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ORTHOPEDIC SURGERY IN BIRDS

Orthopedic problems are a common reason for birds to visit the veterinarian. Flying and living with humans in an unnatural environment frequently results in severe trauma. Nutritional deficiencies and lack of UV-light cause problems with the calcium metabolism and can make the bones more vulnerable.

Although the basics of the avian skeleton are the same as in mammals, some characteristics of the bones of birds make orthopedic problems more complicated. The cortices of the bones are relatively thin and brittle, easily resulting in comminuted fractures with sharp edged fragments in cases of trauma. Because of the absence of thick layers of protective soft tissues covering the bones, the sharp fragments easily perforate the overlying skin. Especially in the distal parts of the legs and the humerus, open fractures are common. Significant blood loss can be the result of external or internal bleeding.

Because of severe trauma, stabilizing the patient prior to orthopedic surgery is important. While waiting for the permanent fixation, extremities of birds with fractures of the wings or legs more distally than the femur, should be bandaged immediately to protect the soft tissues and skin to more trauma caused by moving sharp fragment. Fixation can be accomplished by external coaptation, external skeletal fixation, internal fixation or combinations. Internal stabilization by means of a single intramedullary pin should in most cases not be used as a sole treatment. External skeletal fixation is the method of choice for most fractures of the extremities. Intramedullary pins can be combined with external skeleton fixation. Because of the characteristics of avian bones, the size of implants necessary to stabilize the forces on the avian bones and the fact that implants need to be removed in wild birds, plate osteosynthesis is not frequently used in birds.

As in mammals, orthopedic surgery is painful and should only be done under full anesthesia with optimal analgesia.

Avian bones heal faster than mammalian bones, on condition that the fractures have been fixated correctly and no complications occur.