

Challenging the anecdotal concerns of peripheral nerve block in wildlife – a case series in large felids undergoing pelvic limb fracture repair

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Peripheral nerve blocks (PNB) are increasingly used in small animals undergoing orthopaedic surgery. In wildlife, PNBs are underutilised due to limited species-specific information on local anaesthetic pharmacology and block techniques (Quesada et al. 2022). Wildlife veterinarians have expressed concerns regarding iatrogenic nerve injury and self-inflicted trauma, particularly in feline species (Geoge et al. 1986). However, PNBs are safe and effective in domestic cats (Vettorato and Corletto, 2016). This case series extends these findings to wild felids:

A five year old, 200 kg, male lion (*Panthera leo*) underwent surgical repair of a tibial and fibular fracture (case A1); the implant was removed three months later due to limb swelling (case A2). A five year old, 55 kg, male cheetah (*Acinonyx jubatus*) required surgical repair of a tarsal calcaneus fracture (case B), and a six year old, 9 kg, female caracal (*Caracal caracal*) underwent femoral fracture repair (case C).

Following immobilisation, transport, and induction of general anaesthesia, a femoral-saphenous (inguinal approach, cases A1, A2, B; lateral pre-iliac approach, case C) and ischiatic (lateral approach) PNB were performed using ultrasound in cases A2 and B, a peripheral nerve-stimulator in case C, and both techniques in case A1.

Ropivacaine was used in cases A1 (0.25 mg kg⁻¹, 0.04 ml kg⁻¹, 7.5%) and B (0.5 mg kg⁻¹, 0.04 ml kg⁻¹, 7.5%), while lidocaine was administered in cases A2 (1 mg kg⁻¹, 0.05 ml kg⁻¹, 2%) and C (2 mg kg⁻¹, 0.2 ml kg⁻¹, 2%).

No intraoperative nociception was observed, monitored vital parameters remained stable, and no rescue analgesia was required. Recovery was uneventful, with no contralateral limb paralysis, neurological complications, or self-mutilation.

Conclusively, pelvic limb PNB was safely performed in these wild felids, challenging anecdotal concerns. While objective pain scoring was challenging, observational assessment suggested that the PNB contributed to a smooth recovery.

References

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