Fenestration of Intervertebral Disk Disease

Fenestration of the herniated disk space at the time of spinal decompression is recommended as a means to prevent continued extrusion of degenerate disk material in the postoperative period, which may result in early recurrence of clinical signs. (Brisson and others 2004)

Postmortem examination of 100 dogs suspected of having disk extrusion revealed a mean of 2.5 disk extrusions/dog. (Hansen 1951)

Prophylactic fenestration is typically performed from T11-12 to L3-4. L4-5 disk space is not routinely fenestrated because it is seldom a site of extrusion and potential complications. (Brisson and others 2004)

To Fenestrate:

Recurrence were at least as frequent in patients that had undergone a laminectomy as in patients that had been treated conservatively. (Funkquist 1970)

In 88% of dogs, the second disk extrusion occurred at a different site, and in more than 70% dogs, the recurrence occurred in a region that could have been readily fenestrated at the time of the first surgery. (Dhupa and others 1999)

The reported recurrence of clinical signs of intervertebral disc disease after decompressive surgery without fenestration lies between 2.7% to 41.7%. (Levine and Caywood 1984, Necas 1999)

A recurrence rate of 0% to 24.4% with fenestration was reported. (Funkquist 1978, Butterworth and others 1991, Davies and Sharp 1983, Levine and Caywood 1984, Black 1988, Knapp and others 1990)

No recurrence occurred at a fenestrated herniated site, whereas without fenestration, further disc material extrusion was detected in the spinal canal on MRI. (Forterre and others 2008)
Not to Fenestrate:

- A recurrence rate of 2% to 5% does not warrant the extra risk and potential complications that disk fenestration may cause. (Muir and others 1995, Brown and others 1977)
- Possible complications including surgical complications, increased anesthetic and surgical times, and increased cost to the owners. (Scott 1997, Brisson and others 2004)
- Surgical complications: Pneumothorax, neuromuscular complications, and hemorrhage

When the Problem Recur...:

- Euthanasia is commonly chosen by owners in cases of recurrence. (Mayhew and others 2004)
- The rate of euthanasia in dogs that developed recurrence of neurologic signs after decompressive surgery but did not return for evaluation was 44.4% (Brisson and others 2004)

Reference: