
Successful clinical management of a distal humerus oblique fracture in a 17-week-old gobbler: A case report

Jallailudeen R. Lawal^{1,7,*}, Zainab B. Yusuf^{2,7}, Hussaini U. Durkwa^{3,7}, Mohammed A. Idris⁴, Saraya H. Mshelia⁴, Arhyel G. Balami^{1,7}, Umar I. Ibrahim^{1,7}, Yaqub A. Geidam^{1,7}, Abubakar S. Yakubu^{5,7}, Oludotun O. Oladele^{6,7}

¹ Department of Veterinary Medicine, Faculty of Veterinary Medicine, University of Maiduguri, P.M.B. 1069, Maiduguri, Borno State, Nigeria.

² Department of Veterinary Surgery and Radiography, Faculty of Veterinary Medicine, University of Maiduguri, P.M.B. 1069, Maiduguri, Borno State, Nigeria.

³ Veterinary Teaching Hospital, Faculty of Veterinary Medicine, University of Jos, P.M.B. 2084, Jos, Plateau State, Nigeria.

⁴ Veterinary Teaching Hospital, Faculty of Veterinary Medicine, University of Maiduguri, P.M.B. 1069, Maiduguri, Borno State, Nigeria.

⁵ Department of Veterinary Surgery and Radiology, Faculty of Veterinary Medicine, Usmanu Danfodiyo University Sokoto, P.M.B. 2346, Sokoto, Sokoto State, Nigeria.

⁶ Department of Veterinary Medicine, Faculty of Veterinary Medicine, University of Maiduguri, P.M.B. 1069, Maiduguri, Borno State, Nigeria.

⁷ Postgraduate College of Veterinary Surgeons, Nigeria.

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Abstract

Traumatic long bone fractures in avian species, particularly in turkeys (*Meleagris gallopavo*), pose significant clinical and surgical challenges due to their unique skeletal architecture, high metabolic rate and sensitivity to stress and handling. This case report details the successful surgical management of a Grade I open oblique fracture of the distal humerus in a 17-week-old domestic Bronze gobbler, following vehicular trauma. The bird presented with compound wing fracture, severe soft tissue laceration and exposed cortical bone, yet without evidence of neurovascular compromise – a critical prognostic factor. Following stabilization and thorough decontamination, open reduction and internal fixation (ORIF) was performed using cerclage wire under locoregional anesthesia via a lignocaine circumferential ring block. Intra-operatively, anatomical alignment was achieved through manual reduction and stabilization with orthopaedic wire passed through pre-drilled transverse bone tunnels. Multi-layer wound closure and appropriate antimicrobial and analgesic therapy facilitated uneventful post-operative recovery. Progressive functional improvement was observed, with early weight-bearing by day 7 and radiographic evidence of callus formation by day 14. This report emphasizes the viability of ORIF with cerclage wire in repairing distal humeral fractures in turkeys, and highlights the importance of early intervention, preservation of neurovascular function and species-specific peri-operative considerations.

Keywords: Avian orthopedic surgery; Cerclage wiring; Humerus fracture; Open oblique fracture; Open reduction internal fixation (ORIF); Turkey (*Meleagris gallopavo*).

* **Correspondence:** Jallailudeen R. Lawal; Email: rabana4real@unimaid.edu.ng; Phone: +234 8032886428

Article History: Initial manuscript submission received – May 18, 2025; Final revised form received – October 10, 2025; Accepted for publication – October 15, 2025; Published – October 21, 2025.

Introduction

The increasing global relevance of turkeys (*Meleagris gallopavo*) in both commercial poultry production and smallholder livestock systems has heightened the focus on their health, welfare, and clinical care, particularly with regards to traumatic skeletal injuries (Ngu *et al.*, 2014; Dudusola *et al.*, 2020). While substantial literature exist addressing orthopaedic conditions in broiler chickens and other avian species such as psittacines, raptors and waterfowl, clinical investigations into fracture management in turkeys, especially juvenile gobblers, remain notably scarce (Thorp, 1994; Chaves Hernández, 2014; Dar *et al.*, 2015). This paucity is worthy of concern, considering the economic and genetic value of turkeys in breeding programs and the high functional demands placed on their musculoskeletal systems during growth and development. Consequently, orthopaedic trauma in turkeys is not only a clinical challenge but also a potential threat to production efficiency, animal welfare and economic sustainability.

Fractures in birds occur commonly due to a combination of light-weight skeletal architecture, high metabolic demands and environmental or management-induced trauma. Avian bones are characteristically pneumatized, containing air sacs that reduce weight for flight but render them more fragile and susceptible to injury, even from minor impact (Ozsemir and Altunatmaz, 2021; Ünsaldi and Ünsaldi, 2023). The humerus, a critical component of the avian wing, is especially vulnerable because it articulates with both the shoulder and elbow joints and participates in the respiratory system. Injuries to this bone, particularly in its distal segment, can lead to profound functional impairment, respiratory compromise and deterioration in the animal's welfare. Moreover, turkeys possess a disproportionately high muscle-to-bone ratio in the pectoral girdle, which can exacerbate displacement and complicate

fracture stabilization (Serrano *et al.*, 2020; Jones *et al.*, 2023).

Distal humeral fractures present formidable clinical challenges. The distal humerus serves as a junctional node articulating with the radius and ulna at the elbow and is closely associated with major neurovascular structures. Oblique fractures in this region are particularly complex due to the angular nature of the fracture line, the lack of surrounding musculature for splinting and the limited soft tissue coverage that increases susceptibility to infection and complicates surgical access. In turkeys, where flight may be restricted but wing function remains essential for thermoregulation, self-righting and social behaviors, restoration of limb integrity is critical not just for mobility, but for quality of life (Islam *et al.*, 2017).

The principles of avian fracture management emphasize rapid and stable anatomic alignment, with techniques tailored to the species, age, fracture configuration and biomechanical forces acting on the limb (Calvo Carrasco, 2019). Options include external coaptation (splints, bandages), internal fixation (intramedullary pinning), and external skeletal fixation (ESF) or hybrid techniques combining multiple methods. However, each technique presents unique challenges in avian patients, particularly in large-bodied birds such as turkeys. Rapid growth rates in juvenile gobblers intensify the urgency for early and effective stabilization to avoid mal-union, angular limb deformities or long-term locomotor deficits (Van Wettere *et al.*, 2009; Jalalipour *et al.*, 2020). Despite these challenges, successful outcomes are possible with appropriate diagnostics, surgical planning and post-operative care.

Fracture reduction, the process of realigning bone fragments to their anatomical configuration, is a cornerstone of effective fracture management. Two primary techniques are employed in avian

orthopaedics: closed reduction and open reduction. Closed reduction is a non-invasive approach that utilizes external manual manipulation to realign fractured bones without surgical exposure. While advantageous in minimizing surgical trauma and risk of infection, closed reduction may be insufficient for unstable, oblique, or comminuted fractures, particularly when fragment apposition cannot be reliably maintained. In such cases, open reduction is warranted. The open surgical approach involves incision, direct visualization of the fracture site and internal fixation using orthopedic implants such as intramedullary pins, Kirschner wires or external fixators. Open reduction is especially indicated when fracture stability, anatomical alignment or vascular integrity cannot be ensured via non-surgical methods, conditions frequently encountered in distal humeral fractures of avian patients (Savvidou et al., 2018).

Despite advancements in avian orthopedic techniques, including refinements in biomaterial design and minimally invasive instrumentation, clinical documentation of fracture repair in turkeys is scarce, especially in the context of distal humeral fractures in growing gobblers. As such, this case report offers a novel contribution to the veterinary orthopaedic literature by detailing the successful surgical repair of a distal oblique humeral fracture in a 17-week-old gobbler. The report provides a comprehensive overview of diagnostic imaging, surgical decision-making, fracture reduction method, fixation strategy and post-operative rehabilitation. By documenting the clinical resolution and functional recovery of this rarely reported fracture type, this case aims to bridge a significant gap in avian surgical procedures knowledge and stimulate further investigation into best practices for fracture management in poultry species, particularly those of increasing commercial and veterinary importance

Case History and Presentation

On April 19, 2024, a 17-week-old male domestic Bronze turkey (*Meleagris gallopavo*), reared under a semi-intensive management system within a household flock of three, was presented to the Poultry Unit of the Veterinary Teaching Hospital, University of Maiduguri, Nigeria. The primary complaint was an acute traumatic injury to the right wing, reportedly sustained approximately four hours prior to clinical presentation. According to the owner, the turkey was accidentally struck by a moving vehicle while foraging freely near a residential driveway alongside the remaining flock members. The impact resulted in immediate lameness, visible bleeding and an apparent angulation deformity of the wing, prompting the owner to administer rudimentary first aid.

In an effort to stabilize the injury and minimize further hemorrhage, the owner applied a white cotton rag as a makeshift tourniquet around the fractured area. Although non-sterile, this improvised bandage partially arrested external bleeding and served as a temporary support for the injured limb during transport. According to the owner, the gobbler had been healthy prior to the incident, with no history of trauma or underlying systemic illness.

Upon arrival at the Poultry Unit, the patient was observed to be alert but in overt distress, with guarded movement and non-weight bearing of the right wing. A preliminary evaluation revealed a compound fracture with bone protrusion and surrounding soft tissue trauma. The wound was immediately debrided and cleansed using a topical antiseptic solution (Septol®, Gongoni Company Limited, Nigeria) to eliminate gross contamination and reduce microbial load. Following initial stabilization, the case was referred to the Surgery Unit of the hospital for definitive orthopaedic evaluation and intervention.

Clinical Examination and Findings

Upon initial presentation to the Veterinary Surgery Unit, the bird appeared alert and responsive, maintaining a normal upright stance and exhibiting no signs of systemic compromise, such as anorexia or lethargy. However, marked non-weight-bearing lameness of the right wing was readily apparent, characterized by the limb being held in an abnormally drooped and abducted position away from the body. This posture suggested an attempt by the bird to alleviate mechanical stress and nociceptive stimulation at the site of injury. Behavioral responses including persistent vocalization, tachypnea and pronounced withdrawal upon manual wing manipulation were indicative of acute pain and discomfort.

Closer orthopaedic examination of the right wing revealed a full-thickness laceration evident over the distal third of the humerus, exposing protruding cortical bone and periosteal disruption (Figure 1). The wound margins were irregular, and the surrounding feathers were matted with a moderate amount of serosanguinous exudate. These observations were consistent with an open fracture, and the presence of external bone exposure elevated concerns regarding microbial contamination and the potential for secondary infection. On palpation, the fracture site demonstrated abnormal mobility, instability and palpable crepitus, reinforcing the suspicion of a complete diaphyseal discontinuity. A full-thickness laceration overlaying the fracture further allowed visual confirmation of cortical bone compromise and periosteal disruption. The area also exhibited localized ecchymosis and soft tissue edema, characteristic of vascular leakage and inflammatory response secondary to trauma.

Despite the significant musculoskeletal insult, neurological and vascular assessment of the distal wing remained reassuring. Passive manipulation of the wing segments distal to

the fracture elicited voluntary withdrawal but preserved mild mobility, suggesting the maintenance of functional innervation and intact vascular perfusion. This was a favorable prognostic indicator in terms of tissue viability and potential surgical salvage.



Figure 1. Picture of the gobbler showing acute traumatic injury to the right wing.

A detailed systemic evaluation was concurrently undertaken to assess the bird's general health status and suitability for anesthesia and surgical correction. The mucous membranes were pink and moist, with a capillary refill time within normal limits, indicating adequate perfusion. Vital physiological parameters were within acceptable reference ranges for domestic turkeys: cloacal temperature measured 40.0°C (reference value: 39.0 – 42.0°C), respiratory rate was 32 cycles per minute (reference value: 28 – 49 cycles/min), and heart rate was recorded to be 168 beats per minute (reference value: 160 – 175 beats/min) (Nascimento *et al.*, 2012; Mayes *et al.*, 2015). These values further affirmed the bird's systemic stability. However, haematological analysis revealed a packed cell volume (PCV) of 32%, which is mildly below the avian reference interval of 35 – 39% (Goodwin *et al.*, 1992).

Diagnosis

Based on the bird's history of vehicular trauma, observed clinical signs and detailed physical examination, the diagnosis was established as a Grade I open oblique fracture of the distal third of the right humerus. The nature of the oblique fracture and its close proximity to the distal condyle raised concerns about potential involvement of the elbow joint, necessitating immediate urgent surgical orthopaedic intervention to restore structural integrity, prevent infection and preserve wing function. The patient was thus scheduled for surgical repair under general anesthesia following pre-operative stabilization

Case Management

Pre-operative Care: Pre-operative stabilization of the gobbler included supportive care and analgesia to address pain and maintain physiological balance. The exposed fracture site was thoroughly flushed with sterile saline to reduce the risk of microbial contamination, and the bone fragment was temporarily covered using a sterile dressing soaked in diluted chlorhexidine solution. To alleviate the risk of regurgitation during anaesthesia, feed was withheld for six hours prior to surgery. The affected wing was immobilized temporarily using a soft padded bandage to prevent further injury during transport and handling.

Anaesthetic Protocol: A loco-regional anaesthetic technique was employed to ensure effective intra-operative analgesia while minimizing systemic drug exposure. Specifically, a circumferential ring block was administered around the midshaft of the humerus using 2% lignocaine (Maltobic Pharmaceutical Company Nigeria Limited) at a dose of 10 mg/kg. The calculated total volume was divided into four equal parts and injected subcutaneously at the cranial, caudal, medial, and lateral aspects of the humerus to achieve complete desensitization (Figure 2). The bird

was calmly restrained using a towel wrap, minimizing stress and restricting excessive wing movement during the surgical procedure.



Figure 2. Administration of ring block using 2% lignocaine, during the pre-operative period.

Surgical Procedure: The chosen method for the fracture repair was open reduction and internal fixation (ORIF) using cerclage wiring, appropriate for stabilizing the oblique fracture pattern and accommodating the anatomical constraints of the distal humerus. The turkey was positioned on left lateral recumbency with the right wing extended and secured to adequately expose the fracture area and surgical site adequately. The entire right wing was shaved and aseptically scrubbed with 0.3% w/v chlorhexidine gluconate (Gauze Pharmaceutical and Laboratories Nigeria Ltd.) followed by sterile saline rinse. The site was then draped using sterile fenestrated surgical drapes to maintain a sterile operative field (Figure 3). A longitudinal skin incision was made directly over the fracture site, and blunt dissection was used to expose the bone ends.

To facilitate cerclage wiring, transverse drill holes were made proximal and distal to the fracture plane using a low-speed orthopaedic drill, ensuring physeal structures were avoided (Figure 4).

Stainless steel orthopaedic cerclage wire was passed through these drilled holes, and the fracture ends were manually aligned (Figure 5). The wire was then carefully tensioned to

draw the bone fragments into anatomical apposition (Figure 6). Once aligned, the wire ends were twisted and gradually tightened to ensure firm and stable fixation (Figure 7). Due to the unavailability of intra-operative radiographic guidance, the reduction was assessed manually by palpation.



Figure 3. Draping of the injury site for surgery.



Figure 4. Drilling of the bone during the surgery.



Figure 5. Cerclage wire insertion during surgery



Figure 6. Placement of cerclage wire during surgery.



Figure 7. Bone reduction during surgery.

Wound Closure: Wound closure was performed in two layers. The muscular layer was sutured with size 2 chromic catgut in a simple interrupted pattern, ensuring re-apposition and minimizing dead space (Figure 8). The skin was then closed using the Lambert suture pattern with the same suture material to promote wound apposition and reduce the risk of contamination (Figure 9). The turkey recovered uneventfully from anaesthesia and surgery, and was placed under close post-operative monitoring (Figure 10).

Post-operative Medication: To prevent complications and support healing, a course of medications were administered. Amoxicillin (50 mg/ml) (Hebei Tianyuan Pharmaceutical co. Ltd, China) was given intramuscularly at a dose of 10 mg/kg (0.7 ml) once daily for five consecutive days to mitigate the risk of infection. Additionally, piroxicam (20 mg/ml) (TianJin KingYork Group Hubei Tianyao

Pharmaceutical Co. Ltd., China) was administered intra-muscularly at 0.2 mg/kg (0.035 ml) once daily for three consecutive days to provide anti-inflammatory and analgesic support during the initial healing phase.



Figure 8. Closure of the musculature after surgery.



Figure 9. Closure of the skin after surgery.



Figure 10. The gobbler after surgery.

Prognosis: The overall prognosis was considered favorable due to several positive prognostic indicators: the absence of neurovascular damage, prompt surgical intervention and the mechanical stability provided by the cerclage wire fixation

technique. Furthermore, the gobbler's young age and good general health were expected to contribute positively to recovery and fracture healing outcome.

Advice to Client: Post-operative care instructions were thoroughly communicated to the caregiver. These included strict confinement of the bird for at least two weeks in a clean, secure and dry enclosure to minimize movement and facilitate fracture healing. The caregiver was also advised to monitor the surgical site daily for signs of infection, such as swelling, discharge or erythema. A gradual reintroduction to physical activity was recommended after the initial confinement period, under close supervision. Preventive measures, such as controlled enclosures or barriers, were recommended to mitigate the risk of future vehicular or accidental trauma.



Figure 11. Radiographs showing the humerus of the gobbler, 7 days after surgery.

Follow-Up: On post-operative day 2, the surgical wound appeared clean with minimal swelling, and no signs of infection or wound dehiscence were present. The turkey's performance improved, and visible pain had reduced. By day 7 post-operation, the gobbler began showing mild weight-bearing on the affected limb, suggesting functional improvement. The sutures remained intact, and soft tissue healing progressed without complication as expected. A follow-up radiograph taken on day 14 demonstrated early callus formation at the fracture site, confirming satisfactory alignment and initial bone healing (Figure 11).

Discussion

The successful surgical management of a distal humeral oblique fracture in a 17-week-old domestic gobbler (*Meleagris gallopavo*) presented in this case report emphasizes both the inherent challenges and potential for favorable outcomes in avian orthopaedic surgery. Fracture management in birds requires a nuanced understanding of their unique anatomical, physiological, and behavioral characteristics, which is markedly different from those of mammals. These distinctions necessitate a tailored clinical approach that incorporates avian-specific bone biology, refined surgical techniques and comprehensive peri-operative care strategies (Calvo Carrasco, 2019; Ozsemir and Altunatmaz, 2021).

Previous studies have identified the humerus as one of the most frequently fractured bones in both wild and domestic avian species, owing to its exposed anatomical position and vulnerability to direct trauma. Such injuries commonly result from vehicular accidents, predatory encounters or high-energy collisions (Bertuccelli *et al.*, 2021; Sindhu *et al.*, 2023). In the present case, the oblique and compound nature of the fracture suggests a high-impact traumatic event, likely involving axial compression combined with bending forces – an injury pattern consistent with those documented in similar avian orthopaedic cases as reported by Bigham-Sadegh and Oryan (2014).

Moreover, the presence of cortical bone protrusion and associated soft tissue laceration permitted classification of the injury in this present case as a Grade I open fracture, following the Gustilo-Anderson system as adapted for veterinary applications. This classification carries a recognized risk of microbial contamination and compromised tissue viability, necessitating prompt and meticulous surgical and anti-microbial

management to mitigate infection (Kim and Leopold, 2012).

Prompt and decisive intervention is paramount in the successful management of open fractures in avian patients, as any delay in treatment can significantly increase the risk of wound contamination and subsequent osteomyelitis. Early wound management including thorough irrigation, application of topical antiseptics such as chlorhexidine, and surgical debridement of necrotic tissues remains the cornerstone of best practices in avian orthopaedic surgery. These steps, as employed in the present case, are consistent with protocols advocated in earlier studies (Roberts *et al.*, 2017; Barreto *et al.*, 2020; Barrigah-Benissan *et al.*, 2022).

The mildly lower than normal pre-operative packed cell volume (PCV) observed in the gobbler was most likely due to acute hemorrhagic loss sustained prior to presentation at the clinic. This finding underscores the importance of early haemodynamic stabilization, pain management and supportive care before undertaking definitive orthopaedic repair. These principles are well-aligned with the recommendations of Ballas *et al.* (2012) and Morris *et al.* (2021), who noted that uncontrolled haemorrhage from open skin wounds associated with fractures may significantly lower haematocrit levels, depending on the extent of blood loss

The internal fixation of long bone fractures in avian species presents distinct biomechanical challenges, primarily due to the light weight, thin-walled and pneumatic nature of their bones, which limits the applicability of conventional, heavier orthopaedic implants (Dehghani *et al.*, 2019; Zhang *et al.*, 2025). In the present case, cerclage wiring was selected as the stabilization method, aligning with its established role as a reliable technique for managing long oblique or spiral fractures, particularly in large-bodied birds where the

bone diameter can accommodate secure wire placement. This approach is consistent with ethical and effective orthopaedic practices in avian surgery, as documented by Al-Qattan and Al-Zahrani (2008) and Agarwala *et al.* (2017).

Although intramedullary pinning and external skeletal fixation are commonly utilized in humeral fracture repair, the specific anatomical location of the fracture (distal humerus near the elbow joint) rendered these options less appropriate. Their use in this context could have resulted in joint encroachment and potential impairment of wing mobility, as previously highlighted by Deemer *et al.* (2024).

One of the key contributors to the favourable clinical outcome in this gobbler was the ability of cerclage wiring to facilitate precise anatomical reduction and provide stable compression across the fracture plane. This not only supported primary bone healing but also preserved the integrity of the adjacent joint structures – a vital consideration for the restoration of functional wing movement in avian patients. This finding is in line with similar successful applications of the technique reported by Agarwala *et al.* (2017) and Codesido *et al.* (2017), further validating its utility in managing distal humeral fractures in birds.

Anesthetic management in avian species presents notable challenges due to their high metabolic rates, complex respiratory system involving air sacs and heightened sensitivity to stress-related cardiopulmonary instability (Ludders, 2025). In this clinical case, the application of a regional nerve block using lignocaine represented a conservative and minimally invasive anaesthetic technique designed to limit systemic pharmacologic burden while providing effective analgesia. This approach emphasized the growing preference for regional anaesthesia in avian orthopaedic surgery. In line with this,

Gasteiger *et al.* (2023) previously demonstrated that circumferential wing blocks can deliver excellent intra-operative analgesia in birds, particularly when general anesthesia may pose significant risk. Such techniques contribute to improved peri-operative outcomes and align with evolving best practices in avian surgical care.

We believe that effective post-operative management was critical to the successful clinical resolution observed in this case. The key components included robust infection control and adequate pain management, both of which have been reported to significantly influence surgical outcomes in avian orthopaedic interventions. The administration of a broad-spectrum beta-lactam antibiotic, amoxicillin, was strategically selected in accordance with principles of antimicrobial stewardship in avian medicine. Given the open nature of the fracture and the associated high risk of opportunistic bacterial colonization, this choice was both rational and evidence-based. This approach aligns with the findings of Muteeb *et al.* (2023), who emphasized the importance of judicious anti-microbial selection in post-operative care to mitigate the development of anti-microbial resistance.

Additionally, the targeted use of a non-steroidal anti-inflammatory drug (NSAID), piroxicam, provided effective analgesia and controlled post-operative inflammation – two pivotal factors in ensuring early mobilization and preventing disuse muscle atrophy. This management strategy is consistent with the recommendations of Bindu *et al.* (2020), who highlighted the vital role of NSAIDs in enhancing post-operative recovery and functional restoration in avian patients.

The favorable functional outcome observed in this case, characterized by early weight-bearing as soon as day 7 post-surgery and radiographic evidence of callus formation by day 14, emphasizes the remarkable regenerative capacity of avian bone tissue

when supported by stable fracture fixation and an optimized healing environment. Previous studies by Tully (2002), Marsell and Einhorn (2011), and more recently by Vasileva *et al.* (2024) have consistently demonstrated that birds, especially juvenile individuals, exhibit a markedly rapid rate of bone turnover. This physiological trait enables accelerated fracture repair relative to mammalian species. The current case aligns with these findings, as the gobbler's young age likely contributed to the swift osteogenic response. Moreover, the absence of neurovascular injury and the high level of postoperative compliance by the bird's caretaker further enhanced the clinical outcome, collectively supporting the successful resolution of the distal humeral oblique fracture.

Reports of humeral fracture repair in turkeys is scarce in avian orthopaedic literature; the present report is therefore novel and of clinical significance. Most existing reports on avian fractures focus predominantly on companion or wild bird species, such as parrots, raptors, and pigeons (Azmanis *et al.*, 2014; Sindhu *et al.*, 2023). In light of the growing interest in backyard poultry and the emerging popularity of turkeys as domestic avian species, this case report provides valuable insights into the surgical management, anaesthetic considerations and post-operative care of larger, less frequently treated avian species.

In addition to its clinical relevance, this case highlights the broader need for targeted education on injury prevention in semi-intensive and free-range poultry production systems. Birds allowed to forage unsupervised in urban and peri-urban environments are at risk of preventable trauma, including vehicular accidents and predator attacks. As emphasized during post-operative client counseling, the implementation of environmental safety and effective containment strategies is essential in

reducing the incidence of recurrent injuries (Jokimäki and Ramos Chernenko, 2024).

Conclusion: This case report documents the successful surgical management of a distal humeral oblique fracture in a 17-week-old domestic Bronze gobbler (*Meleagris gallopavo*) using open reduction and internal fixation (ORIF) with cerclage wiring, a relatively under-reported technique in avian orthopaedics, particularly in large-bodied poultry species. The prompt identification of a Grade I open oblique humeral fracture, coupled with immediate decontamination, pre-operative stabilization, and a well-executed surgical intervention, culminated in complete functional recovery without post-operative complications.

The case exemplifies the vital role of early surgical intervention, tailored anaesthetic planning, and context-appropriate fixation methods in optimizing orthopaedic outcomes in avian patients. The application of cerclage wire fixation in this scenario proved to be biomechanically effective, offering sufficient stability for bone healing while preserving joint integrity and wing function. The post-operative improvement, evidenced by progressive weight-bearing, radiographic callus formation and restoration of mobility, highlights the suitability of this approach for avian long bone fractures with oblique configurations.

Importantly, this case also emphasizes the relevance of holistic case management, including pain control, infection prophylaxis, client education and structured follow-up. Despite the challenges posed by field limitations such as absence of intra-operative imaging, the outcome underscores the importance of meticulous surgical planning and skillful execution in resource-constrained veterinary settings.

Recommendations: This case highlights the importance of prompt clinical assessment and stabilization of wing fractures in turkeys to

preserve limb function and prevent complications. Cerclage wiring, although infrequently documented in avian orthopaedics, proved effective and economical for managing oblique humeral fractures, especially in large birds where alternative fixation methods may be impractical. Loco-regional anesthesia, such as lidocaine ring blocks, offered safe and efficient analgesia and should be integrated into avian surgical protocols. The unique anatomical features of avian species emphasize the need for continued research into species-specific orthopaedic techniques and fracture management strategies. Preventive measures, including improved housing and restricted foraging, are essential in reducing trauma risks in backyard poultry systems. Documenting similar cases will strengthen the evidence base, guide clinical decisions and support the refinement of avian orthopaedic practices. This report contributes practical insights into adapting conventional surgical techniques for successful application in avian species and encourages further exploration in this evolving field.

Conflicts of interest

The authors declare that they have no competing interests.

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