INTERVERTEBRAL DISC DISEASE (DISC HERNIATION)

What is it? IVDD is a condition in which the intervertebral discs between the vertebrae of the spine become degenerative and may herniate up into the spinal canal causing spinal cord compression or swelling. This condition can cause discomfort and neurologic abnormalities.

What animals are affected? IVDD and disc herniation tend to occur most often in chondrodystrophic breeds (breeds with long backs and short curvy legs), such as Dachshunds, Basset Hounds, Beagles, Lhasa Apsos, Pekingese, but it can occur in any breed. Affected animals can be anywhere from 2 years of age and up. It rarely occurs in cats (herniated discs in cats are usually related to significant trauma).

What are the signs? Signs can vary from discomfort and a decrease in activity to complete paralysis and loss of pain sensation. Most dogs show a gradual progression of signs, but it can occur very suddenly as well. Dogs with a cervical (neck) disc herniation typically only exhibit pain and reluctance to move the head and neck. Dogs with a herniation in the thoracolumbar (back) spine often show discomfort, as well as some degree of weakness, wobbliness or paralysis.

How is it diagnosed? Diagnosis is based on history, clinical signs, neurologic examination, radiographs of the spine and then further imaging, either myelogram, CT, or MRI. Myelogram is a radiographic study done when contrast or dye is injected around the spinal cord to allow us to see it better and to identify any areas of compression.

How is it treated? Medical management includes cage confinement for a minimum of 3 weeks, anti-inflammatory medications, pain relievers and muscle relaxers. Dogs that are minimally affected may respond well to this treatment but are at risk for recurrence and worsening of signs. We recommend proceeding with myelogram and surgery if the pain cannot be controlled, if it recurs, or if the animal is showing neurologic deficits. If a disc has herniated and is causing spinal cord compression as seen on the myelogram, CT, or MRI, then surgical decompression is recommended. If the herniated disc is in the cervical (neck) region, it is most commonly treated with a procedure called a ventral slot. This procedure involves exposing the underside of the affected disc and vertebrae, and making a window through the affected disc space and ends of the vertebrae on either side of the disc all the way to the spinal canal so that the herniated disc material can be removed, relieving pressure on the spinal cord. When the thoracolumbar spine is involved, decompression is usually accomplished through a hemilaminectomy. The incision is made down the middle of the back over the affected site, the muscles are retracted from one side of the spine, and the window into the spinal canal is made on the side of the vertebra at the affected and adjacent disc spaces.

What after care is needed? IVDD dogs must have restricted activity for 2-3 weeks after surgery. Depending on their level of function pre and postoperatively, many of them will also require physical rehabilitation to regain voluntary movement, strength and balance. A key part of managing an IVDD dog is bladder management. If they have lost the ability to voluntarily move their legs, they will not be able to urinate on their own.
In these cases they either need to be catheterized or the bladder must be manually expressed to help them empty it.

**What is the prognosis?** If the animal still has pain sensation (they mentally recognize when their paw is being pinched), +/- voluntary movement of the limbs, and the pressure on the spinal cord can be relieved; prognosis for return to normal function is very good. If the animal has lost pain sensation for more than 8 hours, the chances of recovering, even with surgery are guarded.

**Can it be prevented?** IVDD or disc degeneration and herniation cannot truly be prevented, but we can decrease the risk by keeping the animal healthy, slender, minimizing high impact activities such as jumping on and off furniture, and minimizing the use of stairs. It is a degenerative process and often is not related to a traumatic event of any kind.

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