

Cervical Epidural Steroid Injection (TFESI) Understanding Your Risks

This document outlines the risks and potential complication rates associated with cervical Transforaminal Epidural Steroid Injection (TFESI). The following information is based on recent evidence from multicenter studies, prospective trials, and consensus guidelines.

Purpose of the Procedure:

CTFESI is performed to deliver corticosteroid and local anesthetic near the affected cervical nerve root to reduce inflammation and alleviate radicular pain. It is typically considered for patients with cervical radiculopathy who have not responded to conservative management.^{[1][3][5]}

Expected Benefits:

- Short-term pain relief and functional improvement in selected patients with cervical radiculopathy, especially due to disc herniation or foraminal stenosis.^{[3][5]}
- CTFESI may help avoid or delay surgical intervention in some cases, but long-term benefit is less certain and repeated injections may be required.^{[1][3][5]}
- The number needed to treat for one patient to benefit is estimated at 4–15 for radicular pain, with modest effect size and short-term benefit.^{[1][5]}

Common Risks and Estimated Incidence:

- Any complication: 1.6–4.6% (most are minor and self-limited).^{[2][4-6][9]}
- Increased pain at the injection site, transient radicular pain, or soreness: 1–3%.^{[2][4][6][9]}
- Vasovagal reaction (lightheadedness/fainting): 1–2%.^{[4][6][9]}
- Headache, facial flushing, or insomnia: 1–2%.^{[4][6][9]}
- Minor bleeding or hematoma at the injection site: rare (<1%).^{[2][4][6]}
- Most minor complications resolve without lasting effects.^{[2][4][6][9]}

Serious or Rare Risks:

- **Catastrophic neurologic complications** (spinal cord infarction, brainstem or cerebellar infarction, paralysis, stroke, or death): exceedingly rare but reported, most often associated with inadvertent intra-arterial injection of particulate steroids. ^{[1-3][6-8]}
- Permanent neurological deficit: rare but possible. ^{[2-4][6][8]}
- Infection (epidural abscess, meningitis): exceedingly rare. ^{[2][6]}
- Allergic reaction to injectate: rare. ^{[2][6]}
- Vascular injury or inadvertent intravascular injection: risk is higher in the cervical region due to proximity of critical arteries; major vascular complications are rare but potentially devastating. ^{[2-3][6-8]}
- Hematoma requiring evacuation: rare (<1%). ^{[4][6]}
- The use of **nonparticulate steroids** (e.g., dexamethasone) and advanced imaging guidance is strongly recommended to minimize risk. ^{[1-3][6-7]}

Risk Factors for Increased Complications:

- Advanced age, coagulopathy, anatomic variations, and multilevel injections may increase risk. ^{[2-3][6]}

Additional Considerations:

- The majority of complications are minor and resolve without long-term sequelae; however, catastrophic events, while rare, can occur and are often irreversible. ^{[1-3][6][8]}

Patient Acknowledgment: By signing below, the patient acknowledges understanding of the above risks, their estimated incidence, and the potential for both common and rare complications associated with cervical Transforaminal Epidural Steroid Injection (TFESI). All questions have been answered to the patient's satisfaction.

Signature: _____ **Date:** _____

Patient Name: _____ **DOB:** _____

References

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