

MANAGEMENT OF AVIAN HUMERAL FRACTURES- A REPORT OF TWO CASES

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SUMMARY

Humeral fracture was observed in a duck and a peacock as a result of an accident. The diagnosis of fracture was confirmed by radiographic examination. There were multiple pieces near the mid shaft area of humerus in both the birds. Birds were anaesthetized with ketamine anaesthesia. The humeral area was prepared for intra medullary pinning and the humerus was immobilized in both the birds. After repair, the peacock was handed over to wildlife department and the duck to the owner. The post operative follow up of duck revealed complete healing of fractured bone after four weeks. The intra-medullary pin was removed after six weeks of surgery. The bird started using the repaired wing successfully.

Key words: Humeral fracture, intra-medullary pinning, duck, peacock

Humerus fracture is routinely observed in domestic animals but in birds it is rarely seen. In birds, it makes the wing non-functional. The affected wing remains in a dropped form and always remains at a risk of further injury. Such wings are difficult to manage. There are few reports regarding management of humerus in pigeons both experimentally (Wan *et al.*, 1994) and clinically (McCartney, 1994). However, in ducks and peacock, such type of reports are not on record.

CASE HISTORY AND CLINICAL EXAMINATION

Two birds (a duck and a peacock) were admitted to the Veterinary Clinics with the complaint of broken wings. Both the birds were attacked by a dog and in an attempt to escape from the invader, the duck got hit against the cage and peacock against the tree. Both the birds with dropped wings were brought from the military cantonment area. There were signs of the scratches at different body parts along with decreased feed and water intake. The matter

was reported to the wild life department and were asked to proceed for proper treatment. The broken wings were temporarily immobilized by supporting bandage and sent for X-ray examination. Radiograph showed multiple fracture of the mid shaft of the humerus (Fig 1).

SURGICAL MANAGEMENT

The birds were anaesthetized by injecting Ketamine @ 0.2 mg/kg body weight and were prepared for corrective surgery. Both the birds were secured in right lateral recumbency keeping the affected left wing upwards. The feathers were clipped and the operative area was shaved in the direction of root of the feathers avoiding any injury to the ridges. The humerus was approached from the craniolateral side. The bleeding was checked by the digital pressure. The extra pieces of the bone lying scattered in to the surrounding tissues were removed and a Steinmann pin mounted on Jacob chuck was placed in to the bone marrow cavity in a retrograde fashion. The extra pin was cut at the level of skin by a pin cutter. Ampicillin powder was sprinkled in to the separated tissue, and the muscles and skin were closed in a routine manner. The post-operative radiograph revealed good

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Fig 1. Multiple mid shaft fracture of humerus

alignment of the fractured ends.

Post-operatively, the birds were administered ampicillin @10 mg/kg body weight (bid i/m), phenyl butazone (3 ml, i/m) and vitamin B-complex (2 ml, i/m) up to 5 days. Daily antiseptic dressing of the wound with povidone-iodine was done. Both the birds started lifting the repaired wing and taking food and water. The peacock was handed over to the wild life department, while, the duck was taken by the military personnel. The sutures were removed after ten days. The duck started using the wing after 4th week of the repair and radiograph showed healing of the fractured bone (Fig 2). The pin was removed after 6th week of the repair and the bird was kept in captivity for another two weeks and left loose afterward. The follow up of the peacock was not available. After 10th week of the repair it was reported that the duck is using the wing without any problem.

In birds, accidental injuries are more problematic since the affected birds cannot fly. Majority of the birds are not brought to the hospital for treatment except the domesticated



Fig 2. Post-operative radiograph showing healing of fractured bone after 4th week

birds. In birds, problem faced during repair of the humerus was shaving of the operative area, as feathers grow in the groove of the skin supported by ridges. Control of the bleeding is another problem as it is very difficult to locate the vessels. Therefore, bleeding was checked by the digital pressure with gauge. Intramedullary pin provided full support to the broken wing and duck started using it after repair, however, McCartney (1994) advocated use of an external fixator as compared to intramedullary pinning for repair of humerus in pigeons. The recovery in duck was uneventful and the bird started using the wing after removal of the pin.

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