



Safety of Cervical Transforaminal Epidural Steroid Injections (TFESI)

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Background

- In 2014 the FDA issued a drug safety warning that steroids in the epidural space may result in rare but serious neurological event.
- Historically, 131 cases of neurological adverse events were identified, and the majority of complications were related to particulate steroid TFESI.
- These events preceded the standard use of non-particulate steroids.
- Many still consider TFESI to be unsafe practice.

Methods

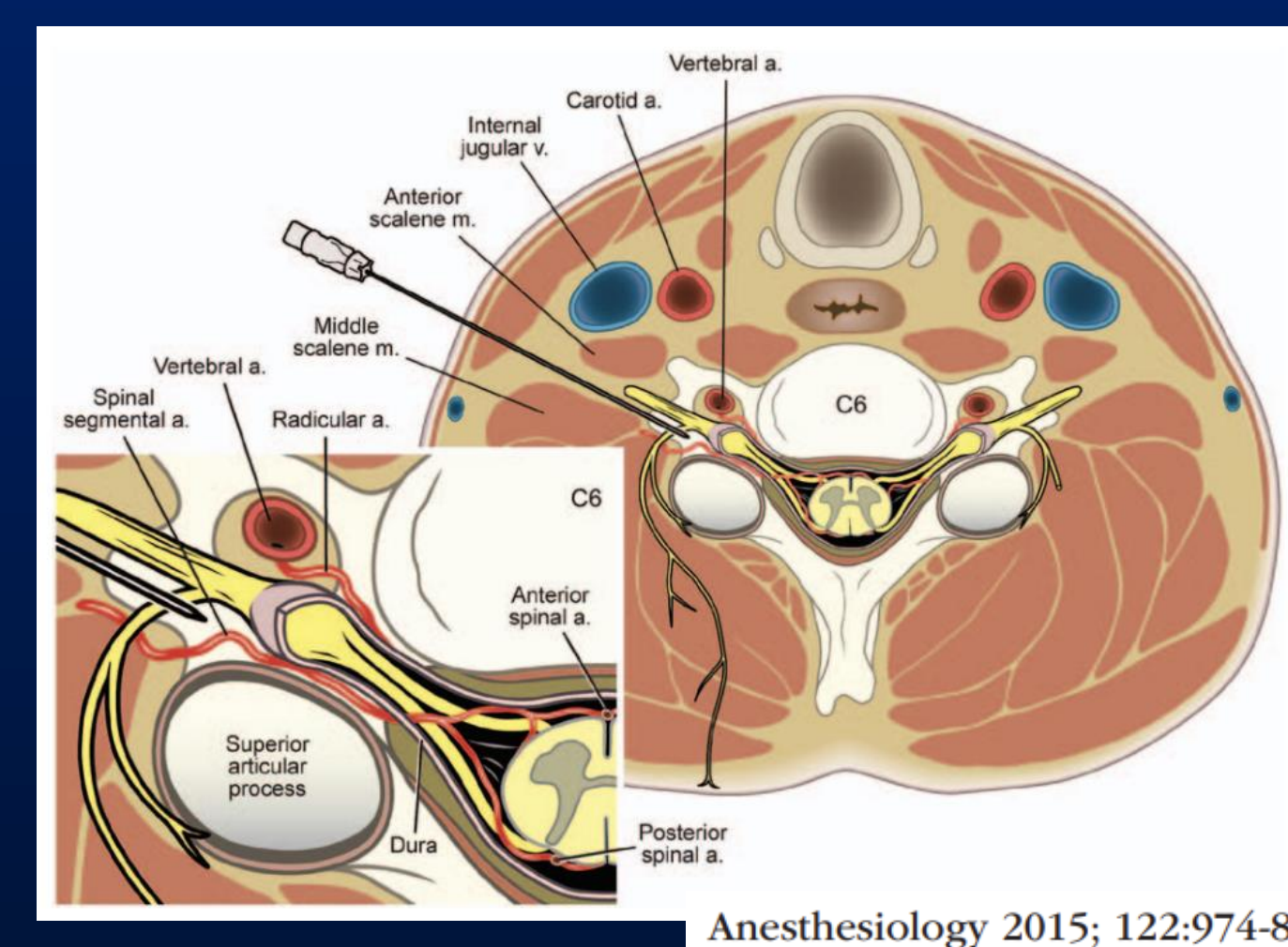
- A review of all cervical TFESI since 2004 using non-particulate steroid was performed using CPT code 64479 (cervical/thoracic TFESI).
- The 2nd part of the study looked at side effects and complications.

Results

- From 2004 – 2021 CPT 64479 was used for 6244 cervical and 726 thoracic TFESI's. No catastrophic complications were documented.
- Complications from 200 patients: 7 patients (3.5%) had transient increase in pain, 18 patients (9%) had no change in pain, and 171 patients had a decrease in pain.

Immediate Complications	Number	Percentage with 95% CI
Increase in pain	7/200	3.5% (0.95 – 6.0)
Increase of pain $\geq 3/10$	5/200	2.5% (0.34 – 4.7)
Increase pain requiring urgent care	1/200	0.5% (0.0 – 1.5)
Muscle spasm	1/200	0.5% (0.0 – 1.5)
Insomnia	1/200	0.5% (0.0 – 1.5)
Elevated glucose (>500)	1/200	0.5% (0.0 – 1.5)
Transient numbness thumb	1/200	0.5% (0.0 – 1.5)
Elevated blood pressure	1/200	0.5% (0.0 – 1.5)
Neck rash	1/200	0.5% (0.0 – 1.5)

Table 1. Immediate complications after cervical transforaminal epidural steroid injections.



Discussion

- This study supports cervical TFESI's safety when using non-particulate steroids.

Safety

- Non-particulate steroids
- Review MRI beforehand, locate vertebral artery
- Live Fluoro with contrast
- Extension Tubing
- Optional: Digital Subtraction Angiography (DSA), test dose of lidocaine, modified approach

Limitations

- Retrospective Study
- Inconsistent documentation
- Patients may have sought medical care outside of health system
- Potential physician recall bias for catastrophic complications

References

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