

INTRODUCTION

Thoracotomy is associated with severe postoperative pain which risks prolonged recovery. Thoracic epidural analgesia is a gold standard for thoracotomy-related pain, providing superior analgesia compared with systemic or regional alternatives (1).

However, percutaneous catheter placement may be contraindicated or technically infeasible when spinal instrumentation or distorted anatomy complicates access to the epidural space.

Here, we present a case of intraoperative thoracic epidural placement under direct surgical visualization during resection of a large tumor.

CASE PRESENTATION

A 61-year-old female presented with progressive shortness of breath. Imaging revealed a 10×9×9 cm right intrathoracic mass abutting the T5–T7 vertebral bodies and involving the T6 nerve root. Biopsy confirmed schwannoma.

She underwent a combined procedure: hemilaminectomy with division of the T6 nerve root followed by thoracotomy for intrathoracic resection.

Preoperative epidural placement was considered by the Acute Pain Service but judged not feasible due to the concurrent spinal operation.

MAIN FINDING

An epidural catheter can be safely placed under direct surgical visualization when standard percutaneous placement is not feasible for combined spine-thoracic cases, providing effective postoperative pain control for thoracotomy.

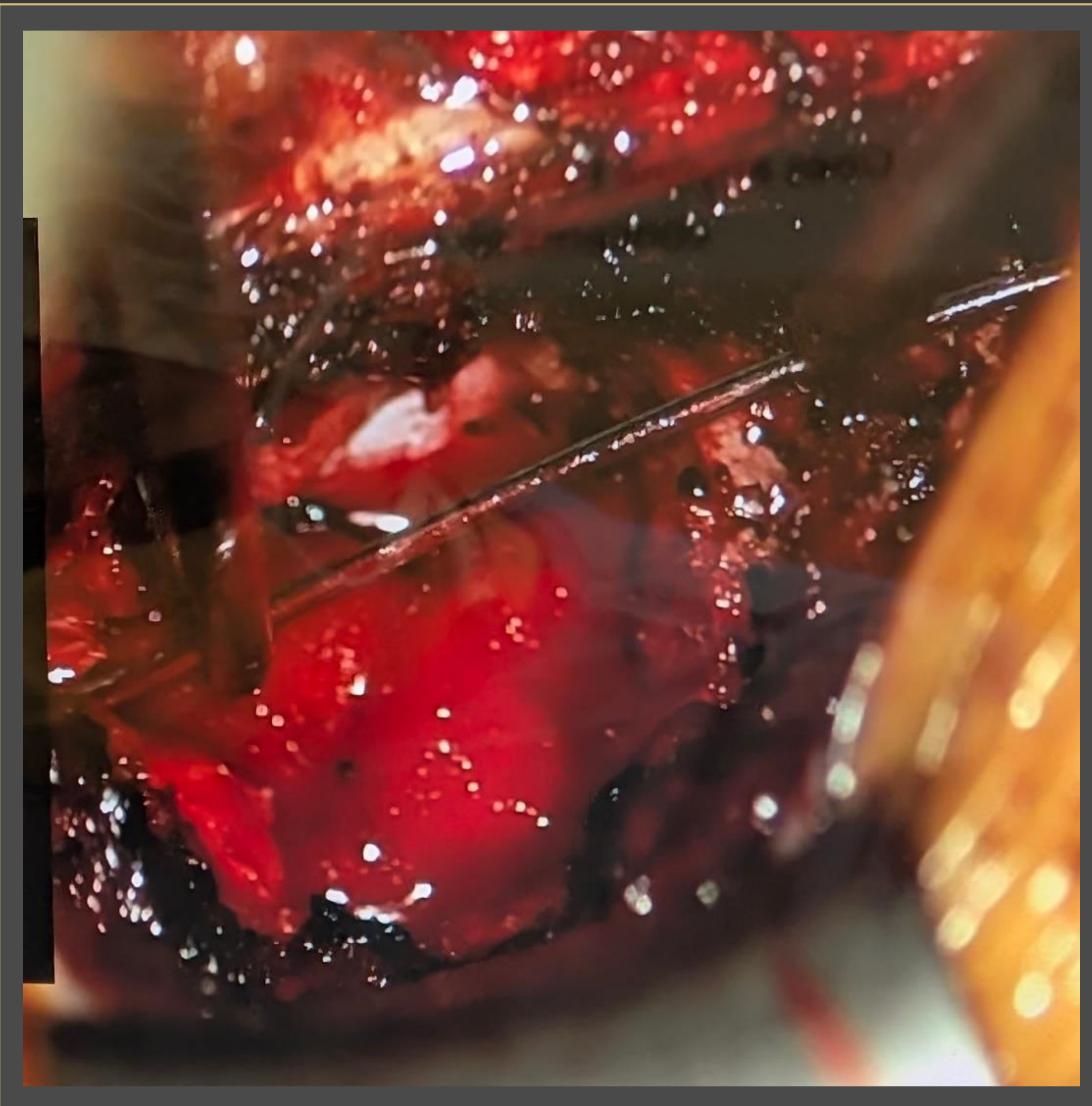


Figure 1. Intraoperative view: surgical threading of epidural catheter at the edge of the T6 hemilaminectomy.

Post-Operative Pain Score: 4 / 10

Pain localized primarily at spinal incision. Epidural provided satisfactory thoracotomy analgesia.

PROCEDURE

After right T6 hemilaminectomy and facetectomy, the neurosurgical team ligated and transected the T6 nerve root proximally.

Under direct visualization through the surgical field at the edge of the T6 hemilaminectomy, an epidural catheter was advanced cephalad into the epidural space to the T4 level. The catheter was tunneled subcutaneously to an exit site in the left lateral chest wall, secured, and dressed in a sterile fashion. The patient was then positioned laterally and the cardiothoracic team proceeded with thoracotomy.

A continuous epidural infusion was initiated with bupivacaine 0.08%, hydromorphone 5 µg/mL, and basal / bolus / lockout of 6 / 3 / 15.

DISCUSSION

There is case-level evidence that surgically placed thoracic epidural catheters are effective (2, 3). This technique eliminates blind needle manipulation and ensures neuraxial analgesia is established prior to emergence, precluding the need for PACU intervention.

Our case parallels the recent report by Davis et al. (4) but instead we used an anterograde approach, further highlighting the feasibility, effectiveness, and value of this technique for combined spine-thoracic tumor resections.

REFERENCES

1. Sarridou DG, et al. *J Pers Med*. 2023;13(12):1672.
2. Seal DD, et al. *Can J Anaesth*. 1998;45:170–174.
3. Turner A, et al. *Anaesthesia*. 2000;55(4):370-3.
4. Davis VB, et al. *Int Med Case Rep J*. 2025;18:785-790.