



Video Abstract

Surgical removal of a spinal intrathecal projectile led to a significant improvement of cauda equina syndrome

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ABSTRACT

Background: Penetrating gunshot wounds of the spine are common and can cause severe neurological deficits. However, there are no guidelines as to their optimal treatment. Here, we present a penetrating injury to the lower thoracic spine at the T12 level that lodged within the canal at L1, resulting in a cauda equina syndrome. Notably, the patient's deficit resolved following bullet removal.

Case Description: A 29-year-old male sustained a gunshot injury. The bullet entered the right lower chest, went through the liver, entered the spinal canal at T12, fractured the right T12/L1 facet, and settled within the canal at the L1 level. The patient presented with severe burning pain in the right leg, and perineum. On exam, he had right-sided moderate weakness of the iliopsoas and quadriceps femoris muscles, a right-sided foot drop, decreased sensation throughout the right leg, and urinary retention. Computed tomography myelography showed the bullet located intrathecally at the L1 level causing compression of the cauda equina. The patient underwent an L1 laminectomy with durotomy for bullet removal. Immediately postoperatively, the patient improved; motor power returned to normal, the sensory exam significantly improved; and he was left with only mild residual numbness and burning pain in the right leg.

Conclusion: With gunshot injuries, there is a direct correlation between the location/severity of the neurological injury and the potential for recovery. In patients with incomplete cauda equina syndromes, bullet extraction may prove beneficial to neurological outcomes.

Keywords: Bullet, Cauda equina, Removal, Spine, Trauma

[Video 1]-Available on:

www.surgicalneurologyint.com

Annotations^[1-3]

- 1) 2:55 – Exposure.
- 2) 3:00 – Laminectomy.
- 3) 3:22 – Durotomy.
- 4) 3:50 – Bullet removal.

Declaration of patient consent

Patient's consent not required as patients identity is not disclosed or compromised.

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Conflicts of interest

There are no conflicts of interest.

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