DOI: 10.22055/ivj.2024.457279.2718

Corrective Osteotomy and Intramedullary Pinning in a Golden Eagle with Angular Malunion Fracture of Radius and Ulna

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Received: 20.05.2024 Accepted: 03.08.2024

Abstract

Some of avian orthopedic problems occur as a result of trauma (ceiling fan injuries, flying into a window or mirror, or getting stepped on); others occur from nutritional imbalances or as a result of genetic or developmental problems. An adult female golden eagle (*Aquila chrysaetos*) was presented to the clinic of faculty of veterinary medicine of Razi University (Kermanshah, Iran) with a history of being unable to fly. Physical examination revealed some abnormality in the left wing. Radiographic examination showed radius and ulna midshaft fracture angular malunion. The bird was prepared for aseptic surgery and so malunion part of the bone was cut. After correction and aligning of the bones, both ulna and radius were fixed with intramedullary pin. The bird was discharged without any complication. Case follow up showed an uneventful improvement and 6 weeks later the ulna pin was removed, but the radius pin was remained. Most of the orthopedic techniques developed for mammals can be applied to birds, taking into account the anatomical differences in avian species, and whether or not the bird can have flight restored. Fracture malunion in raptors can compromise muscle and tendon function and adversely affect normal activities that are essential for survival of these species. Malunion can be acutely corrected by osteotomy techniques, followed by bone fixation that provides sufficient stability to allow unimpeded healing with minimal soft tissue injury.

Keywords: Eagle, Intramedullary pin, Malunion, Osteotomy

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