

INTRODUCTION

Background: Cervical plexus blocks (CPB) are frequently utilized for carotid endarterectomy (CEA) due to their low complication profile.

Conversion to GA: The most common drivers for converting to general anesthesia (GA) are block failure (40%) and patient anxiety (45%).

Rare Complication: Intractable coughing is an infrequent complication. While previous reports mention paroxysmal coughing after “weak cough” leading to increased bleeding, this case focuses on an immediate, primary cough.

Objective: To present a case where uncontrollable coughing following CPB necessitated urgent GA conversion.

MATERIALS&METHODS

The Procedure: An ultrasound-guided combined superficial and intermediate CPB was performed.

Supplementation: The block was supplemented by submandibular and incision site subcutaneous injections.

Local Anesthetic (LA): A total volume of 35 mL was administered, consisting of 25 mL 0.5% ropivacaine and 10 mL 2% lidocaine.

Ethics: No off-label medications or Investigational New Drugs were used.

CASE REPORT

Patient History: A 75-year-old male with hypertension and CAD presented for CEA with 90% right ICA stenosis following a recent TIA.

Preoperative Findings: MRI confirmed an acute infarct in the right parietal operculum.

Acute Event: Within minutes of the ultrasound-guided CPB, the patient developed an intermittent, uncontrollable cough.

Intervention: To ensure surgical field stability, the anesthesia team converted the case to general anesthesia.

Postoperative Course: The patient reported new hoarseness and coughing with all liquid consistencies.

Evaluation:

Bedside Swallow: Suggested penetration with all consistencies.

Nasolaryngoscopy (POD 2): Revealed pooling of secretions in the vallecula and bilateral pyriform sinuses and mild post-cricoid edema.

Clinical Status: Vocal cords were intact and symmetric, but a significant supraglottic squeeze was observed during phonation.

Resolution: Symptoms improved by the third day, and by POD 5, clinical evaluation showed no overt signs of aspiration with clear liquids.

REFERENCES

1. Pandit JJ, Satthaporn S, Buchan A, et al. Superficial or deep cervical plexus block for carotid endarterectomy: a systematic review of complications. *Br J Anaesth.* 2007;99(2):159-169.
2. Harris RJD, Benveniste G. Recurrent laryngeal nerve blockade in patients undergoing carotid endarterectomy under cervical plexus block. *Anaesth Intensive Care.* 2000;28(4):431-433.
3. Van Houtte E, Van Lierde K, Claeys S. Pathophysiology and treatment of muscle tension dysphonia: a review of the current knowledge. *J Voice.* 2011;25(2):202-207.

DISCUSSION

Pathophysiology: The intractable cough likely resulted from LA spread to the branches of the vagal trunk.

Mechanism: This spread may cause impaired laryngeal sensation or motor coordination, leading to aspiration and a subsequent protective cough.

Clinical Significance: Recognition of this rare complication is vital for the timely decision to convert to GA to proceed with surgery safely.

Conclusion: Unlike delayed paroxysmal coughing reported in other literature, this immediate cough indicates a direct primary effect of the LA on vagal branches rather than a secondary surgical injury.

