

## **Successful inhalation anaesthesia with ultrasound-guided regional anaesthesia in a patas monkey (*Erythrocebus patas*) for the treatment of an iatrogenic tibial fracture**

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A 10-year-old, 6.7 kg, clinically unremarkable, female patas monkey was sedated for relocation using a blowpipe-delivered dart, which instead of the right lateral thigh, struck the left proximomedial tibia. Initial examination revealed a puncture wound with stable bone palpation. Fourteen days later, a non-weight bearing lameness was observed.

After 6 mg kg<sup>-1</sup> oral diazepam, the monkey willingly climbed into a transport box and could be injected by hand with 0.05 mg kg<sup>-1</sup> medetomidine and 5 mg kg<sup>-1</sup> ketamine IM for sedation. Following placement of an intravenous catheter, general anaesthesia was induced with propofol IV, and maintained with sevoflurane in 100% oxygen after orotracheal intubation. Radiographic examination revealed a long oblique fracture of the tibia. Ultrasound-guided regional anaesthesia of the femoral and sciatic nerves using 2 mg kg<sup>-1</sup> bupivacaine was performed before osteosynthesis with a 3.5 mm locking compression plate.

Anaesthetic complications included hypothermia and hypotension (MAP 55 ± 5 mmHg). The latter proved non-responsive to fluid administration and was successfully treated with dobutamine IV (3 - 5 µg kg<sup>-1</sup> minute<sup>-1</sup>). Non-invasive oscillometric blood pressure measurement could be performed on the forearm. The other vital parameters were within the normal reference range for old world monkeys (Bush et al. 1977; Morita 1995) during the entire procedure (4 hours). After successful completion of surgery, the monkey recovered in its transport box. Cage rest, oral enrofloxacin and meloxicam were continued for ten days. Other than temporary non weight bearing, further recovery was unremarkable.

This case report describes the successful anaesthetic management for osteosynthesis of a presumably dart-induced tibial fracture in a monkey. During anaesthesia, no signs indicative of nociception were observed, suggesting effective regional anaesthesia. Postoperative analgesia beyond meloxicam might have been beneficial but was not used due to a lack of experience with oral bioavailability and tolerability of opioids in this species.

### **References**

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- Morita H. (1995) Ventricular wall thickness and blood pressure values in normal cynomolgus monkeys. *J Vet Med Sci* 57, 1045–1048.