

What to do with a down dog: Conservative management v. Surgery

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Paraparesis is a very common neurologic problem seen in our canine patients.

Acute paraparesis is sudden onset of weakness in the ability to generate gait.

Paraplegia means complete absence of any voluntary motor ability. Any injury or lesion to the spinal cord can cause paraparesis or paraplegia.

The most common causes of acute onset paraparesis/plegia are Type I intervertebral disc disease, fibrocartilagenous emboli or other vascular event, and noncompressive nucleus pulposus extrusion (or Type III intervertebral disc disease). Inflammatory disease such as meningomyelitis or discospondylitis, and neoplasia are also possible causes of acute paraparesis/plegia but will more commonly have a progressive course.

Management of paraparesis depends on the suspected disease process, but more importantly is based on the severity of clinical signs. A dog that is ataxic but able to walk on its own is less of an emergency than a dog that is not able to move its limbs at all. Some cases can be treated with conservative management while others are better treated with surgical decompression immediately.

Conservative management consists of **strict crate rest** and **pain control** as needed. The dog should be confined to a crate or small area at all times except for short leash walks for urination and defecation. Most owners will inadequately confine their dog unless they are specifically instructed on the degree of restriction. **Conservative management is an acceptable treatment for dogs suspected to have intervertebral disc disease if they are still able to walk.** This treatment is often very successful for dogs with mild ataxia and mild paraparesis. It is usually recommended for a dog to have a total of 4-6 weeks of strict cage rest; however, a dog should only continue with conservative management if their condition is improving. If at any time the dog's neurologic status worsens, or has not improved within 1-2 weeks, conservative management has likely failed and further diagnostics should probably be pursued.

- Pros-
1. Less expensive
 2. Avoid surgical morbidity and risks
 3. Good prognosis with mild disease

- Cons-
1. Risk of worsening condition
 2. Longer recovery as compared to surgery
 3. Sometimes a less complete recovery as compared to surgery
 4. Recurrence rate of 33-50%
 5. Not very effective in dogs with severe signs
 6. Potential long-term complications of chronic compression (atrophy of the spinal cord, syrinx formation, chronic pain)

Surgical decompression is the treatment of choice for dogs that have a disc extrusion and are not able to walk. It is an emergency procedure for dogs that are paraplegic, severely paraparetic or have absent deep pain sensation. Surgery is also an option in any dog with paraparesis and ataxia, because it has a very high success rate and generally dog's neurologic condition improves faster and more completely with surgery than with conservative management. In general, success rate of all dogs with intervertebral disc extrusions with surgery is greater than 90% as long as they still have deep pain perception. In dogs that lose deep pain perception, the prognosis drops to 50% with surgery and is an absolute emergency procedure.

- Pros-
1. Good prognosis in dogs that retain deep pain perception and only option in dogs that have lost deep pain perception
 2. More rapid and complete improvement than with conservative management
 3. Reduced recurrence rate
 4. Reduced long-term complications

- Cons-
1. Expense
 2. Risks associated with surgery and anesthesia
 3. Hospitalization time (~2-5 days)