granulomas, tumours, and abscesses are common findings in birds that are feather picking and that show secondary dermatitis.[4,15,16,19]

7. Biopsy

Full thickness skin and feather follicle biopsies are an important step in the diagnosis of feather picking. Underlying hormonal and nutritional disease or some bacteria that do not grow in culture may be identified during histopathology.[4,15,16]

SPECIFIC CAUSES OF FEATHER PICKING

Medical

1. Allergy

Allergies are a controversial cause of feather picking because it is not yet known if birds develop allergies similar to mammals.[11] Although basophils, eosinophils and mast cells may play a role in allergic reactions, they may play different roles in birds as compared to mammals as the precise mechanisms are still not fully understood.[4,6] In addition, IgG rather than IgE seems to be the immunoglobulin involved in anaphylactic responses in birds.[9,11]

Allergic feather picking tends to be patterned under the wings and down the thighs.[4,16,19] The chest area is often left untouched with these cases of allergic dermatitis.[4] Oral cavity staphylococcal infections have often been discovered in the affected birds. These infections generally respond well to appropriate antibiotic therapy and the feather picking stops.4

2. Endocrine imbalance

Hypothyroidism and other hormonal imbalances are a rare cause of feather picking in birds.[11,12] The adrenals, gonads, and thyroids glands are all associated with the hormonal control of normal moulting. Affected birds often have retained feathers and poor moults.[4]

The exception to this is seen in amazon parrots that chew at their feet which is often described as infectious pododermatitis. These birds have very thin keratinised skin on their feet and legs. Thyroid supplementation in these individuals often results in a cessation of the problem and an overall healthier condition of the skin on the feet and legs.[4]

3. Environment

Poor environmental conditions can contribute to feather picking. Humidity and temperature are important factors especially in tropical parrots like Amazons, as environments that are too dry may lead to poor growth and brittle feathers which in turn leads to feather picking of the abnormal feathers. [12,15,16,19]

Lighting is also another important environmental consideration because it influences normal behaviour in many bird species. Birds should be exposed to sunlight with an appropriate dark-light period which is recommended to be similar to that of the natural environment outside.[1,12,15,16]

Cage size has also to be considered as small cages may damage feathers and irritate the bird which may lead to feather picking.[1,14,15,16,18]

4. Feather cysts

Feather cysts are usually inherited in canaries and appear to increase in number with age.[4,15,16,19] Cysts can also occur from feather follicle trauma that results in the feather folding back on itself as it grows within the follicle. These often become a necrotic mass under the skin and may develop secondary infections.[4] Feather cysts are often irritating and cause the bird to over-preen and self-mutilate. Surgical excision is the only effective method of treatment.[4]

5. Infections

Localised and systemic viral, bacterial and fungal infections can result in feather picking behaviour. Despite being frequently considered, cases of primary bacterial dermatitis and folliculitis are fairly uncommon in pet birds.[4] However, there have been a number of cases where the feather follicles were colonised by small, *Malezzia*-like organisms. This condition is more common in pigeons and affected birds are usually extremely pruritic and my develop multifocal necrotising dermatitis in severe cases but respond well to systemic antifungal therapy.[11,12] Birds with PBFD (and occasionally pox virus) may also feather pick.[12]

6. Malnutrition

Malnutrition is the main medical problem affecting many pet birds but is rarely the primary cause of feather picking. Chronic deficiencies can cause alterations in the skin and feathers which can in turn lead to feather picking.[11]

Nutritional deficiencies may manifest in a variety of ways depending on the type of deficiency. Vitamin A hypovitaminosis may lead to rough itchy skin and poor feather quality. Vitamin E and selenium deficiencies are associated with ulcerative skin conditions. Deficiency of quality protein and sulfur-containing amino acids can cause poor plumage while yellow feather coloration and streaks frequently associated with lysine deficiency.[4] Calcium, magnesium and selenium deficiencies can cause brittle and easily broken feathers. [4] Deficiencies in arginine, biotin, choline, folic acid, iron, pantothenic acid, riboflavin, selenium, and zinc should also be considered.[4,13] Nutritional deficiencies often take a long time (a minimum of 3 months to more than a year) to correct. [4]

7. Neoplasms

Feather picking is often observed over areas of skin tumours. Xanthomas (dermal infiltrates of large number of macrophages with lipid particles) are not technically a neoplasm and are commonly associated with feather and skin mutilation over the affected areas.[11] Other cutaneous neoplasms found in birds include fibrosarcoma, lymphosarcoma and other less common neoplaasms.[12]

8. Parasitism

Ectoparasites are an extremely rare cause of feather picking in pet birds.[11] In budgerigars, *Cnemidocoptes* sp can cause physical changes on the beak and legs but this rarely results in the birds feather picking.[12] In canaries (rarely budgerigars), *Dermanyssus gallinae* can result in restlessness and anaemia but is rarely associated with feather picking.[4] Lice are most commonly observed in birds that are housed outdoors; infections in indoor birds are extremely rare.[4] However, actual feather lice are an extremely rare cause of feather picking in the pet bird situation.[2,12]

Endoparasitic infections are more common.[4] Gastrointestinal giardiasis is commonly observed in pruritic birds (especially cockatiels and love birds).[11] There may be self-mutilation in addition to the feather picking with gastrointestinal giardiasis. Endoparasitic infections with gastrointestinal helminths (tapeworms and roundworms) should not be overlooked as they have been reported to be associated with avian feather picking.[11,13]

9. Systemic

Although systemic diseases rarely cause feather picking in birds a number of systemic diseases can theoretically result in feather loss. Liver disease should always be considered as a possibility for feather picking as pruritis is a prodromal sign of liver disease in humans.[11] Nephritis and air sacculitis have also been reported to cause affected birds to feather pick.[13]

10. Toxic

Arsenic, zinc and other insidious toxic household materials (eg. cigarette smoke, cooking fumes, and aerosols) have been reported to result in feather picking.

Behavioural

1. Aggression/Dominance

Feather picking of other birds in the cage or aviary due to dominance or aggression is a relatively common cause of roughened feather and bald areas on the top of the heads, backs and (less commonly) the trunk of targeted birds.[1,4,11] This can also be accompanied by other injuries especially skin trauma. Male generally pluck female and subordinate males, although dominant females can also engage in feather picking.[2] Dominance can also result in self feather picking as a displacement behavior.[11] Other causes of cagemate aggression include bullying of submissive, younger, or sick individuals. Cagemeate incompatibility is common in cockatiels, cockatoos, finches, and lovebirds.[4]

2. Attention-getting device

Most birds are naturally found in flocks and are generally very social animals. Pair bonding and social interactions are a strong physiological factor in a bird's life. Many birds (especially psittacine birds) will form a pair bond with their owners when lacking a mate or have been hand-raised and imprinted. Many of these pet birds have to compete with other objects in the house for attention.[11] Feather picking is an ideal attention-getting device. Once the bird starts feather picking, a vicious cycle is most since the attention (scolding, fussing) that the bird gets further encourages it to feather pick because it acts as a perfect attention device.[4,11]

Boredom

Boredom in extremely intelligent birds (particularly in a number of psittcine birds) is an important cause of feather picking. In the wild, there are hundreds and thousands of stimuli that are bombarding the bird each day. Pet birds however may have little environmental stimulation especially when other members of the household are away during the day. This boredom can lead to displacement behavior which may manifest as feather picking.[11,12]

3. Change

This is another important cause of behavioural feather picking. Birds are and creatures of habit that live structured lives and routines. Change(s) in their environment or in their established routine (large or small) can be a source of stress for the bird. These changes can be anything from changes in the cage, cage location, room, addition or removal of an object in the bird's environment and new people or pets coming into or leaving the household.[4] This stress is often demonstrated as an obsessive introverted behavior which may manifest as feather picking.

4. Crowding

Some birds pick at themselves or others as a displacement behaviour when they are crowded in a cage or aviary.[4,11]

5. Exaggerated preening

Preening is a normal activity which involves cleaning and rearranging the feathers into place.[11] It is useful to understand that feather picking represents one extreme of the feather care on a continuum. In the middle of the continuum is normal feather care (normal preening) represented by normal feather care and maintenance represented by normal preening. To the left is inadequate feather and maintenance which is frequently seen in domestic hand-raised birds as they fail to learn proper preening techniques and frequencies from their parents. To the right is overzealous preening or outright damage to or destruction of the feathers.[11]

Bird behaviour tends to be patterned and ritualised. Thus it is not surprising that some feather pickers initially had normal preening behaviour but begin to overpreen and then progress to pulling feather out. This is because there is very little difference between drawing a feather through the beak to condition it (preening) and doing the same thing but clamping down on the feather midway through this process and cutting it in half or pulling it out (feather picking).[11]

Exaggerated preening is often seen in young parrots who are incubator-raised or had no parents to learn from, or were raised in sight of other parrots. This is because although preening is instinctive, the finesse has to be learnt from adult birds of the same species.[2,15,16]

Irritation

Poor feather clips can be a source of irritation and this causes the bird to pick at the clip site especially if the edges of the feathers are frayed or have sharp edges. This picking may become a habit and the bird will continue to over preen or continue to pick at the feathers after the damaged wing feathers have been replaced with normal ones.[5,11,15,16,19]

Injury sites can also another source of irritation. Affected birds not only pick their feathers but also their skin and may even pick at the deeper muscle layers resulting in chronic hemorrhage.[11] Cagemates may also pick at another bird's injury site.

Reproductive behaviour

Few pet birds are desexed and natural instincts are still present in captivity.[11] Many of these undesexed birds do not a mate to breed with and no natural outlet for this energy. This can lead to reproductive frustration especially in male birds because the males often come into season first and have to find and compete for nest sites, fight off other males, court the female.[4] Exaggerated or frustrated reproduction combined with the absence for a natural outlet for the increased sexual and "breeding season" energy may result in displaced aggression which in turn may present as self picking at the breast, abdomen, or leg regions in the breeding season.[4,11,15]

It should be noted that some species of birds commonly line their nest with feathers which is normal and is observed only at nesting time.[4] In addition, some birds (both nesting cocks and hens) may also develop a brood patch which is a bare area of skin over the chest to allow greater contact for heat transfer when incubating the eggs.[4,9,12] They do so by pulling their feathers out and occur regardless of whether they have a clutch. This is not pathological and should right itself when the breeding season ends.[4,11] The bird is designated as a feather picker only if this behaviour continues beyond the time of nesting.

6. Separation anxiety

Many psittacine birds live in groups in nature and may be stressed when they are separated from other birds or substitute social companion (human).[14,15] The more emotional and highly strung birds like African grey parrots and cockatoos may feather pick as a displacement behaviour due to separation anxiety when left confined alone in a cage when their owners depart for varying lengths of time.[1,12] Even more at risk are birds that have been rehomed or improperly socialised and whose entire life centres around the flock.[16]

7. Territorial

In multiple bird cages, territorial disputes may occur which can lead to feather picking between cage mates and self picking as a displacement behavior.[11,14]

TREATMENT

The best results are usually achieved when the underlying cause is identified. Medical causes of feather picking usually have a greater response to treatment.[7] Medical diseases should be treated according to their causes and they often resolve uneventfully with appropriate treatment.[7] On the other hand, there is no quick and/or easy solution for behavioural feather picking. Behavioural causes can managed and treated with behavioural therapy, environmental changes, pharmacological intervention and possibly other forms of alternative therapies.[7] Therapy in these cases should be aimed at managing the condition rather than expecting a cure.[13,15,19] However, some types of behavioural picking such as nesting induced feather picking do not require treatment.

Behavioural therapy

Behavioural therapy may include improving the human-animal bond, establishing a dominance hierarchy and providing positive reinforcement for non-picking behaviour.[1,9] Improvement of the human-animal bond may be the most effective therapy in some psychological causes of feather picking such as separation anxiety.[5,12] A number of training programs teach birds to learn and follow simple commands and in so doing make the owners the flock leader and so remove stress from the bird and make it feel secure.[1,15,16] However, the owner has to be clear and consistent for this to work. A popular program is "nurturing dominance" training which was established by Sally Blanchard who is a well-known bird behaviourist.[15,19] It consists of four commands – "up" (step onto the human's hand now), "down" (step off the human's hand now), "no" (stop that behaviour now) and "OK" (gives the bird permission to do something it wants to do).

Environmental changes

Environmental changes include altering daylength, moving the cage, separating birds and environmental enrichment (toys, more frequent bathing, and so on).[1,9,12,13,15,18] It is important to gradually change and avoid causing further stress to the bird when changing its environment.

It is recommended that the larger psittacine birds have at least one of each of the four different types of toys to play with to challenge and occupy them. The four basic types of toys are climbing toys which include chains, ladders, swings and even the cage itself. Chewing toys such as wood and empty paper towel rolls and raw pastas would provide both tactile stimulation and keep their beaks busy. Food toys such as nuts in whole shells or small chunks of corn of the cob take more time to be consumed which leaves the bird with less free time. Puzzle toys such as C-clamps which suspend toys or specially made puzzle boxes for birds will also keep them mentally occupied.[9,15]

Some birds which self mutilate as a result of sexual frustration may stop feather picking when placed in a breeding situation.[2,5] However, others will continue feather picking, may overpreen their mates and possibly pass genes that predispose their progeny to the same problem if the idiopathic self mutilating behaviour is in fact an undetectable neurosis.[5,9]

It is essential to provide the bird with good nutrition since feather picking adds nutritional stress to the bird. Easily shreddable foods eg. raw carrots, green beans, peas in the pod, corn on the cob, apples, breadsticks, wheat toast, minimum rice cakes and other non toxic food can help provide both nutritional and entertainment needs.[5,15,16,19]

Other things to alleviate boredom include playtime with the owner, leaving a TV or radio on during the day, and making sure the bird is getting enough sleep by artificially lengthening nights (to achieve a 8 to 14 hour photoperiod that varies with naturally with the season).[9, 15,16,19] Increasing the daylength will also help the "raging hormone" cases get out of breeding season.[15,16]

Pharmacological intervention

Antihistamines (oral hydroxyline [Atarax] at 2mg/kg PO q8-24hr), diphenhydramine [Benadryl] (2-4 mg/kg PO q12hr) may be beneficial especially in suspected allergic birds to decrease itching and to cause mild sedation.[7] Diphenhydramine can be used long-term if necessary. Prednisone (0.2mg/30g body weight q12 hr with gradually decreasingly dose) can be used in truly pruritc birds in the short-term as prolonged systemic use of steroids often result in secondary fungal or viral disease and other undesirable complications. Tranquilizers (diazepam up to 0.6mg/kg IM or IV or phenobarbital 3.5-7 mg/kg q8-12 hr) can be also be used as adjuvants.

The use of psychotrophic drugs (tricyclic antidepressants) is based on therapeutics in dogs, cats, and humans.[6,19] Their use should be reserved until after other therapies are initiated or deemed ineffective after a two-month therapy unless self mutilation is occurring.[5] There should be good and constant communication between the owner and the vet to evaluate the effectiveness and to monitor for possible side effects.[1,12] Tricyclic antidepressants have some antihistaminic, anticholinergic and local anaesthetic properties, making them useful as adjunct therapy for feather pickers and mutilators.[616,19] Haloperidol (0.1-0.2 mg/kg PO q12hr), amitriptyline [Elavil] (1-2 mg/kg PO q12-24hr), doxepin [Sinequan] (0.5-1 mg/kg PO q12hr), nortryptylline [Aventyl] (2mg/4oz. water), or fluoxetine (2 mg/kg PO q12hr) may be tried with varying success.[2,6,7,13,16,19] Although many of these drugs are chemically related, they may work dramatically differently in individuals.[6] These drugs are not without their side effects and may cause dry mouths and subsequent increase in fluid intake. It may take several weeks or months of treatment before therapeutic benefits are seen. Thus, the current recommendations are for a minimum trial length of four to eight weeks for these drugs.[6]

Hormonal therapy has been suggested for some cases of feather picking ; however, these agents can have undesirable effects and should be used only to treat specifically identified problems.[1,5,16,19] Medroxy-progesterone [Depo-Provera] (0.025-0.05mg/g IM) may be particularly useful in birds with reproductive imbalances and has a "calming" effect which results in cessation of some sexually related behavioural disorders including feather picking, aggression and masturbation.[5] However, it is not recommended for long-term use as it can have severe side effects and can cause obesity, polydipsia, polyuria, glucosuria and hepatic liposis.[2,5] Recently, human chorionic gonadotrophin (500-1000 IU/kg IM) has shown promise in providing short term resolution of feather picking in African grey parrots and cockatoo hens with no adverse effects.[1]

Alternative therapy

Acupuncture

The response to acupuncture is variable and is often species dependent.[7] The common acupuncture points for the treatment of feather picking are – large intestine 11, pericardium 6, stomach 36, bladder 40, and governing vessel 20.[7,10] Acupuncture has to be continued at intervals of once or twice weekly over a long period.

Homoeopathy

Homoeopathy is very challenging to use in veterinary medicine as remedies do not come with "cookbook" styled instructions.[8,17] A remedy has to be matched for the psychological picture of the bird. Very often five to six remedies may have to be tried before the right one is found by trying each remedy one at a time for about one to two months. With African greys, Belladoona, Nat mur and Nux vomica can be tried.[7,8,17] Arnica 200c once a week for four weeks can be used in cockatoos with high efficacy.[8,17] Nat mur is also useful in birds that are strongly bonded to their owners and go through separation anxiety.[8,17] However, some birds will have no response and will have to go to the traditional antidepressant drugs like amitryptylline.

Adjunct therapy

Beak grinding or notching

Beak grinding or notching is radical and potentially dangerous and drastic technique as an adjunct to feather picking by grinding the beak down to make picking difficult or creating a V-shaped notch in the lower beak.[12] This may be worth considering if all else fails.

Elizabethan collars, Body jackets and Bandages

The above devices prevent further feather damage and mutilation, allow feather regrowth and help break the cycle by forming an artificial barrier between the bird's peak and its feathers.[6,13] It is important to understand they treat only the symptoms (feather picking) but do not eliminate the underlying cause(s) as there is usually no cessation of feather picking when these are removed. They are often a great stress to the bird and prevent normal feather maintenance (preening). Some vets have recommended that collars and jackets be removed to allow the birds to groom and then replaced if grooming becomes pathologic.[12] Therefore, they should only be applied when it is necessary to arrest self mutilation to prevent haemorrhage or as a last resort when all else fails.

Foul-tasting sprays

A variety of foul-tasting sprays have been used as an adjunct to feather picking therapy. Success depends on the individual bird. Methods in vogue include dilute bitter apple, dilute Listerine® and antibiotic water (one chloromycetin capsule per quart of water).[9,12,15,16]

CONCLUSION

Feather picking is a symptom that something – whether medical, physical, environmental or psychological- is wrong with the bird.[6] It is important to systematically rule out all possible factors contributing to the condition so that appropriate therapy can be initiated for the best possible results.

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APPENDIX 1

SELF-MUTILATION – PATIENT HISTORY

Self-mutilation in birds can be due to variety of behavioural, management or medical problems. A thorough history can help identify these problems. Please complete the following questions about your bird. Our staff will help, if you are uncertain about how you should answer.

Your name_____ Your bird's name_____

Species_____

Variety/color_____ Age_____

Sex_____ How determined?_____

Patient History

1. here did you get your bird?_____

2. When did you get your bird?_____

3. Is your bird; Hand raised Parent raised Wild caught other (circle)

4. On receiving your bird was it; Still being hand fed Weaned <1yo >1yo (circle

5. Is your bird; Single In a pair With<5 birds With>5 birds (circle)

6. Is more than one bird affected? Yes/No (circle)

7. If yes, how many are affected? (e.g. 3/10) _____

8. Has your bird had previous owners? No 1 2 >2 (circle)

9. With the previous owner was it; In a cage Aviary Confined Unconfined (circle)

Environment and Housing

1. My bird lives in a; (circle) Cage Aviary Both Other

2. My bird is in the cage; Always Mostly 50% At night (circle)

3. The cage/aviary is made of; Painted wire Unpainted wire (circle)

4. The cage/aviary is; (circle) <1yo <2yo 3-5yo >5yo

5. List any toys/furnishings in the cage _____

_____

6. What room/s do you keep your bird in? _____

7. Has your bird been moved recently? _____

8. How often do you clean the food and water dishes?_____ The cage?_____

9. What products do you use? _____

10. Does anyone in the household smoke? Yes No (circle)

11. How many hours per day is your bird alone? _____

12. When are the lights in the bird's area turned off at night? _____

13. When does light first come on in the morning? _____

14. What do you consider the light intensity? Bright Moderate Dim (circle)

15. What sights, sounds and other stimuli are available to you bird while you are gone?

_____

_____

Nutrition

1. Describe you birds diet in detail; _____

_____

_____

2. Any treats or table scraps offered; _____

3. Any vitamins or mineral supplements; _____

4. What is your birds' favourite food? _____

5. Does your bird have food ; All the time Fed separate meals (circle)

Social Interaction

1. How many adults in the household _____ How many children _____

2. What animals are in contact with the bird?_____

iii) How do these pets get on with the bird? _____

iv) Who does the primary maintenance of the bird? _____

v) Who spends most time with the bird? _____

vi) Who does the bird like?_____

vii) Who does the bird dislike?_____

viii) How often is the bird handled? Never Rarely Occasionally Often (circle)

ix) Is the bird attached to a particular person? Yes No (circle)

x) Does the bird show courtship behaviour to humans? Yes No (circle)

xi) Does the bird have other problems apart from feather picking? (Circle below)

Destructive Aggressive Screeching Nervous Other_____

12. Have any changes occurred in the household? (circle below)

Recent move People leaving/arriving Work hours changing

xiii) Indicate any breeding situations or breeding behaviour with other birds; (circle applicable)

Courtship Mating Nesting Egglaying Breeding

The Birds' Behaviour

1. Does your bird like to be petted: On the head On the back Under wings Over the tail (circle)

2. Does your bird step onto your hand: Easily Hesitantly Rarely (circle)

3. Does your bird sit on your shoulder? Never Rarely Occasionally Often (circle)

4. Does your bird tolerate restraint?_____

5. How does your bird greet you when you come home?_____

xiv) How does your bird greet strangers?_____

xv) If your bird talks, list its' vocabulary_____

_____

_____

xvi) Describe your birds play behaviour _____

_____

_____

Problem Behaviors

1. Which behaviour problems does your bird exhibit?

Feather plucking Yes/No Parts of the body _____

Feather chewing Yes/No Parts of the body _____

Self mutilation Yes/No Parts of the body _____

Screaming Yes/No

Irrational fears Yes/No

ii) When did you first notice the behaviour/s?_____

iii) What part of the body was first affected by feather picking? _____

iv) How often does the bird pick?_____

v) When does it pick the most?_____

vi) When does it pick the least?_____

vii) Has the pattern or severity changed over time? _____

viii) When did your bird last moult? _____

ix) Has your bird shown any other signs of illness? (circle applicable)

Abnormal droppings Weight loss Respiratory problems Neurological abnormalities.

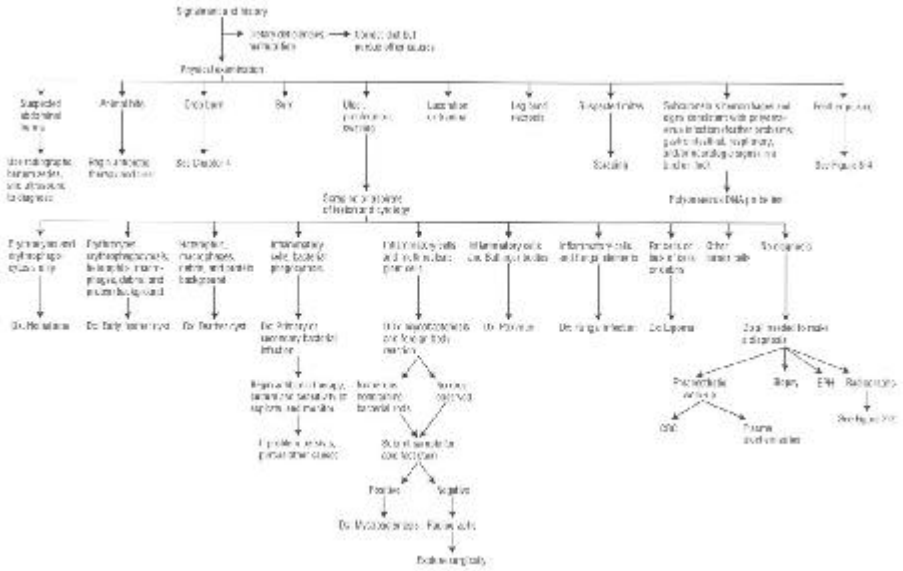
10. Has your bird seen another vet for the problem? Yes/No

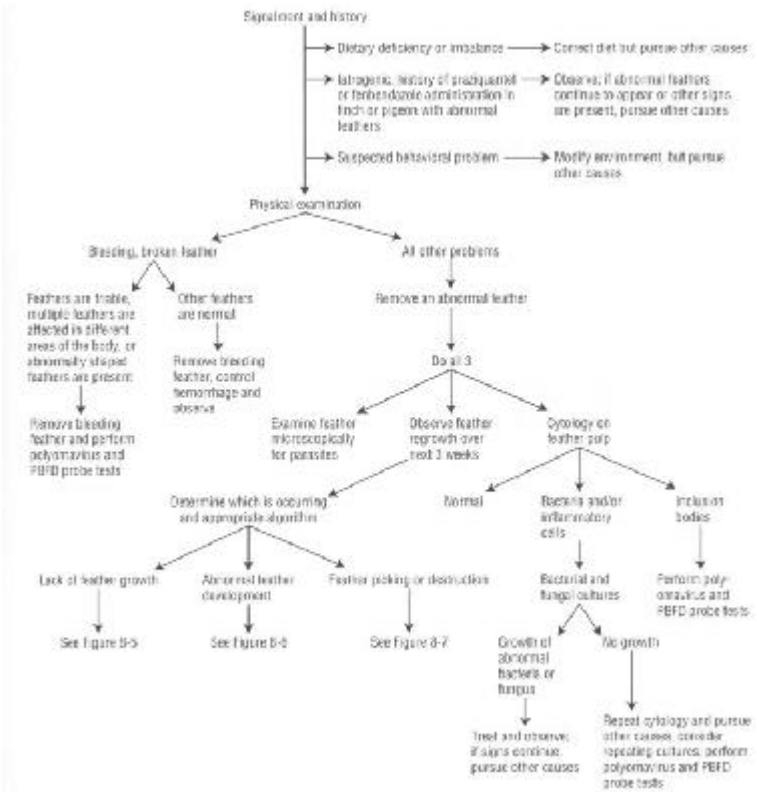
11. If yes, what conclusions were reached? _____

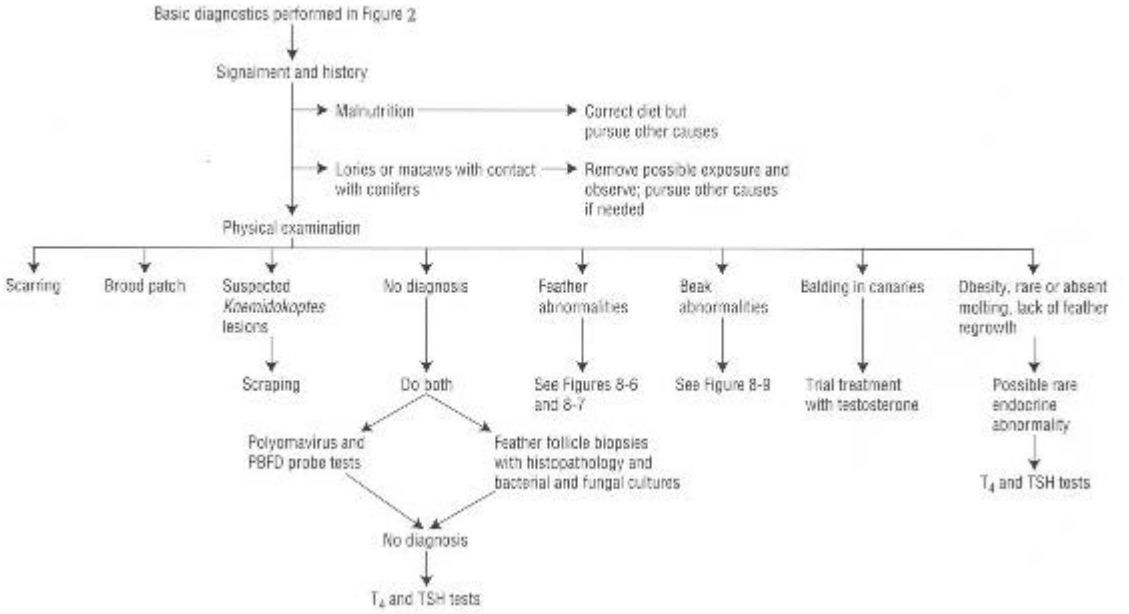
_____

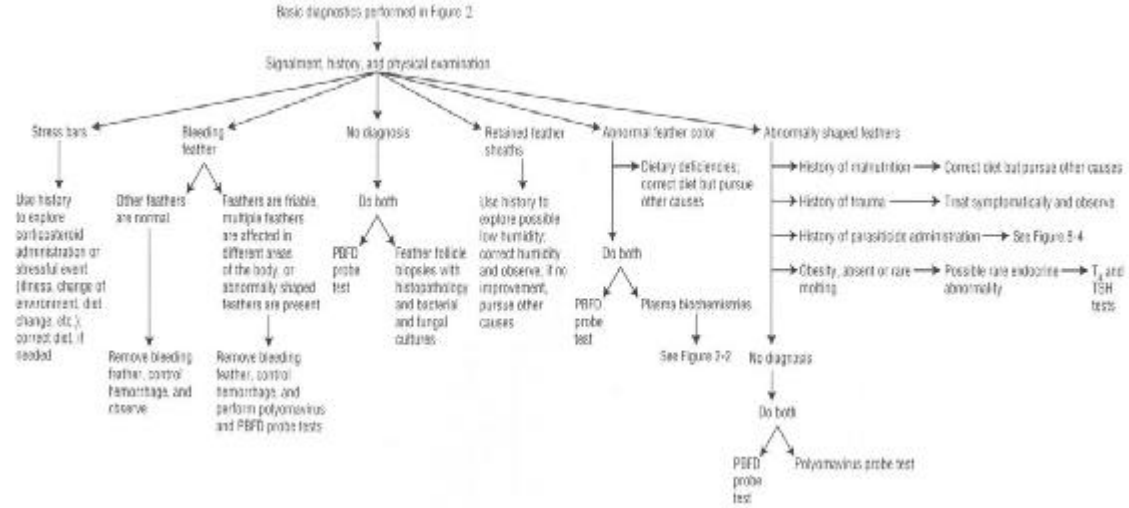
APPENDIX 2

These Figures were obtained from RupleyAE A Manual of Avian PracticeWB Saunders CompanyPhiladelphia 1997






Basic diagnostics performed in Figure 2
Signalment and history
Malnutrition
Correct diet but pursue other causes
Lories or macaws with contact with conifers
Remove possible exposure and observe; pursue other causes if needed
Physical examination
Scarring
Brood patch
Suspected Knemidokoptes lesions
No diagnosis
Feather abnormalities
Beak abnormalities
Balding in canaries
Obesity, rare or absent molting, lack of feather regrowth
Scraping
Do both
See Figures 8-6 and 8-7
See Figure 8-9
Trial treatment with testosterone
Possible rare endocrine abnormality
Polyomavirus and PBFD probe tests
Feather follicle biopsies with histopathology and bacterial and fungal cultures
No diagnosis
T4 and TSH tests
T4 and TSH tests


Basic diagnostics performed in Figure 2
Signalment, history, and physical examination
Stress bars
Bleeding feather
No diagnosis
Retained feather sheaths
Abnormal feather color
Abnormally shaped feathers
Use history to explore corticosteroid administration or stressful event (illness, change of environment, diet change, etc.); correct diet, if needed
Other feathers are normal
Feathers are friable, multiple feathers are affected in different areas of the body, or abnormally shaped feathers are present
Do both
PBFD probe test
Feather follicle biopsies with histopathology and bacterial and fungal cultures
Use history to explore possible low humidity; correct humidity and observe. If no improvement, pursue other causes
Dietary deficiencies; correct diet but pursue other causes
Do both
PBFD probe test
Plasma biochemistries
See Figure 7-2
History of malnutrition
Correct diet but pursue other causes
History of trauma
Treat symptomatically and observe
History of parasiticide administration
See Figure 5-4
Obesity, absent or rare molting
Possible rare endocrine abnormality
T4 and TSH tests
Remove bleeding feather, control hemorrhage, and observe
Remove bleeding feather, control hemorrhage, and perform polyomavirus and PBFD probe tests
No diagnosis
Do both
PBFD probe test
Polyomavirus probe test