Post Operative Paraplegia After Laparoscopic Colorectal Surgery
A Case Report and Literature Review

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INTRODUCTION

- Epidural anaesthesia is frequently used to provide perioperative pain relief in thoracoabdominal surgeries.
- The incidence of transient neurological deficits is 0.1 %, and permanent is extremely rare after epidural block.
- Acute spinal cord infarction is unexpected in surgeries remote from the spinal axis.
- We present a case of post operative paraplegia following laparoscopic GI surgery under general anesthesia and epidural for analgesia.

CASE PRESENTATION

- A 44-year-old ASA II male with no co morbidities was planned to under go laparoscopic assisted right hemi colectomy.
- After thorough pre operative assessment a plan of general anesthesia, epidural for analgesia and standard plus invasive monitoring was decided upon.
- Epidural placed T9–T10 uneventfully; surgery and immediate recovery unremarkable.
- POD 1 afternoon: sudden paraplegia with sensory loss below T8; cranial nerves and upper limbs intact.
- Epidural stopped. TLC/PT/INR done were normal.
- MRI POD 2 showed T2 hyperintensity T4–T12 (Fig. 1)
- Managed with steroids and therapeutic enoxaparin as per neurologist recommendations.
- CT angiogram (POD 5) inconclusive (Fig. 2)
- CSF (POD 7) showed 87 mg/dL), normal glucose 33 mg/dL and TLC 14 cells/mm³, sterile cultures, and a negative PCR panel.
- Plasmapheresis three sessions done, no improvement noted.
- MRI DWI (POD 13) confirmed spinal cord infarction (Fig. 3)
- Patient discharged on request for second opinion on POD 14, till now his neurological status is static.

DISCUSSION

- Paraplegia is loss of motor and sensory function in lower limbs, may result from spinal cord ischemia.
- Spinal cord infarction is rare (~1–2% of ischemic strokes).
- Causes include vascular, systemic, surgical, anesthesia-related, pre-existing spinal conditions, patient positioning.
- MRI is the mainstay for diagnosis, diffusion-weighted imaging improves early detection.
- Mid-thoracic cord (T4–T8) has limited collateral supply (“watershed zone”), prone to ischemia.
- Studies say even brief ischemia (2–3 min) causes irreversible neuronal injury.
- Evidence for stroke therapies (aspirin) in SCI is limited.
- In contrast to limited reported cases, our patient had no typical risk factors, stayed hemodynamically stable and no complications during epidural insertion or surgery.

Figure 1

Figure 3

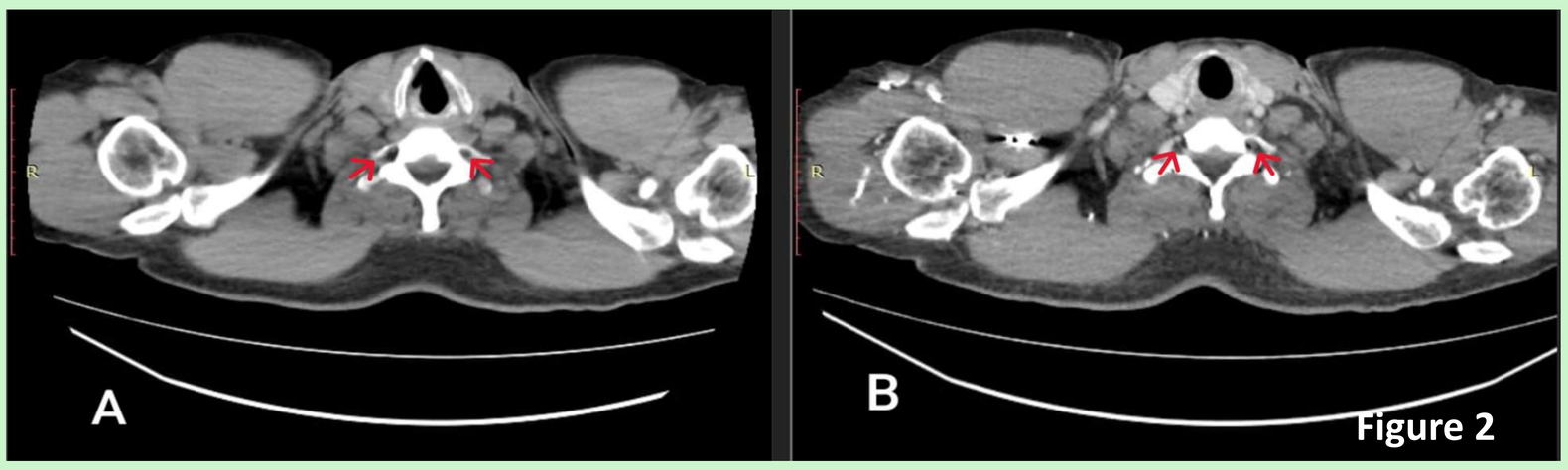

Figure 2

CONCLUSION

- This case adds to the limited but expanding literature pool on postoperative paraplegia following colorectal surgery, especially in patients without identifiable risk factors.
- It accentuates that even without the presence of appreciable predisposing conditions, catastrophic neurologic complications can manifest.
- The prognosis in such idiopathic cases may remain dismal, reinforcing the need for ongoing vigilance and further research.

RECOMMENDATIONS

- Follow a “prevention is better than cure” approach with preoperative cardiovascular assessment, especially in hypovolemic patients.
- Maintain strict intra- and postoperative blood pressure control.
- Review family and medication history for potential risk factors.
- Assess lower limb neurological and vascular status preoperatively.
- Use preoperative imaging (CT/MRI) to detect spinal lesions.
- consider chest X-ray for spinal ossification.

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