



E-ISSN: 2320-7078

P-ISSN: 2349-6800

www.entomoljournal.com

JEZS 2021; 9(1): 1778-1780

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Received: 22-10-2020

Accepted: 24-12-2020

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Case studies on overgrown beak in budgerigars (*Melopsittacus undulatus*)

CM Bhadesiya, VA Patel, PJ Gajjar and MJ Anikar

Abstract

The urban and rural India is observed to have an increase in the trade of exotic pets. Different species of birds are being kept as indoor pet or companion by bird lovers throughout the country. Budgerigars are most commonly preferred pet birds as compared to other exotic species. They frequently encounter various healthcare and management associated diseases and disorders where overgrown beak remains one of the common clinical ailments. The present case study places special emphasis on overgrown beak in budgerigars and describes in brief about possible etiology, clinical significance and management.

Keywords: overgrown beak, budgerigar, clinical significance, management

Introduction

Budgerigars (*Melopsittacus undulatus*) are one of the most common psittacine birds kept as in-house pets or companions in the world^[1]. This species is preferred due to its attractive color variations, behavior and adaptability. Budgerigars can suffer from certain infectious or non-infectious diseases. Various scientists have documented clinical ailments in Budgerigars such as inclusion body disease or fledgling disease^[2], keratoacanthoma^[3], oral leiomyoma, trichomoniasis, circovirus infection, clostridial infection, lymphoid leucosis, coligranuloma, thyroid hyperplasia^[4], cutaneous leiomyosarcoma, subcutaneous epithelioid hemangioendothelioma, cutaneous xanthogranuloma, infestation by *Knemidocoptes* spp. of mite^[5], megabacteria infection^[6], overgrown beaks^[7], endoparasitic infestations, traumatic injuries etc. in different countries. Out of all conditions, overgrown beak remains one of the most frequently encountered clinical ailment in budgerigars. The present case study describes overgrown beak in 03 budgerigars and its management. Emphasis has been placed specifically on possible etiological factors, clinical signs and steps for management of overgrown beaks in budgerigars.

Case Details

Three budgerigars having beak deformities (Figure-01) were brought to Veterinary Hospital functional under the Postgraduate Institute of Veterinary Education & Research (PGIVER), Kamdhenu University, Rajpur (Nava), Himmatnagar from Rajkot, Gujarat. Anamnesis suggested that all the birds were raised on all-seed diet and were kept in a single cage. Moreover, the owner did not opt for regular trimming of beaks. Physical examination revealed overgrown beaks in all 03 birds.



Fig 1: Budgerigars in a single cage showing beak abnormalities

Management

All the birds were captured individually to trim the beaks. Physical restraint by gentle manual handling was preferred over anesthesia. Overgrown beaks were cut by use of commonly available scissors (Figure-02) and nail cutter/trimmer (Figure-03) followed by smoothening of edges using rasp of nail cutter/trimmer. Care was taken to avoid bleeding from the beak. All the birds were observed for normal feed intake, water intake and general behavior after the procedure which showed no complications.



Fig 2: Use of a commonly available scissors to cut overgrown beak in a budgerigar

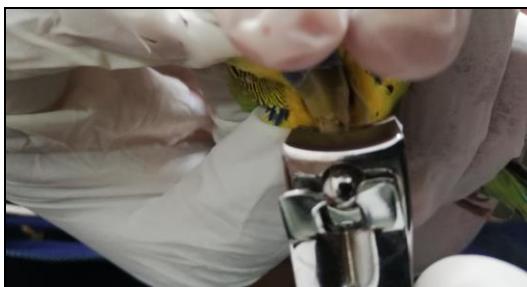


Fig 3: Use of a commonly available nail cutter/trimmer to cut overgrown beak in a budgerigar

Discussion

Beaks in birds are useful to perform various functions and to maintain general health and behavior of all types of birds^[8]. Normal beak of budgerigars appear smooth and symmetrical in appearance with homogenous texture, regular edges, absence of peeling areas, appropriate coloration, proper length, proper width and proper alignment.

Some of the beak abnormalities in birds include [a] improper shape and size of beak without specific etiology, [b] overgrown beaks, [c] poorly grown beaks, [d] weak beaks, [e] prognathism, [f] brachyggnathism, [g] damaged/injured beaks, [h] rough beaks, [i] hyperkeratosis due to vitamin-A deficiency, [j] split beaks, [k] scissor beak etc. (Figure-04).

Beak overgrowth can be associated with [a] poor nutrition or improper diet leading to malnutrition and an imbalance in levels of vitamin-A; [b] keeping birds in a cage of inappropriate size; [c] mite infestation (e.g., *Knemidocoptes* spp.); [d] other infectious causes such as beak rot caused by Psittacine Beak and Feather Disease (PBFD), polyomavirus-like infection, mycobacterial infection etc.; [e] hyperkeratosis associated with fatty liver disease; [f] tumours (e.g., keratoacanthoma, squamous cell carcinoma); [g] beak mutilation by other cage-mates (*i.e.*, infight injuries, cannibalism, attacks during aggressive mating); [h] congenital and hereditary causes; [i] lockjaw (an arthritis beak condition) etc.^[7-10].

Cases of overgrown beak are more frequently encountered in

exotic pet birds. Mild to moderate overgrown beaks generally do not affect the general health and well-being of budgerigars; however, regular trimming is advisable. In severe cases, budgerigars with overgrown beak may show [a] difficulty in feed intake; [b] difficulty in drinking; [c] difficulty in preening; [d] may appear with ruffled and soiled feathers due to inappropriate preening; [e] debilitation and dehydration in chronic cases due to reduced feed and water intake for prolonged period; [f] change in temperament; [g] change in general behavior; [h] increased possibilities of ectoparasitic infestation and subsequent health issues; [i] inability to defend against attacks by predators or dominant birds; [j] inability to climb upwards in cages; [k] inability to play with toys kept as an enrichment material etc.

Generally, regular trimming of beaks is advisable in mild as well as moderate cases to prevent serious complications. This can be achieved by use of commonly available scissors (curved or straight), nail trimmer and debeaking machines. Here, it is not always possible for veterinarians to have debeaking machines at their veterinary clinics. Moreover, beak trimming can be performed without using anesthetic agents because use of anesthetic agent may cause additional complications. Care must be taken to avoid bleeding during the procedure. Veterinarians can use topical haemostatic and antiseptic if there is evidence of bleeding and exposure of blood vessels.

The approach depicted in the present case study proved to be effective for management of overgrown beaks in budgerigars. The same approach can be advised for regular beak trimming in budgerigars at veterinary clinics.

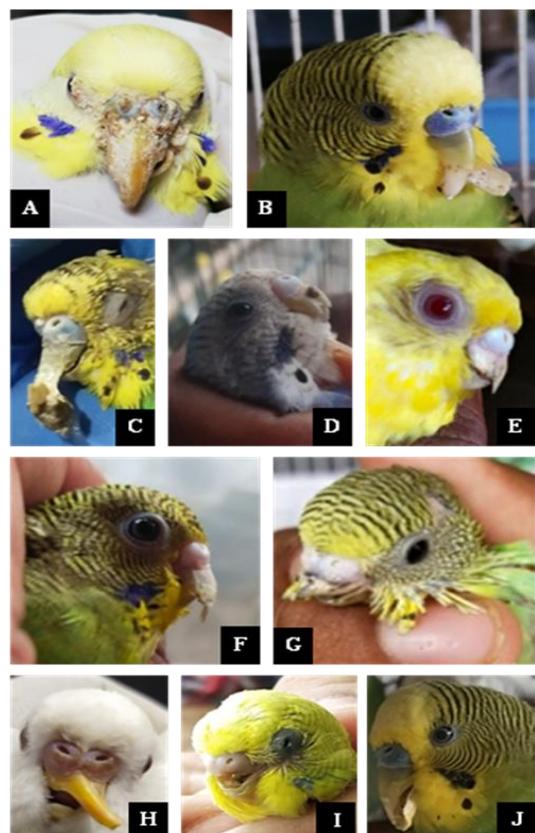


Fig 4: Beak abnormalities in budgerigars (A) Beak abnormality due to infestation by *Knemidocoptes* spp. of mite; (B) Scissor beak; (C) Tumor; (D) Split beak; (E) Poorly grown upper beak with pointed tip; (F) Overgrown upper beak with pointed tip; (G) Damaged beak due to trauma; (H) Congenital deviation of beak; (I) Congenital absence of upper beak & (J) Overgrown upper and lower beak

Conclusion

Beak overgrowth can be caused by various etiological factors and can lead to development of unexpected clinical manifestations in budgerigars if not trimmed on regular basis. Minimally invasive beak trimming can be performed by using commonly available handy tools (such as scissors and nail cutter/trimmer) when advanced machineries are not available. This practice can be effective to regain normal behavior in budgerigars diagnosed with severe beak overgrowth.

Conflict of Interest

Authors declare no conflict of interest with regards to funding.

Acknowledgements

Authors acknowledge staff and authorities of PGIVER, KU, Rajpur (Nava), Himmatnagar and University authorities.

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