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Case Series

# Surgical and Anesthetic Management of Periorbital Chronic Abscess in Common Hill Myna (*Gracula religiosa*)

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**ABSTRACT**

**Introduction:** An abscess is a collection of pus that can cause damage and inflammation and may develop into a painful, life-threatening caseous mass. The present study aimed to report a case series of periorbital chronic abscesses in hill mynas and evaluate the efficacy of the surgical and anesthetic approach used.

**Case report:** Between 2020 and 2024, five black common hill mynas weighing 286-300 grams and approximately 12 months old were presented to the Sahidul Aalam Quadary Teaching Veterinary Hospital in Chattogram, Bangladesh, with a history of chronic periorbital abscesses. Hill mynas were active and alert on presentation. Based on manual palpation and X-ray examination, all common hill mynas exhibited abscesses, leading to a decision to perform surgery. For anesthesia, 0.5 mL of isoflurane was administered in a gas chamber, and 25 mg/kg of ketamine was administered intramuscularly (IM). During surgery, the caseous mass was successfully removed using the opening method without complications. Mynas received oral pefloxacin at 10 mg/kg of body weight and local application of renamycin ointment (oxytetracycline 3%) twice daily for one week. Four mynas had no complications, with wounds healing without sutures; however, one myna with sutures developed an infection. Wounds healed completely within 15 days without sutures and within 20 days with sutures.

**Conclusion:** The present study indicated that chronic abscess surgery in common hill mynas was successful without using sutures.

## 1. Introduction

Mynas can mimic a wide range of sounds, particularly human speech; they are frequently kept as pets[1,2]. Mynas are lively and sociable birds with very friendly personalities, and they can be trained to imitate human speech fairly quickly[3]. The common hill myna (*Gracula religiosa*) is originally from Africa, India, and Southeast Asia[3].

Common skin problems in confined birds include damaged or missing feathers, discolored feathers, dystrophic feathers, scaling, crusting, ulceration, erythema, nodules, masses, and abscesses[4]. An abscess is a localized collection of pus within tissue, typically caused by trauma and bacterial infection. An abscess appears as a pus-filled swelling that can develop under the skin or between organs inside or outside the body[4]. Cutaneous abscesses are common on the head, neck, dewlap, back, chest, and limbs[5]. Secondary abscesses can be caused by bite wounds, scratch wounds, or trauma[6].

Common surgical problems in birds include esophageal rupture, traumatic crop puncture, crop laceration, crop fistula, cutaneous neoplasms, lipomas, and fibrosarcomas. In Mynas, common complaints include foreign objects, adenomas, and keratinizing epitheliomas of the uropygial glands[7,8]. Captive myna birds generally do not suffer from ocular issues; however, during importation or transportation, they may experience corneal abrasions, unexplained keratitis, and chronic conditions such as keratoconjunctivitis[9]. No published studies currently describe surgical treatment of a periorbital abscess in the common hill myna. This study was the first to report surgical

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treatment of ocular abscesses in mynas in Bangladesh. The present study aimed to report a series of chronic periorbital abscess cases in hill mynas and assess the effectiveness of surgical and anesthetic treatment using isoflurane and injectable anesthesia.

## 2. Case report

From 2020 to 2024, five black common hill mynas (*Gracula religiosa*), each weighing 286-300 g and approximately 12 months old, were presented to the Sahidul Aalam Quadary Teaching Veterinary Hospital at Chattogram Veterinary and Animal Sciences University, Chattogram, Bangladesh. All five mynas had a history of residing in a wire enclosure and exhibited chronic abscesses adjacent to their eyes, with progressive enlargement in two mynas on the right upper eyelids and three on the left upper eyelids, along with lethargy and diminished appetite. Clinical examination revealed spherical, painless, reducible swellings extending from the inner to the outer canthus, along with closed eyes. Before surgery, X-ray examination confirmed the presence of chronic abscesses in their eyes. The main clinical parameters, including temperature, respiratory rate, and heart rate, were evaluated and found to be within the normal range (Figure 1). Based on the clinical and X-ray findings (Figure 2), these hill mynas were diagnosed with chronic abscesses, prompting a decision to proceed with surgical treatment.

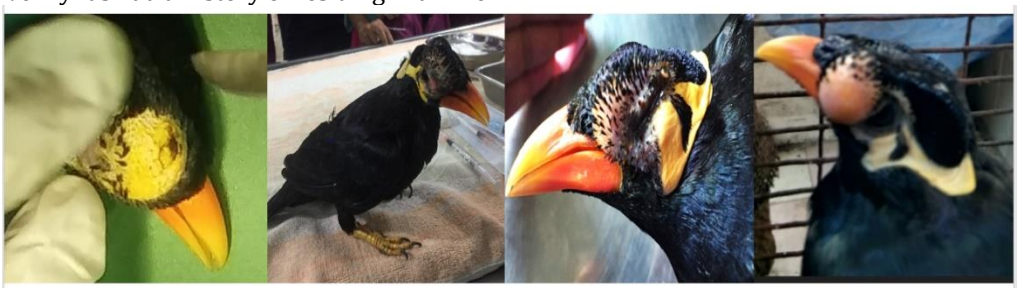


**Figure 1.** Chronic abscess in common hill mynas, approximately 12 months old



**Figure 2.** The hill mynas, approximately 12 months old, showing abscesses in different views

### *2.1. Restraining anesthesia*

Before giving general anesthesia, the hill mynas were placed in an induction box with 0.5 mL of isoflurane[10] (Isoflurane 250 mL, Neon Laboratories Ltd., India; Figure 3A). After two minutes, the birds lost consciousness, and general anesthesia was induced with 25 mg/kg ketamine hydrochloride (Inj. G-ketamine® 50 mg/mL, Gonoshasthaya Pharmaceuticals Limited, Bangladesh) intramuscularly[11]. In addition, the mynas' heart rates and eye reflexes were closely monitored during the anesthetic procedure.

### *2.2. Surgical procedure*

After anesthesia, mynas lost consciousness within two minutes. Mynas were subsequently positioned on the operating table, lying on their sides with their heads elevated, covered with towels, and maintained at an appropriate temperature using a heating pad to prevent hypothermia, a condition to which they are susceptible when under anesthesia. The temperature, heart rate, and breathing were monitored throughout the procedure (Table 1). The surgical area was prepared by plucking feathers, shaving, and cleaning using water and soap. The surgical site was then scrubbed with a 10% povidone-iodine solution. A minor longitudinal incision was made with a surgical blade over the lower side of the abscesses to facilitate drainage[12]. After all the dead tissue was removed (Figure 3B), a ligature was placed using absorbable suture material, catgut No. 2.0 (Trugut®, Suture India Pvt. Ltd., Bangalore, India), in only one myna, while no sutures were used in the other four mynas (Figures 3C and 3D). All hill mynas had the same abscess location and surgery duration, and anesthetic duration was also similar across all birds.

**Table 1.** Vital parameters of 12-month-old hill mynas before, middle, and after surgery

| Parameters / Conditions | Temperature (°C) | Heart rate (beats per minute ) | Respiratory rate (breaths per minute) |
|---|---|---|---|
| Before the surgery | 41.1 | 302 | 60 |
| Middle of the surgery | 39.4 | 235 | 34 |
| End of the surgery | 37.2 | 201 | 52 |
| Five minutes after the surgery | 40.0 | 265 | 58 |

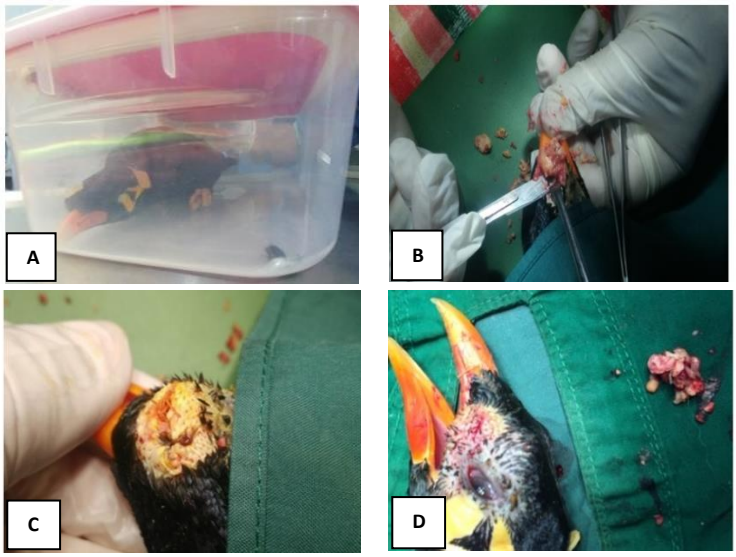



**Figure 3.** Surgical procedure for chronic periorbital abscess in hill mynas aged 12 months. **A:** Induction of isoflurane, **B:** Removing caseous mass from wound, **C:** Stitches the wound after surgery, **D:** Wound without stitches after surgery

### *2.3. Treatment and postoperative care*

A dressing was applied using 5% povidone-iodine cream, accompanied by oral administration of the antibiotic pefloxacin (10 g packet, ACME Pharma Ltd., Bangladesh) at a dosage of 10 mg/kg of body weight once daily[13]. Additionally, renamycin cream (oxytetracycline 3%, 5 g packet, Reneta Pharma Ltd., Bangladesh) was applied locally twice daily for one week[12]. During the wound-healing follow-up period extending up to 20 days, four mynas healed within 15 days (Figure 4); however, one case required 20 days to fully heal. All mynas were advised to follow a nutritionally balanced diet using market-available feedstuffs (Bangladesh).



**Figure 4.** Abscess fully healed in a hill myna after 15 days post-surgery

## 3. Discussion

The present study is the first report of surgical treatment of periorbital abscesses in common hill mynas in Bangladesh and provides valuable clinical information for the scarce literature on surgical procedures in avian species. Five common hill mynas exhibited chronic periorbital abscesses and were successfully treated surgically using isoflurane and ketamine. During the clinical examination, spherical, non-tender, reducible masses were observed from the inner to the outer canthus, and radiographic analysis revealed chronic abscesses without any bony involvement. The anesthetic protocol was safe and efficacious, with stable physiologic parameters observed throughout the procedure. Mean heart rate decreased from 302 bpm pre-surgically to 201 bpm at the end of surgery, respiratory rate decreased from 60 to 52 breaths per minute, and body temperature decreased from 41.1°C to 37.2°C. These changes in clinical parameters were consistent with the expected anesthetic effects in avian species and comparable to findings reported by Serir et al.[14] in pigeons using balanced anesthetic protocols. The rapid induction time of two minutes was consistent with the findings of Mousa et al.[11] regarding ketamine anesthesia in chickens and Rahdari et al.[10], who documented the effectiveness of isoflurane-ketamine combinations in grilling chickens for surgical interventions. A body temperature of 37.2°C at the end of surgery indicated that anesthetic birds need active warming. Yadav et al.[15] found that keeping grey parrots from getting too cold during surgery was important to ensuring the surgery went well. All mynas recovered uneventfully within 30-45 minutes without signs of emergence excitement or dysphoria, suggesting that the balanced anesthetic technique provided adequate sedation and analgesia during the recovery period. The lower part of the abscess was incised longitudinally for drainage, and the caseous mass was surgically removed, consistent with the surgical technique described by Kalaka et al.[12] in Aseel birds with periorbital abscesses. Aseptic management of avian surgical sites was conducted in accordance with the description provided by Mesgarani et al.[1], utilizing 10% povidone-iodine irrigation during the procedure. Comparing wound-management techniques revealed a critical finding. Four mynas with open wounds (without sutures) healed completely within 15 days without complications, while one myna with primary closure using absorbable suture material took 20 days to heal completely and developed a localized infection postoperatively. This observation strongly supported the established principle in avian medicine that most soft tissue

wounds in birds heal best by secondary intention, especially when presented outside the golden period for primary closure, as Cousquer[16] documented in avian wildlife casualties. The sutured wound took longer to heal and became infected. This longer healing time may be because the closed wound trapped bacterial contaminants and necrotic debris. Ritzman[6] stated that contaminated wounds in psittacine birds require debridement and open treatment rather than primary closure. The 15-day healing period in open wounds aligned with the findings of Kalaka et al.[12] in Aseel birds, who observed complete healing 10-15 days after surgical drainage of periorbital abscesses. Postoperative medical management included systemic pefloxacin at 10 mg/kg body weight orally and topical oxytetracycline 3% ointment twice daily. Pharmacokinetic studies by Martínez et al.[13] demonstrated that pefloxacin had effective oral bioavailability in broiler chickens. The open-wound group responded well to antimicrobial treatment with a 5% povidone-iodine dressing, emphasizing the need for adequate drainage in chronic abscesses with necrotic tissue and bacteria. According to the current study, the unstitched wounds heal faster, whereas the stitched wounds are more susceptible to infection and take longer to heal. Kalaka et al.[12] indicated that the open abscess wounds recover more quickly.

## 4. Conclusion

The present study demonstrated that using isoflurane at 0.5 mL and ketamine at 25 mg/kg IM was a successful anesthetic protocol for treating chronic periorbital abscesses in common hill mynas, with stable physiological parameters and uneventful recovery in all five cases. Open wounds healed within 15 days without complications, while sutured wounds took 20 days and became infected. Current evidence supports maintaining contaminated avian wounds exposed; however, further studies are necessary to validate these findings through microbiological culture and histological analysis.

## Declarations

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### *Authors' contributions*

Saroj Kumar Yadav prepared, drafted, reviewed, and wrote the manuscript. Bhajan Das and Saroj Kumar Yadav performed the surgery, while Sunil Yadav assisted the surgeon during surgery and data collection. All authors approved the final edition of the manuscript before publication.

### *Availability of data and materials*

Data available upon request from the corresponding author.

### *Competing interests*

The authors of the present study have declared no conflicts of interests

### *Ethical considerations*

The authors assert that this study has not been submitted elsewhere and that they checked for plagiarism, misconduct, and data originality before submission and during the peer review process. The authors have thoroughly addressed all ethical concerns, including plagiarism verification and publication consent. The authors stated that they did not use generative AI methods/applications to create or edit this study. The authors take full responsibility for the originality of the data in the present manuscript.

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## References

1. Mesgarani H, Kazemi Mehrjerdi H, Mirshahi A, and Razmyar J. Successful surgical crop foreign body removal in a mynah (*Acridotheres tristis*): A case report. Iran J Vet Sur. 2014; 9(1): 57-60. Available at: https://www.ivsajournals.com/article_5904_05ae14d7ae387b93370d142d82220f1b.pdf
2. Archawaranon M. Captive hill mynah *Gracula religiosa* breeding success: Potential for bird conservation in Thailand?. Bird Conserv Int. 2005; 15(4): 327-335. DOI: 10.1017/S0959270905000651
3. Zuccon D, Pasquet E, and Ericson PG. Phylogenetic relationships among Palearctic–Oriental starlings and mynas (genera *Sturnus* and *Acridotheres*: Sturnidae). Zool Scr. 2008; 37(5): 469-481. DOI: 10.1111/j.1463-6409.2008.00339.x
4. Mitchell MA, and Tully JR TN, editors. Manual of exotic pet practice. Saunders, 2009.
5. Abou-Zahr T, Carrasco DC, Shimizu N, Forbes NA, Dutton TA, Froehlich F, et al. Superficial chronic ulcerative dermatitis (SCUD) in psittacine birds: Review of 11 cases (2008-2016). J Avian Med Surg. 2018; 32(1): 25-33. DOI: 10.1647/2017-250
6. Ritzman TK. Wound healing and management in psittacine birds. Vet Clin Exot Anim Pract. 2004; 7(1): 87-104. DOI: 10.1016/j.cvex.2003.08.003
7. Kumar PR, Prasad VD, Sailaja B, and Raju DB. Surgical repair of oesophageal rupture in a cock (*Gallus domesticus*). J Livestock Sci. 2016; 7: 238-240. Available at: https://livestockscience.in/wp-content/uploads/Oesophag-rupt-cock.pdf
8. Rodríguez F, Herráez P, Lorenzo H, López T, and De Los Monteros AE. Intracutaneous keratinising epithelioma in a mynah bird (*Gracula religiosa*). Vet Rec J British Vet Assoc. 2006; 158(2): 57. http://www.bvapublications.com
9. Rich GA. Syndromes and conditions of parrotlets, pionus parrots, poicephalus, and mynah birds. In: Rosskopf Jr WJ, editor. Seminars in avian and exotic pet medicine. 2003; 12(3): 144-148. DOI: 10.1053/saep.2003.00021-5
10. Rahdari A, Hamidi F, and Ghasemi S. Comparing injectable anesthesia regimens of ketamine-xylazine, ketamine-midazolam, and inhalation using isoflurane in broiler chickens to perform stereotactic brain surgery. J Vet Res. 2024; 79(2): 81-91. DOI: 10.22059/jvr.2024.369503.3409
11. Mousa YJ, Al-Zubaidy MH, and Amin SM. Age-related anesthetic effect of ketamine in the chickens. Iraqi J Vet Sci. 2021; 35(3): 501-506. Available at: https://vetmedmosul.com/article_167931.html
12. Kalaka R, Likhitha S, Jeevanraj GD, Vineetha C, Tirumala C, and Vamsi Y. Surgical correction of periorbital abscess in Aseel birds: A report of three cases. Int J Vet Sci Anim Husbandry. 2026; 11(2): 410-412. DOI: 10.22271/veterinary.2026.v11.i2d.3043
13. Martínez MA, Ares I, Rodríguez JL, Martínez M, Martínez-Larrañaga MR,

Isea G, et al. Oral bioavailability and plasma disposition of pefloxacin in healthy broiler chickens. Front Vet Sci. 2017; 4: 77. DOI: 10.3389/fvets.2017.00077

14. Serir A, Tuff JM, Rook N, Fongaro E, Schreiber T, Peus E, et al. Balanced anesthesia in pigeons (*Columba livia*): A protocol that ensures stable vital parameters and feasibility during long surgeries in cognitive neuroscience. Front Physiol. 2024; 15: 1437890. DOI: 10.3389/fphys.2024.1437890
15. Yadav SK, Pallab MS, and Das BC. Surgical management of crop fistula in gray parrots. J Vet Res Adv. 2022; 4(1): 13-14. Available at: https://jvra.org.in/uploads/archivepdf/6883JVRA_Vol_04_Jun-2022_03.pdf
16. Cousquer G. Wound management in the avian wildlife casualty. World Wide Wounds. 2003. Available at: https://www.scopus.com/pages/publications/4043077811