



E-ISSN: 2320-7078

P-ISSN: 2349-6800

[www.entomoljournal.com](http://www.entomoljournal.com)

JEZS 2021; 9(1): 1778-1780

© 2021 JEZS

Received: 22-10-2020

Accepted: 24-12-2020

**CM Bhadesiya**

Assistant Professor,  
Postgraduate Institute of  
Veterinary Education &  
Research (PGIVER), Kamdhenu  
University, Rajpur (Nava),  
Himmatnagar, Gujarat, India

**VA Patel**

M.V.Sc. Scholar, Postgraduate  
Institute of Veterinary  
Education & Research  
(PGIVER), Kamdhenu  
University, Rajpur (Nava),  
Himmatnagar, Gujarat, India

**PJ Gajjar**

M.V.Sc. Scholar, Postgraduate  
Institute of Veterinary  
Education & Research  
(PGIVER), Kamdhenu  
University, Rajpur (Nava),  
Himmatnagar, Gujarat, India

**MJ Anikar**

M.V.Sc. Scholar, Postgraduate  
Institute of Veterinary  
Education & Research  
(PGIVER), Kamdhenu  
University, Rajpur (Nava),  
Himmatnagar, Gujarat, India

## 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 fledging 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

**Corresponding Author:****CM Bhadesiya**

Assistant Professor,  
Postgraduate Institute of  
Veterinary Education &  
Research (PGIVER), Kamdhenu  
University, Rajpur (Nava),  
Himmatnagar, Gujarat, India

## 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 smoothing 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 bird are useful to perform various functions and to maintain general health and behavior of all types of birds<sup>[8]</sup>. 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] brachygnathism, [g] damaged/injured beaks, [h] rough beaks, [i] hyperkeratosis due to vitamin-A deficiency, [j] split beaks, [k] scissor beak etc. (Figure-04).

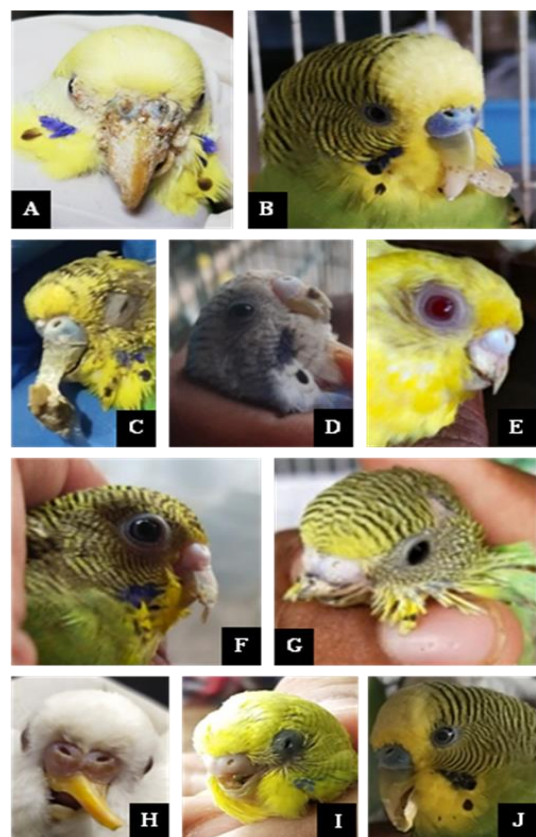
Beak overgrowth can be associated with [a] poor nutrition or improper diet leading to malnutrition and an imbalance in levels of vitamin-A; [b] keeping birds in a cage of inappropriate size; [c] mite infestation (e.g., *Knemidocoptes* spp.); [d] other infectious causes such as beak rot caused by Psittacine 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.<sup>[7-10]</sup>.

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.

## References

1. Abou-Alsoud ME, Karroul GI. Diagnosis and management of *Knemidocoptes pilae* in budgerigars (*Melopsittacus undulatus*): Case reports in Egypt. Mathews Journal of Veterinary Science 2017;2(1):007.
2. Kingston RS. Budgerigar fledging disease (papovavirus) in pet birds. Journal of Veterinary Diagnostic Investigation. 1992;4:455-458.
3. Owen HC, Doneley RJT, Schmidt RF, Patterson-Kane JC. Keratoacanthoma causing beak deformity in a budgerigar (*Melopsittacus undulatus*). Avian Pathology. 2007;36(6):499-502.
4. Loukopoulos P, Bautista AC, Puschner B, Murphy B, Crossley BM, Holster I *et al.* An outbreak of thyroid hyperplasia (goiter) with high mortality in budgerigars (*Melopsittacus undulatus*). Journal of Veterinary Diagnostic Investigation 2015;27(1):18-24.
5. Toparlak M, Tuzer E, Gargili A, Gulamber A. Therapy of Knemidocoptic mange in budgerigars with spot-on application of moxidectin. Turkish Journal of Veterinary and Animal Sciences 1999;23:173-174.
6. Moore RP, Snowden KF, Phalen DN. A method of preventing transmission of so-called "Megabacteria" in Budgerigars (*Melopsittacus undulatus*). Journal of Avian Medicine and Surgery 2001;15(4):283-287.
7. Patel VA, Bhadesiya CM, Gajjar PJ, Anikar MJ. Prosthetic fixation of beak in a green cheek conure (*Pyrrhura molinae*) using telemedicine. The Pharma Innovation Journal 2021;10(1):585-588.
8. Akhtar S, Durrani UF, Mahmood AK, Akhtar M, Hussain R, Matloob K *et al.* Comparative efficacy of ivermectin and fipronil spot on against *Knemidocoptes pilae* in budgerigars. Indian Journal of Animal Research 2018;B-925:1-4.
9. Alarcon Elbal PM, Carmona Salido VJ, Sanchez-Murillo JM, Calero Bernal R, Lucientes Curdi J. Severe deformity in *Melopsittacus undulatus* caused by *Knemidocoptes pilae*. Turkish Journal of Veterinary and Animal Sciences 2014;38:344-346.
10. Donnelly TM. Overgrown beak in a budgerigar (*Melopsittacus undulatus*). Nature - Lab Animal 2006;35(3):19.