



INTERVERTEBRAL DISC DISEASE

ABOUT THE DISEASE

Between each back bone (vertebrae) there are cartilage discs referred to as intervertebral discs. When these discs degenerate, rupture, or bulge it is collectively referred to as **intervertebral disc disease (IVDD)**.

There are two main types of **IVDD**:

- Hansen Type I Disk Disease (ruptured disc)
 - The center of the disc (nucleus pulposus) becomes calcified and ejects upwards through the outer capsule (annulus fibrosus) causing compression of the spinal cord further above.
 - These patients are often abruptly (acutely) painful and rapidly progress to nerve dysfunction which may include full paralysis of the hind limbs.
- Hansen Type II Disk Disease (bulging disc)
 - The outer capsule (annulus fibrosus) degenerates and allows the center of the disc (nucleus pulposus) to protrude upwards into the spinal cord but does not rupture.
 - These patients are often chronically (persistently) painful and typically undergo a slower degenerative process. Nerve dysfunction is possible, but not usually as severe.

OBTAINING A DIAGNOSIS

Physical examination is singlehandedly the most useful way to assess spinal involvement and neurologic dysfunction. Different spinal and peripheral (surrounding) reflexes will aid in diagnosing severity of spinal cord involvement.

Higher order imaging (MRI; CT) is the most useful diagnostic to identify the location of disc degeneration and surgical approach for surgical candidates.

X-rays (radiographs) and myelograms (use of dye in conjunction with radiographs) are useful tools but have fallen out of favor by surgeons looking to identify a disc or disc(s) that require removal.

TREATMENT

Whether a patient has **IVDD** with ongoing pain and suffering with nerve dysfunction, ability to treat medically and/or ability to treat surgically should all be considered when deciding management.

Depending on extent and severity of the patient's nerve dysfunction with Hansen Type I, surgery is often the only option for maximizing ability to reverse paralysis and regain movement of the legs. However, spinal surgery is often very expensive and has a long recovery period. Unfortunately, there are no medications proven to aid Hansen Type I patients showing severe nerve dysfunction.

In patients with less severe spinal involvement, like Hansen Type II, medical management is often focused on alleviation of pain and a strict order for confinement. This management often includes one or a combination of the following:

- Exogenous Glucocorticoids – Provide anti-inflammation support but no pain relief
- Non-Steroidal Anti-Inflammatories – Provide anti-inflammatory support as well as pain relief
- Muscle Relaxants – Provide no pain relief, but will relax the tense muscles of the back
- Analgesics – Often utilized for additional pain control
- Laser Therapy – Helps with pain and relaxation
- Acupuncture or Chiropractics – Helps with pain and discomfort, with some discussion of increasing nerve function

TIPS FOR SUCCESS

- Do not delay evaluation by a veterinarian if the patient seems acutely painful with hind limb nerve dysfunction (wobbly, weak, or unable to use).
- There are no medications that specifically treat spinal disease.
 - Only use veterinarian recommended medications to treat symptoms.
- Surgery is often the only option to regain function if a patient is paralyzed.