Intervertebral Disc Surgery

If your pet has a “slipped disc” which has caused paralysis or weakness in the legs, or has had many bouts of pain without long-term relief, he/she is a candidate for surgery. There are basically two types of surgery we perform to help these conditions. For the patient with pain only, we sometimes perform a “fenestration.” This involves removing the disc causing the problem from underneath the spinal vertebrae and at the same time, removing the adjacent discs that could cause problems in the future. Animals seem to do quite well without these “shock absorbers” as they do not put great stress on their spines by walking upright like humans do. It is not necessary to know which disc is causing the pain since all of them will be removed in this operation. The risks are very minimal and the patient usually takes one to two months to completely be free of all pain.

The other surgery we do is called a “laminectomy” for those patients who are paralyzed due to the spinal cord becoming swollen or compressed within the bony casing of the vertebrae. This surgery actually removes this bone, which is acting like a tourniquet from on top or side of the spinal cord, to allow blood flow to return to the spinal cord. This surgery is much more difficult than the fenestration, and since a myelogram is usually performed, has a greater degree of risk.

Since it is important to know which disc has slipped out of place and where the spinal cord is swollen, special tests are sometimes necessary to know exactly where to operate. These may include:

**Radiographs:** High detail radiographs taken under anesthesia to provide the highest quality images with special views. Anesthesia can worsen your pet’s condition as the muscles provide some stabilizing protection to the spine and these are relaxed under anesthesia. This is why we many times do not anesthetize patients for radiographs unless they are having this surgery.

- **Myelogram:** Contrast agent (dye) is injected around the spinal cord under anesthesia and radiographs are taken to see the otherwise invisible spinal cord. This test is done only by experienced and trained doctors and has about a five percent complication rate. Complications include seizures, anaphylactic (allergic) reactions to the dye, infection, hemorrhage into the spinal cord, inadvertent injection of contrast into the spinal canal, and very rarely, death. On occasion, a board certified radiologist may need to evaluate the study before surgery is done, especially if there are multiple lesions and this necessitates waking your pet up and sending the films to the university. In these circumstances it is better to wait a day or two instead of operating on the incorrect space.

- **MRI:** A magnetic resonance image done at the Veterinary College in Auburn under anesthesia with or without special contrast injected into a vein. These are expensive (around $700-900) and take about one half to one hour to perform. Surgery can then
be done immediately after this procedure under the same anesthesia. This procedure has few complications and provides some of the best images for finding the lesion causing your pet’s pain, paresis, or paralysis.

- **CAT Scan** (with or without a myelogram): CAT scans use x-rays and are excellent for looking at the bones but not as good as a MRI for looking at soft tissue like disc material. They are more affordable than MRI ($400) and can be done in Nashville. They take just a few minutes to perform and when done with a myelogram (which is not possible in the Nashville facility) provide the most comprehensive evaluation of the spine.

If your pet needs to have a laminectomy, you and your doctor will determine if it is an emergency situation that requires immediate surgery, or if medical treatment should be instituted to stabilize the patient. You will also discuss with your doctor which test is best for your pet taking into consideration the most likely pathology and any budgetary constraints you may have. Pre-anesthetic blood tests will be done to determine your pet’s ability to withstand anesthesia safely.

After the x-rays, myelogram, CAT scan or MRI have determined where to operate, the patient is transferred to the operating room where the surgery is performed. Surgery can take from one to three hours depending upon the severity of the disc rupture and an additional thirty to sixty minutes to perform a myelogram if necessary. The surgeon will remove bone from as many vertebrae as necessary to relieve the swelling and pressure on your pet’s spinal cord. Since this is an intra-operative decision, it is hard to give an exact estimate for this surgery since some patients only require one disc space and some require up to three or four. If your pet is found to have a chronic disc extrusion or Hansen Type II bulging disc, it can be difficult or impossible to adequately remove all the disc material without doing irreparable damage to the spinal cord. Patients with this problem do not recover as much or as quickly as acute disc ruptures.

In some instances when your pet is totally paralyzed with no pain perception, it can sometimes be determined during the surgery if the spinal cord is permanently damaged. Consultation by phone with the surgeon during the operation if this is found to be the case is important so please arrange to be available during the surgery.

After the operation, almost all patients are worse than before the surgery, especially if they had a myelogram. Most will quickly return to their pre-operative status within three or four days. It generally takes four to eight weeks after the surgery for complete recovery. Each patient is an individual and recoveries vary considerably, with some taking as long as six months to fully recover. If your pet was paralyzed before the operation, he/she will probably NOT be walking when they are released from the hospital. Home care varies, but usually consists of simple physical therapy three times daily.

Because of the equipment and training necessary for this operation, costs range from $1800 to $3800 or higher if performed at a surgical specialty facility or a university teaching hospital.