

# Orthopaedic affections & management in captive wild animals of Zoological Garden, Alipore, Kolkata

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## Abstract

*Fractures, metabolic bone disease, olecranon bursitis and traumatic muscular injury were evidenced as orthopaedic disease in different zoo animals of the zoo in last 7 years. The cases were successfully treated and rehabilitated.*

**Key words:** *Orthopaedic, captive wild animals, metabolic bone disease, bursitis.*

## Introduction

Orthopaedic problems that affect bones, cartilage joints, or muscles, can range from a minor inconvenience to major locomotor disorder and can affect any animal. Orthopaedic conditions that are frequently seen in captive zoo animals include fractures, metabolic bone disease, arthritis, bursitis, traumatic muscle injury, muscle sprain and various types of hoof disorders. Long bones are subjected to physiological and non-physiological forces. Non-physiological forces can be imposed in unusual situations, such as trauma, automobile accidents, gunshot injuries and falls. They can be transmitted to the bone directly and may easily exceed the ultimate strength of bone, causing a fracture (Singh *et al.*, 2015). Metabolic bone disease (MBD) is an umbrella term referring to abnormalities of bones caused by a broad spectrum of disorders like nutritional secondary hyperparathyroidism (NSH), fibrous osteodystrophy, osteoporosis, osteomalacia, rickets, simian bone disease, osteogenesis imperfecta, cage paralysis, bone atrophy, juvenile osteoporosis, paper-bone disease, Paget's disease, osteitis fibrosa cystica etc. Metabolic bone diseases may develop due to the improper diet balanced with proteins, calcium, phosphorus and husbandry practices like insufficient sun light or artificial ultraviolet light. Pathological fractures are a common complication associated with NSH and have been reported in a number of species (Barr 2006). Bursitis especially occurrence of olecranon bursitis has been reported in tiger. Repeated trauma due to lack of bedding on hard floors and narrow or short space of stalls, which restrict free movements of the animal are predisposing factors. Chronic bursitis is characterized by accumulation of excessive bursal fluid, thickening of wall of bursa by fibrous tissue, extrusions of fibrous bands or septa within the bursal