

Cataract Removal in a Geriatric Captive Wedge-Tailed Eagle, *Aquila audax*

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A female wedge-tailed eagle (*Aquila audax*) housed at a wildlife park and part of a breeding pair that had produced 24 offspring over 45 years, was observed to have cloudiness in both eyes in July 2009. During annual examination under anaesthesia in September 2010, central cataracts were confirmed in both eyes and were estimated to be approximately 2 mm in diameter. At this time there was no pronounced change in the eagle's behaviour and it was predicted that peripheral vision would be unaffected.

In July 2011, the keepers reported that the eagle was spending more time on the ground. In August 2011, it was observed missing perches, crashing into cage wire and missing food thrown to it; by late August it had become a ground dwelling bird. Feeding was becoming difficult and the bird's quality of life was deteriorating. On this basis cataract removal was now considered a viable option.

On the 4/10/12 the eagle was captured, boxed and transported 1.5 hours by road for specialist surgery. Body weight at the time was 3.14 kg. The eagle was sedated with Diazepam (0.5 mg/kg IM) for the journey. On arrival, anaesthesia was induced with isoflurane/oxygen administered via T-piece and mask. The eagle was intubated with a 3 mm cuffed endotracheal tube and maintained on 2% isoflurane with positive pressure ventilation to supplement natural breathing at a rate of one breath per minute or as required to maintain surgical anaesthesia. Under anaesthetic the HR was 65-80/min, RR 2-4/min, pO₂ 99-100%.

During surgery, muscle relaxation to relax pupils and ocular muscles was achieved with DBL® atracurium besylate (Hospira Australia Pty Ltd, Melbourne, VIC), 0.2 mg/kg, 0.1 mls intravenously into the ulnar vein. Both cataracts were extracted using phacoemulsification. Metacam® meloxicam injectable (Boehringer Ingelheim Pty Ltd, North Ryde, NSW) was administered to provide analgesia intra-operatively (3 mg/kg, 0.15 mls IM).

Although this eagle has been in captivity for 45 years, she was by no means tame as she was housed in a large flight aviary and was aggressive towards keepers, particularly when breeding. This provided challenges for post-operative care. Fortunately, she remained ground dwelling for five days post-operatively, so manual restraint was achievable with minimal stress so that Maxidex® 0.1% dexamethasone (Alcon Laboratories, Frenchs Forest, NSW) and Ocuflax® Olfaxacin (Allergan Australia Pty Ltd, Gordon, NSW) eye drops could be applied for seven days and Metacam® meloxicam oral suspension (Boehringer Ingelheim Pty Ltd, North Ryde, NSW) was administered at 0.1 mg/kg, 0.2 mls PO SID for 25 days. Due to the increase in handling stress, Sporanox® itraconazole (Janssen-Cilag, Australia) was given prophylactically in the food at 20 mg/kg for 30 days to prevent aspergillosis.

By the 11/10/11 (six days post-operation) the eagle was using a “disabled ramp” in the form of a perch sloping to the ground to walk up to the lowest perch in the cage (approx 2m high) and could be readily hand fed up to 300g daily. The corneas were stained with flouroscein under manual restraint and no ulcers were detected. Both eyes were still held closed at this point. On the afternoon of the 12/10/11, the eagle was observed to be bright with both eyes open and looking around.

On the 30/10/11 the eagle was first observed flying down from the low perch onto food. On the 7/11/12 she was fist observed to fly to the high perch in the cage (4m). From this time onwards, there was a rapid increase in confidence to fly around the cage and onto food.

A follow up examination under anaesthesia in February 2012 confirmed that both eyes were healthy and sight had been restored. The eagle had been observed to squint the right eye and the pupil in this eye was dilated by synechia, but the retina was normal.

The use of phacoemulsification to remove the cataracts from this eagle was a straight forward procedure which was successful in returning the sight and soon after flight and improving the quality of life for this captive bird.



Mature cataract in the captive wedge-tailed eagle



Appearance of left eye immediately post cataract removal



The eagle remained grounded for six days post-operation



Sight, flight and confidence restored from 26 days post-surgery

