



# BVNS neurotransmitter

Welcome to the latest edition of the BVNS Neurotransmitter. Each issue will feature a recent case along with take home learning points, plenty of pictures and an opportunity to learn a bit more about diagnosing and treating neurologic patients. We are excited to continue to offer these case reports and hope they provide a valuable learning opportunity for our team and yours.



## CASE STUDY: DALLAS

Dallas is a 3 year old Beagle that presented to our Springfield location for back pain and the inability to walk in the rear limbs. On examination, Dallas had no motor ability in the left rear limb and minimal ability to move the right rear and cranial lumbar back pain. Dallas was treated for several days prior to referral with a combination of NSAIDs, muscle relaxants and analgesics, but his signs worsened. Eight months prior to this presentation, Dallas had a left hemilaminectomy performed by Dr. Bush for a herniated L5-6 disc and made a full recovery. MRI showed a right lateralized herniated disc and extra-dural hemorrhage extending from L2 to the middle of L4. There was a concern that the area of compression overlapped the previous surgery site and instability of the spine would result in a poor long term prognosis.

### Presenting Complaint:

- Unable to walk, painful
- Paralysis of the left pelvic limb, weak on the right pelvic limb

### Neurolocalization:

- Left side T3-L3 spinal cord disease evident from paralysis and back pain.
- Absent left patella reflex with increased cranial tibial and gastrocnemius reflexes indicates involvement of the L4-5 segments.

### Diagnostics:

- High-field MRI shows herniated disc material and blood clots severely compressing the spinal cord from L2 to mid-L4 on the right side.

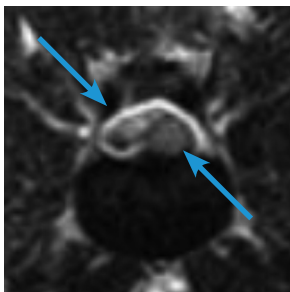


Image 1

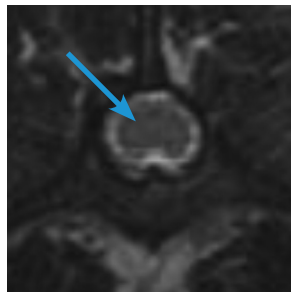


Image 2

Image 1 - T2 weighted axial image at L4-L5. Upper left arrow shows bright (high signal) area consistent with extruded disk material and hemorrhage. Lower right arrow shows compressed spinal cord. Compare to normal spinal cord on the right.

### Outcome:

A hemilaminectomy was performed from L1-L5 on the right, dorsal laminectomy at L5 to accommodate for compression as a consequence of past hemilaminectomy on the left. In effect, 3 sides of the box that contains the spinal cord were removed leaving only the base of the box to support the spine.

Dallas showed rapid improvement and began to move his left hindlimb two days post-operatively. At his 2 week recheck, he was pain-free and ambulatory without assistance.

### Take Home Points:

1. Neurological grade and MRI findings are the best indicators of success with surgery.
2. A decreased patella reflex can help to localize the spinal cord lesion in patients with rear limb paralysis.
3. The odds of recovery and recurrence are no different in a patient that has already recovered from a previous spinal surgery compared to patients undergoing spinal surgery for the first time.
4. Bilateral hemilaminectomy and removal of dorsal spinous processes can result in a positive clinical outcome without clinically relevant spinal column instability.

Case referred to BVNS by Friendship Hospital for Animals in Washington, D.C.

For more information or to discuss this case please email Dr. Tiches at [ditches@bvns.net](mailto:ditches@bvns.net).

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- We are open for regular and emergency neurology referrals Monday through Saturday in our Leesburg, VA location and Monday through Thursday in our Springfield, VA location.
- BVNS is the only local veterinary neurology practice that has MRI and CT imaging on-site at all locations.

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