

Spinal Cord Infarction After Lumbar Transforaminal Epidural Steroid Injection With Dexamethasone: A Case Report

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CASE DESCRIPTION:

65-year-old man with a two-year history of back pain with radicular right leg pain, successfully treated with three prior L3-L4 and L4-L5 transforaminal epidural steroid injections (TFESI).

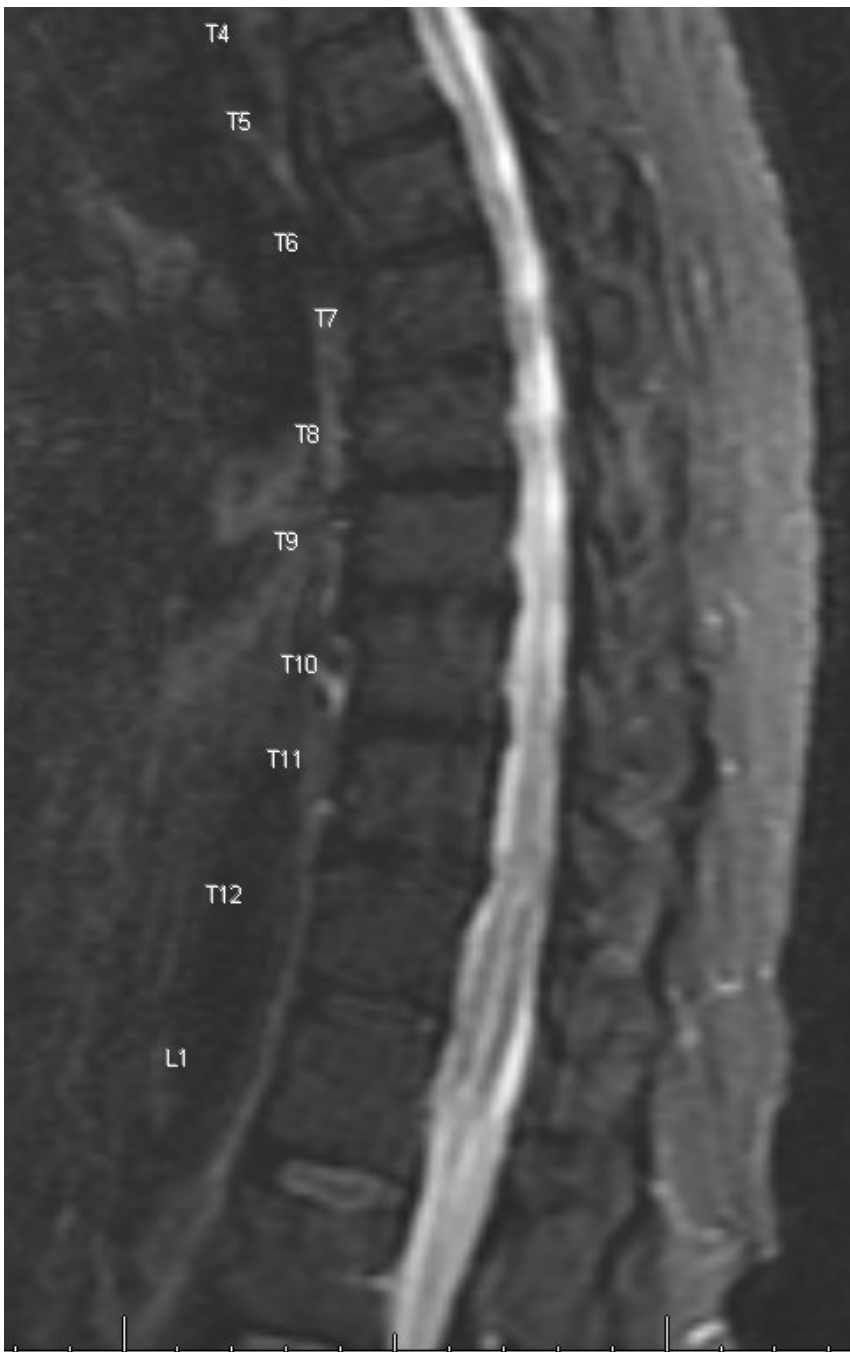
He developed recurrence of back pain and radicular pain months after the last TFESI and underwent repeat right L3-L4 and L4-L5 TFESI with dexamethasone at a private practice pain center.

He developed immediate lower extremity weakness and was unable to move from the procedure table.

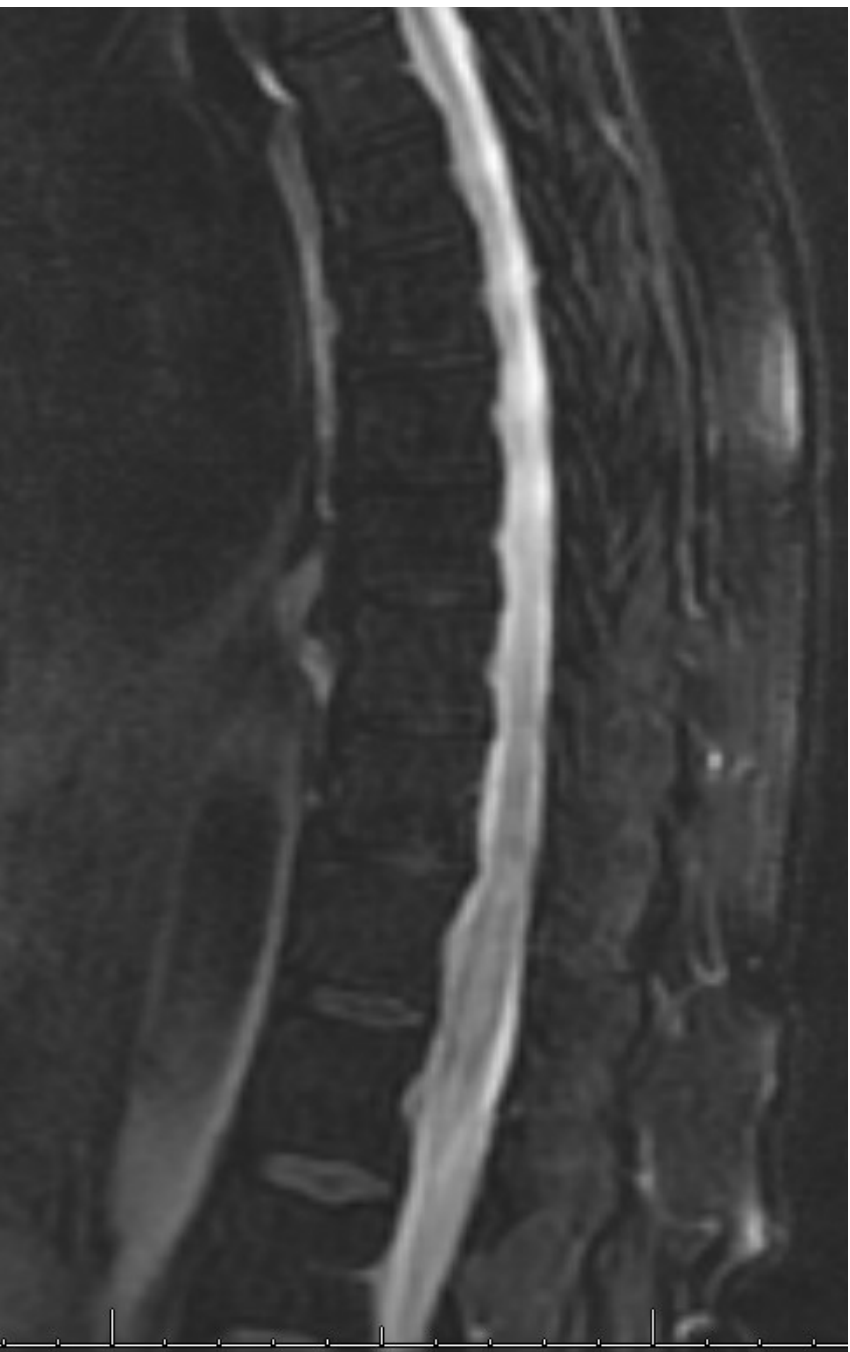
The patient was sent to the emergency room where MRI of the spine showed a spinal cord infarct involving the conus medullaris (Figure 1). Diagnostic spinal angiogram showed thrombosis at right L3 and a codominant artery of Adamkiewicz.

He was admitted to our acute rehabilitation after a five-day course of intravenous steroids and hyperbaric oxygen therapy. He had minimal return of lower extremity strength but was able to make significant functional improvements.

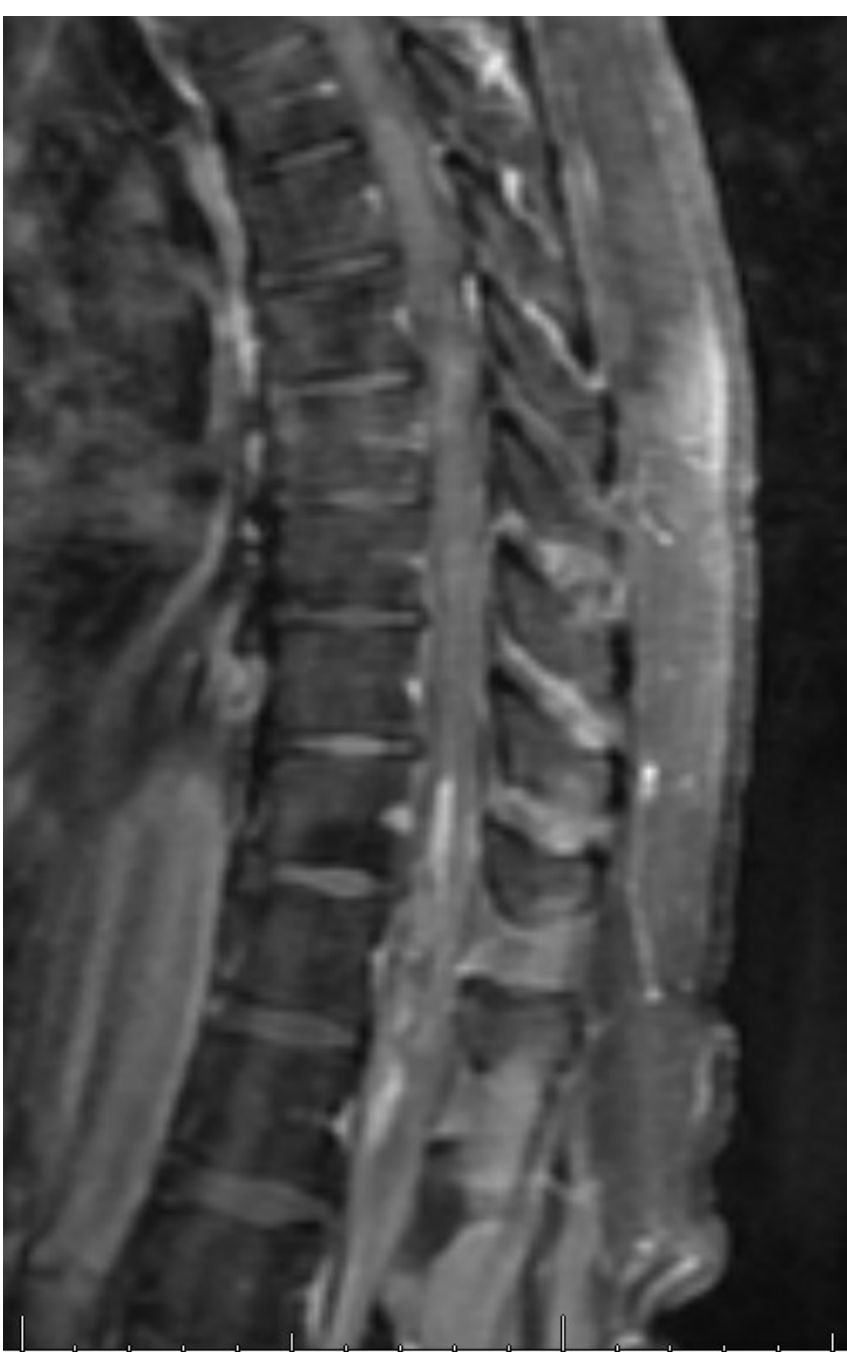
Figure 1: MRI Spine



STIR



T2



T1 Post Contrast



T2 at T12 Level

MRI Thoracic/Lumbar Spine:

There is extensive hyperintense T2 signal within the thoracic spinal cord starting from the level of T8 through the conus, with cord expansion. On the postcontrast sequences, there is significant heterogeneous enhancement within the spinal cord from the upper T11 level through the conus medullaris.

DISCUSSIONS:

Spinal cord infarction is a rare complication of TFESI, possibly from embolization of vessels by the larger particle size and aggregation of particulate steroids.¹ The non-particulate steroid dexamethasone is thought to carry lower risk of spinal cord infarction and its use has increased in clinical practice, especially with recent FDA safety announcements and case reports on particulate steroids.^{1,2} This is the second reported case in the literature to our knowledge of spinal cord infarction from TFESI with dexamethasone, possibly implicating a yet undescribed mechanism of neurologic injury.³

CONCLUSIONS

Spinal cord infarctions may occur with lumbar TFESI despite the use of dexamethasone, a non-particulate steroid, through an unknown mechanism.

REFERENCES

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