



Intervertebral Disc Disease in Veterinary Medicine: Challenges and Innovations

Jacob Smith*

Department of Veterinary Medicine, University of Chicago, USA

INTRODUCTION

Intervertebral Disc Disease (IVDD) stands as a significant health concern in veterinary medicine, primarily affecting dogs, but also seen in cats and other species. Characterized by the degeneration and herniation of the intervertebral discs, IVDD can lead to pain, neurological deficits, and in severe cases, paralysis. Understanding, diagnosing, and treating this complex condition has evolved significantly, reflecting advancements in veterinary science and the ever-growing commitment to animal welfare. IVDD involves the deterioration of the discs that act as cushions between the vertebrae of the spine. These discs can degenerate and either protrude into the spinal canal (protrusion) or burst (extrusion), causing compression of the spinal cord or nerves. The disease is categorized into two main types: Common in chondrodystrophic breeds like Dachshunds, Beagles, and French Bulldogs, this type involves acute herniation of the disc. It typically affects younger dogs and presents suddenly with severe symptoms. Seen more often in older, non-chondrodystrophic breeds, this type involves a slower, progressive disc degeneration and protrusion, leading to chronic symptoms [1,2]. The symptoms of IVDD can range from mild pain and reluctance to move, to severe neurological deficits such as limb weakness, incoordination, and paralysis. The severity of symptoms depends on the degree of spinal cord compression and the location of the affected disc.

DESCRIPTION

Diagnosis begins with a thorough clinical examination and neurological assessment. Advanced imaging techniques such as Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) scans are crucial for confirming the diagnosis, pinpointing the location of the disc herniation, and determining the extent of spinal cord compression. These imaging modalities offer detailed views of the spinal structures, facilitating accurate diagnosis and treatment planning. For mild

cases, conservative treatment includes strict cage rest, anti-inflammatory medications, and pain management. Physical therapy and rehabilitation can also aid in recovery. The goal is to reduce inflammation and allow the body to heal naturally. In cases where there is significant spinal cord compression or when conservative management fails, surgery becomes necessary. Procedures such as hemilaminectomy, ventral slot decompression, or fenestration are performed to relieve pressure on the spinal cord. These surgeries are intricate and require specialized skills and equipment, highlighting the importance of advanced training in veterinary neurology and surgery. The field of veterinary neurology has seen significant advancements in the treatment of IVDD. Minimally invasive surgical techniques, such as endoscopic spinal surgery, are being developed and refined, offering the potential for reduced recovery times and lower risk of complications [3,4]. Additionally, regenerative medicine holds promise for the future of IVDD treatment. Stem cell therapy and the use of growth factors aim to promote the regeneration of damaged spinal tissues and improve neurological function. These innovative approaches are still in the experimental stages but offer hope for more effective and less invasive treatments.

CONCLUSION

Intervertebral Disc Disease in veterinary medicine presents significant challenges, but also opportunities for innovation and improvement in animal care. As our understanding of IVDD deepens and technology advances, the prognosis for affected animals continues to improve. The dedication of veterinary professionals to advancing treatment options and the increasing awareness among pet owners about this condition underscore the importance of continued research and education in the field. Ultimately, the goal is to enhance the quality of life for animals suffering from IVDD, reflecting our enduring commitment to the well-being of our animal

| | | | |
|-------------------------|--------------|-----------------------|---------------------------|
| Received: | 29-May-2024 | Manuscript No: | IPJVMS-24-20552 |
| Editor assigned: | 31-May-2024 | PreQC No: | IPJVMS-24-20552 (PQ) |
| Reviewed: | 14-June-2024 | QC No: | IPJVMS-24-20552 |
| Revised: | 19-June-2024 | Manuscript No: | IPJVMS-24-20552 (R) |
| Published: | 26-June-2024 | DOI: | 10.36648/2574-2868.8.2.12 |

Corresponding author Jacob Smith, Department of Veterinary Medicine, University of Chicago, USA, E-mail: jaocbsmith@123.com

Citation Smith J (2024) Intervertebral Disc Disease in Veterinary Medicine: Challenges and Innovations. J Veterinary Med. 8:12.

Copyright © 2024 Smith J. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

companions.

ACKNOWLEDGEMENT

None.

CONFLICT OF INTEREST

None.

REFERENCES

1. Koroth J, Buko EO, Abbott R, Johnson CP, Ogle BM, et al. (2023) Macrophages and intervertebral disc degeneration. *Int J Mol Sci* 24(2):1367.
2. Olby NJ, Tipold A (2021) Editorial: Canine intervertebral disc disease: The current state of knowledge. *Front Vet Sci* 8:656764.
3. Chang YP, Huang WH, Lua WZ, Wong W, Liu IH, et al. (2023) Outcomes in dogs with multiple sites of cervical intervertebral disc disease treated with single ventral slot decompression. *Vet Sci* 10(6):377.
4. Lappalainen AK, Vaittinen E, Junnila J, Laitinen-Vapaavuori O (2014) Intervertebral disc disease in Dachshunds radiographically screened for intervertebral disc calcifications.