

Lumbosacral Disease in Dogs

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The cauda equina is made of the tail end of the spinal cord and the adjacent nerve roots. Sometimes, the spinal canal, through which the spinal cord and nerves pass, narrows and then compresses the nerves. The most common spot for this narrowing is at the lumbosacral joint, where the spine meets the pelvis. Spinal canal narrowing at that joint is referred to as lumbosacral stenosis, and the condition resulting from these compressed spinal nerve roots is called cauda equina syndrome or lumbosacral compression syndrome. Sometimes, these changes can be congenital (an animal is born with it), but they can also develop as the dog gets older.

Causes

In some cases, the foramina (the holes through which the spinal nerves exit) becomes narrowed and compress the nerves either permanently or intermittently. Intermittent compression is common in very athletic dogs.

Narrowing of the spinal canal is most often caused by arthritic degeneration or intervertebral disc herniation, but traumatic injury, congenital malformation, or tumor growth can also be involved. Narrowing of the foramina can be caused by new bone growth, the spurs that grow as a result of arthritis, or by overgrown soft tissue from the capsule surrounding the joints.

The most common symptom of lumbosacral stenosis is pain. In the beginning, you may notice your dog has hind end stiffness that leads to difficulty in walking, climbing stairs, getting on furniture, wagging the tail, positioning to defecate, or getting into a car. As the condition progresses, one or both back legs may become weak. Some dogs will cry out in pain when trying to move. In severe cases, the nerve roots can become so compressed that urinary and fecal incontinence will result; however, this is less frequently seen. Trapping of the nerves can also cause intermittent pain and leg tremors, depending on the dog's position.

German shepherd dogs and other large, active breeds are most commonly affected. However, it can also affect smaller breeds and even cats. Signs in dogs younger than three to seven years old are unusual.

Diagnosis

When you present your dog to a veterinarian, they will take a thorough history from you to determine what signs you are seeing at home. They will then observe your dog walking and possibly getting in/out of the car or going up and down stairs. A physical examination will then be performed, including an orthopedic examination to check the bones and joints followed by a neurological examination to assess nerve function. Several tests will then be performed to locate the site of pain. This may involve manipulating both back legs, pushing on the spine, or moving the tail. Additional diagnostic tests are usually required to establish the diagnosis. These can include X-rays, CT scans, MRI, and rarely electromyography, a

diagnostic procedure that evaluates the health of the muscles and the nerve cells that control them. Advanced imaging techniques - especially MRI - have become the tests of choice for lumbosacral disease and are now thought to be essential when planning treatment, whether this be medical or surgical.

Treatment

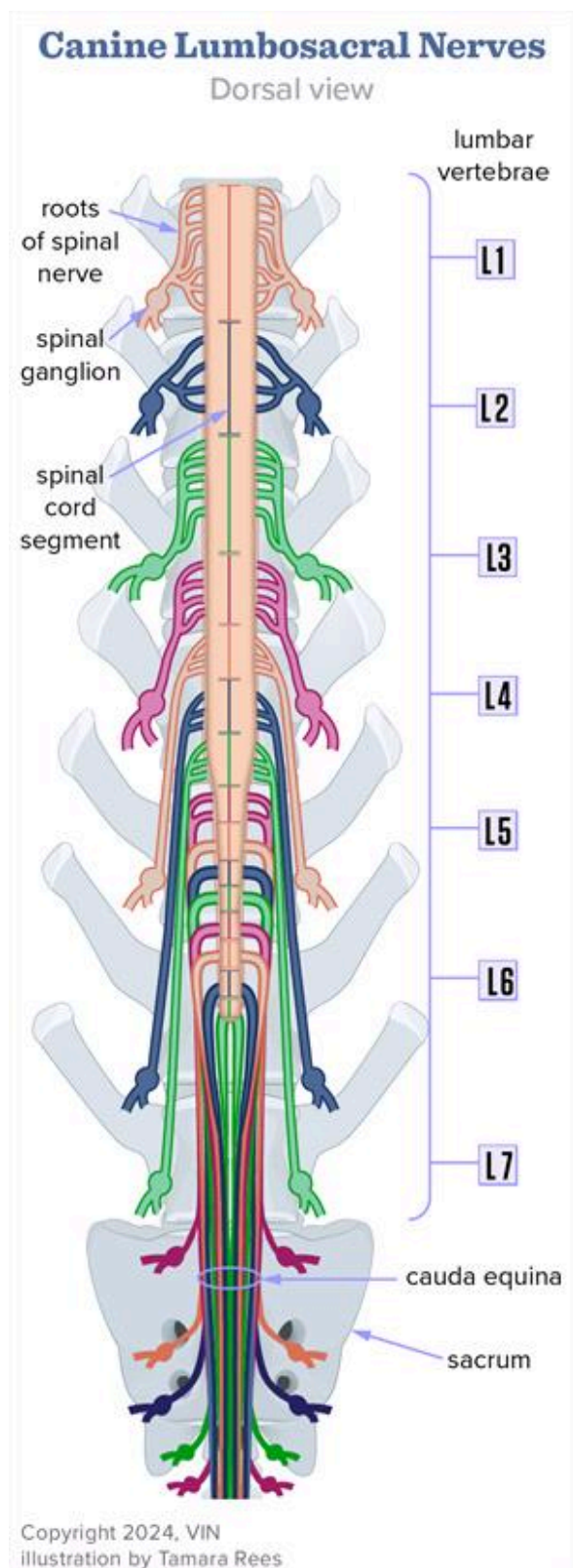
Treating lumbosacral disease depends on the cause and severity of the symptoms. Mild cases often need only supportive treatment, including crate rest, controlled exercise on lead, and anti-inflammatory and pain-relieving medications. Sometimes, injections around the spinal cord, usually steroids, are needed.

If symptoms persist or worsen or if neurologic signs develop, surgery may be required. A dorsal laminectomy creates an opening in the top of the spinal canal to relieve pressure from the nerves. Occasionally, adjacent unstable spinal vertebrae may have to be fused to prevent recurrent nerve trauma. If the foramina are narrowed, they may also need to be widened, which can be done in the same surgery.

Strict rest in the postoperative period is essential to minimize complications.

Outlook (Prognosis)

Dogs with mild signs have a good prognosis as they can be medically treated. Severely affected dogs, including those whose nerve root compression is so severe that urinary or fecal incontinence has resulted, have a poor prognosis as most dogs do not become continent again, even after surgery. However, surgery or epidural cortisone can relieve pain and improve quality of life.



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