

# Small animal *Review*

Spinal problems resulting from intervertebral disc extrusion or protrusion are commonly encountered in clinical practice, with presentations ranging from chronic pain and paresis to acute paraplegia. Small breed chondrodystrophic dogs are predisposed to these problems. Surgery is often indicated, especially in severe acute cases. Three recent papers look at different aspects of disc herniation. <https://doi.org/10.12968/coan.2023.0011>

**Alex Gough** MA VetMB CertSAM CertVC MRCVS Postgraduate Researcher, University of Birmingham. [alexgough71@hotmail.com](mailto:alexgough71@hotmail.com)

Sakaguchi et al (2023) report the results of a retrospective cohort study which aimed to assess whether the volume of disc material extruded is related to the severity of neurological signs in cases of type I thoracolumbar disc herniation. The study included 70 small breed dogs with type I thoracolumbar intervertebral disc herniation. The volume and height of the extruded disc material and the severity of the cord compression were assessed using computed tomography myelography, with the disc immediately cranial to the affected disc used for comparison.

The volume of the affected disc was larger than the control, and there was a weak association between the extruded volume and the neurological severity. The authors conclude that herniated discs have a greater volume than controls and that there is some association between volume and neurological grade.

Spinal disease can be associated with signs of pain in the absence of neurological signs, but pain can be manifested in different ways.

Olender et al (2023) performed a retrospective study to report on dogs with cervical muscle jerks related to cervical pain or spinal disease. This study included 20 dogs with a history of bilateral jerks and cervical pain or myelopathy. All dogs had histories taken, clinical and neurological examinations and computed tomography studies performed, and all dogs had follow-up information available. All dogs were treated as indicated by the diagnosis. Of the 20 dogs in the study, 13 were French Bulldogs.

The jerks were noted to be focal, repetitive, rhythmic contractions on one or both sides of the neck. All dogs had a cervical intervertebral disc extrusion diagnosed, with half of them at C2–C3. The overall prevalence of myoclonia in all dogs diagnosed with intervertebral disc extrusion was 3.8% in the authors' hospital. The authors conclude that the cervical jerks observed may be a form of myoclonus and in this study they were only associated with cranial cervical intervertebral disc disease. Treatment,

whether surgical or medical, led to a full recovery. The exact mechanism is uncertain.

Severe thoracolumbar disc extrusion can lead to a loss of nociception in the hindlimbs, and if this does not return quickly, for example after surgical intervention, this is considered a poor prognostic sign. Ripplinger et al (2023) performed a prospective study to ascertain the outcome in dogs which had undergone hemilaminectomy for thoracolumbar disc extrusion and that had not recovered nociception for at least 4 days. The study included 36 dogs, 22 of which eventually recovered some motor function.

No effect was found on the recovery from the use of physiotherapy or anti-inflammatory drugs (either non-steroidal or steroidal), and age did not have an effect on recovery either. The median time to recovery was 30 days. The longer the time to regain nociception, the longer the time to recovery. A total of 17 dogs (47%) eventually returned to ambulation. Recovery of nociception in the first 5 weeks was a positive prognostic indicator. Clinicians should consider the possibility that dogs with deep pain deficits persisting after hemilaminectomy may still eventually become ambulatory. **CA**

## References

- Olender M, Couturier J, Gatel L, Cauvin E. Cervical jerks as a sign of cervical pain or myelopathy in dogs. *J Am Vet Med Assoc.* 2023;261(4):510–516. <https://doi.org/10.2460/javma.22.11.0507>
- Ripplinger A, Wrzesinski MR, Rauber JS et al. Functional outcome in dogs undergoing hemilaminectomy for thoracolumbar disc extrusion but without nociception > 96 h: A prospective study. *Vet J.* 2023;292:105951. <https://doi.org/10.1016/j.tvjl.2023.105951>
- Sakaguchi Y, Nishida H, Tanaka H, Kitamura M, Akiyoshi H, Nakayama M. The volume of extruded materials is correlated with neurologic severity in small-breed dogs with type I thoracolumbar intervertebral disk herniation. *J Am Vet Med Assoc.* 2023;261(3):348–352. <https://doi.org/10.2460/javma.22.07.0326>

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