Cervical Disc Surgery Consent Form

Your pet has been diagnosed with a cervical myelopathy (compressed spinal cord in the neck) causing partial or complete paralysis and many times neck pain. There are many different causes of neck pain and paresis including meningitis, stroke, tumors, spinal canal stenosis, synovial cysts, spinal arachnoid cysts, discospondylitis, and a bulging or ruptured disc(s). In addition, there can be a single lesion or multiple lesions at single locations or multiple locations. Lastly, in rare cases, the disc can rupture to the side or top of the spinal cord necessitating a dorsal laminectomy to retrieve the disc which is a very difficult and challenging surgery. Unfortunately, we cannot diagnose the exact cause without doing a myelogram, CT or MRI. If we do a myelogram right before surgery instead of more expensive (but more diagnostic) CT or MRI, the findings may be one of the following conditions:

1. The myelogram shows that your pet only has a bulging or ruptured disc with compression of the spinal cord on just the ventral (bottom) side. These patients will have a ventral slot and 70-90% will make a full recovery.
2. The myelogram is non-diagnostic and we need to recover your pet and do an MRI or CT scan before proceeding to surgery.
3. The myelogram shows a very rare condition where the disc is not approachable from a ventral slot and your pet needs a dorsal laminectomy.
4. The myelogram shows an arachnoid cyst, tumor, or stroke condition.

Neurosurgery is a combination of both art and science and the neurosurgeon will evaluate your pet’s radiographs and neurological status and determine the best method of treatment given your pet’s age, type and location of disease causing the myelopathy, and the home environment for post-surgical rehabilitation. The surgeon may utilize one or a combination of procedures that may be best determined during the surgery. The goal of any neurosurgery is fast return to function of the damaged spinal cord and nerves without doing any further harm. As with any surgery on the spinal cord, inadvertent complications can arise including worsening of your pet’s condition. Even under the best circumstances, most patients that recover from surgery (and a myelogram in most cases) will have a neurological status that is worse than before surgery. This is a normal response to the irritation of the spinal needle and contrast agent and the gentle, but necessary, manipulation of the spinal cord during surgery to retrieve the bulging disc material. In most cases, your pet will return to their pre-surgical status within two to three weeks. If your pet’s condition came on quickly, the prognosis is much better and the recovery much faster than if there has been a history of weeks or months of onset of the paralysis. Some patients will have residual weakness but are able to walk, urinate and defecate normally and have no residual neck pain.

Since we will be removing the disc from a vertebra in the neck, some patients will present in months or years with another lesion at the vertebra right in front or behind that disc. This is called the “domino” affect and if severe, can necessitate additional surgery.

Hopefully, if surgery is done, there will be minimal or minor complications and your pet will return to normal in 4-12 weeks, although many patients show significant improvement within 48 hours.
After fully discussing the planned surgical procedure and associated risks with your doctor or the surgeon, please sign the consent for surgery below:

The undersigned owner or authorized agent of admitted patient _____________________ hereby authorizes the admitting veterinarian (and his/her designated associates or assistants) to administer such treatment as is necessary to perform the below-mentioned procedure. The nature of the procedure(s) has been explained to me and no guarantee has been made as to results or cure. I understand that there may be risk involved in these procedures. I consent to the administration of such anesthetics or tranquilizers as are necessary.

Anesthetic Risks: (Although every effort is made to make anesthesia as safe as possible including vital sign monitoring and use of the most up to date anesthetic agents and equipment, understand that anesthesia has inherent risks). The incidence of complications from anesthesia is extremely low and we do not anticipate any in your pet but on rare occasions the following can occur:

1. Allergic reaction to the anesthetic agents
2. Heart rhythm abnormalities
3. Untoward reactions to the gas including drops in blood pressure or respiratory difficulties
4. Just like in humans, on very rare occasions, general anesthesia can result in death.

We are prepared and will treat any anesthetic reactions if they occur, but general anesthesia is never completely without risk, just like driving a car.

I consent to the following surgical procedure(s): Myelogram and ventral slot at one or more disc spaces; fenestration (removal) of neighboring discs to reduce chance of recurrence. If agreed after myelogram, possible dorsal laminectomy or CSF tap to rule out meningitis.

Myelogram risks include (all extremely rare):

1. Allergic reaction to myelogram contrast agent or damage from spinal needle (rare).
2. Damage to spinal cord from needle tip
3. Inadvertent injection of contrast material into substance of cord
4. Bleeding into the spinal canal
5. Seizures (more common in Doberman Pinchers)
6. Infection (less than 3%) which may require additional testing and medication at an additional cost.
7. Worsening of neurological status that may be temporary or permanent, including complete paralysis.
8. Inability to inject that contrast agent into the spinal canal due to arthritis or confirmation of the spine.
9. Non-diagnostic study (2-5%) necessitating a repeat study in 2-3 days or an MRI or CAT scan.
10. Central canal of spinal cord having contrast agent injected into it causing neurologic damage (rare)
11. In about 1% of myelograms, the radiographs will have to be electronically transmitted to a radiologist for interpretation at additional cost ($75)
Intra-operative surgical risks include:

12. Improper identification of the surgical site
13. Inability to find disc material
14. Inadequate removal of disc material
15. Iatrogenic neural injury
16. Penumomediastinum
17. Vertebral fracture
18. Diffuse disc material that cannot be removed safely
19. Adhesion of disc material to dura (outer layer of spinal cord)
20. Excessive bleeding
21. Severe spinal cord swelling
22. Mortality can occur very rarely from cervical spinal cord surgery

Early postoperative complications include:

23. Infection (discospondylitis) which may require additional testing and medication at an additional cost.
24. Blood clots that can lodge in major organs causing stroke or rarely death.
25. Delayed healing of the spinal cord (this is not under the control of the surgeon).
26. Worsening of neurological status that may be temporary or permanent, including complete paralysis.
27. Seroma (pocket of fluid) under the incision can occur in some patients that usually resolves without treatment.
28. Ascending hematomyelia, a rare condition where the spinal cord hemorrhages internally and is usually fatal. This usually only affects patients without deep pain perception. This can occur within five to ten days of surgery.
29. Myelomalacia (melting or necrosis of the spinal cord substance from lack of oxygen and blood supply) which results in permanent paralysis.
30. In cervical (neck) disc surgery, acute sympathetic blockade or severe bleeding can both result in death, although both of these conditions occur very rarely.
31. Patients with chronic compression (clinical signs for many months or even years or a history of paretic episodes in the past) can deteriorate after surgery as a result of reperfusion (fast return of blood flow to an area that was lacking blood flow) or a loss of a few remaining nerve axons.
32. Rarely, surgery can cause disc material to rupture into the spinal canal and make the paralysis or paresis worse.
33. Implant failure if distraction and stabilization is performed
34. Morbidity after ventral slot (worsening)
35. End plate failure
36. Epidural abscess
37. Pneumothorax, scoliosis, self-mutilation of feet and penis, and femoral nerve paralysis can all occur but are usually transient and resolve on their own.

Late postoperative complications include:
38. Laminectomy scars can form many months after surgery which can put pressure on the spinal cord and need surgical removal. This is extremely rare.
39. Infection of the disc space (discospondylitis)
40. Restrictive fibrosis (scar tissue putting pressure on spinal cord)
41. Delayed compression of spinal cord from implant that moves or loosens (if utilized)
42. Recurrence of signs within weeks, months, or even years
43. Domino affect causing disease in a neighboring disc
44. Residual neurological deficits
45. Fecal incontinence or urinary incontinence, usually intermittent, and usually only happens in about 8% of patients that have no deep pain perception after regaining pain perception.
46. Recurrent urinary tract infections

Despite this long list of potential complications, simple disc bulging or disc ruptures usually go very well while the more serious issues can occur if distraction and stabilization with implants and cement is done as well. In both human and veterinary neurosurgery, serious complications can occur even in the best and most experienced of hands, and since we are dealing with the spinal cord, any complication has the potential to cause great harm.