

were offered which the bird caught with great difficulty.

After a month the splint was removed and the wound was marked to be healed completely (Image 5<sup>w</sup>). When held with legs the bird showed rising of its two wings (Image 6<sup>w</sup>) in an attempt to fly, but when released it was unable to fly high for a longer distance. A radiograph was suggested to evaluate the fracture healing. While entering the x-ray room the Shikra suddenly flew and caught a gecko with its left leg (Image 7<sup>w</sup>) and swallowed it immediately. Subsequent radiograph revealed clinical union of the bones with a callous. The gecko could also be marked inside the crop of the bird (Image 8<sup>w</sup>). Then the Shikra was given back to the care taker to strengthen the wing and the flight muscles in hope of releasing it. The care taker allowed the bird to sit on tree branches for 5-10 minutes everyday. This routine was continued for a month and an increase in flying height and range of the bird was observed. Finally the bird was released near the area where it was found.

Because of repeated flying effort by the bird the splint might have loosened resulting in excess callous as evidenced by radiograph. Though there was not anatomical union, there was clinical union and the Shikra was able to fly and catch its prey. Hatt *et al.* (1995) stated that the path from a sick raptor to its successful rehabilitation is a complex puzzle because of frequently long convalescence which includes flight training. In the present case the care taker provided proper care and flight exercise which helped in rehabilitation and eventually release of the bird into the wild.

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**Editor's Note:** Invasive veterinary procedures such as this is best carried out under anaesthetic conditions from a welfare point of view.



#### VET BRIEF

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### Visceral gout in a White-backed Vulture *Gyps bengalensis*

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Gout is a metabolic disorder characterized by deposition of uric acid and urates in the body tissues. It occurs in two forms, synovial and visceral affecting eagles, falcons, hawks, owls and vultures with grave prognosis and palliative treatment. The cause of metabolic disorder is unknown, but the renal lesions associated with vitamin A deficiency, pyelonephritis, renal neoplasia, high protein diet and incorrect amino acid balance are predisposing factors (Fowler, 1986). Prakash (2001) reported decline in both White-backed and Long-billed Vultures in India because of breeding failure and high mortality due to neck drooping syndrome. Virani *et al.* (2001) observed presence

of visceral gout in 71% of adult vultures necropsied in Pakistan. They ascribed the cause to be visceral gout coinciding with head-drooping behaviour due to increasing ambient temperature and possibly other stresses. The present paper describes visceral gout in a captive White-backed Vulture *Gyps bengalensis* of Nandankanan Zoo.

Two captive vultures, one male and one female, both aged about 25 years were observed to be depressed and anorectic. Multivitamin drops were administered for two days without any improvement. On 18.ii.2006 the male vulture died (Image 1<sup>w</sup>).

External examination of the carcass revealed chalky white deposits sticking around the vent. The postmortem lesions included white fine granules of urates on all visceral surfaces (Image 2<sup>w</sup>). These granules were most abundant on pericardium and visceral surface of liver (Image 3<sup>w</sup>) where they caused adhesion to adjacent organs. Chalky streaks of urates were also seen beneath peritoneum and the fascia of the musculature. The kidneys were enlarged, swollen and white tan in colour with deposits of urate crystals. The ureters were greatly distended. The histopathology of kidney sections showed marked congestion and presence of urate crystals replacing the kidney tubules (Image 4<sup>w</sup>). The urate crystals were arranged in radiating manner forming urate tophi (Image 5<sup>w</sup>). The presence of urate crystals were confirmed by degalanthas' stain. Hence, death of the vulture was due to visceral gout. Next day the diet of the female vulture was changed from buffalo meat to goat meat. Administration of multivitamin drops continued and the female vulture showed improvement.

In the present case the male vulture did not show any clinical signs except anorexia and dullness as indicated by Fowler (1986). The postmortem lesions confirmed the case to be visceral gout coinciding with high ambient temperature during February in this region. As the birds affected with gout should be placed on a low-protein diet, the change of the diet to goat meat saved the female vulture although according to FAO the protein score for goat meat is 84 as compared to 89 for beef which does not seem like a significant difference.

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<sup>w</sup> See Images 1-5 in the web supplement at [www.zoosprint.org](http://www.zoosprint.org)