

Cervical lymphadenectomy in a high-risk patient under superficial cervical plexus block as an alternative to general anesthesia

Dear Editor,

A 55-year-old male with a known case of diabetes mellitus, coronary artery disease, and moderate chronic obstructive pulmonary disease (COPD) presented for diagnostic lymph node (4*3 cm in size) biopsy of the right side of the neck. The patient had type 2 diabetes mellitus for 15 years and was taking combination of metformin 1000 mg and dapagliflozin 50 mg once a day (OD), glimepiride 2 mg twice daily, and insulin lente 22 units at bedtime. The patient was a known case of coronary artery disease with hypertension for 15 years and was managed with oral carvedilol 3.125 mg OD and lasilactone 50 mg OD. The patient had undergone off-pump coronary artery bypass graft surgery for four-vessel coronary disease a year back. The patient was on oral aspirin 75 mg, rosuvastatin 20 mg, and clopidogrel 75 mg. The patient had an episode of heart failure with chest pain 2 months back with shortness of breath. Dyspnea was of modified British Medical Research Council Grade 3. The patient was a chronic smoker with 1.5 packs per day for 25 years but had stopped 1 week back. The pulmonary function test revealed moderate COPD. On respiratory examination, there was bilateral wheeze. The patient was put on inhalation capsules as formoterol tartrate 12 µg and glycopyrrolate 12.5 µg and after 1-week therapy, the patient had no wheeze on chest auscultation. Chest X-ray showed emphysematous changes with no active chest infection. In electrocardiogram, old Q wave changed with ST-T strain pattern. Echocardiography revealed moderate left ventricular systolic dysfunction with ejection fraction of 40%. Premedication modification of treatment drugs was done. Neck lymph node biopsy is a low-risk surgery and anesthetic plan was discussed with the patient and surgeon. After obtaining written informed consent and attaching all monitors, the patient was positioned in supine position with neck turned to the left side. Superficial cervical plexus block (SCP) was performed under strict asepsis, using a high-frequency ultrasound probe. A volume of 5 ml of 0.2% ropivacaine and 1 ml of 4 mg dexamethasone were injected in plane at the midpoint of posterior border of sternocleidomastoid muscle. The patient received IV midazolam 1 mg and IV fentanyl 50 µg titrated to effect. The excision lasted 40 min [Figure 1]. The patient received Tab paracetamol 500 mg thrice daily

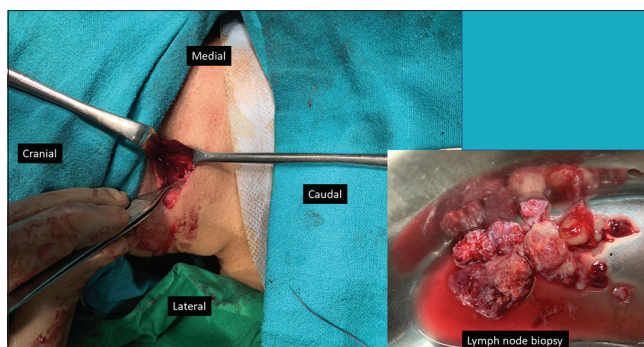


Figure 1: Showing neck lymph node excision biopsy being performed by a surgeon and the excised lymph node

for postoperative pain relief. The perioperative period was uneventful.

The role of ultrasound in the head and neck has increased safety and accuracy in real-time.^[1] SCP in the present case blocked the sensory and sympathetic nociceptive inputs. SCP constitutes ascending and descending loops of C 1-4 and blocks the cutaneous sensory supply of skin on the head, neck, and chest in addition to muscular and communicating branches arising with cervical plexus. The SCP communicates with sympathetic fibers derived from superior, middle, and inferior cervical ganglia. In addition to this, cervical plexus communicates with X, XI, and XII cranial nerves.^[2] Motor supply of sternocleidomastoid muscle from accessory muscle and sensory supply from cervical plexus. Scalene muscles receive sensory supply from C4–C6. This was supplemented with midazolam and fentanyl to reduce anxiety and analgesia.

In the present case, we chose adequate analgesia with SCP as an alternative to general anesthesia (GA) for lymph node biopsy as GA could have increased the perioperative risk for respiratory and cardiac complications. In an earlier study, authors studied bilateral superficial plexus block versus GA in neck surgeries using 12–14 ml of 0.5% ropivacaine using the landmark technique.^[3] Meta-analysis supports the use of perineural dexamethasone with local anaesthetic as compared to intravenous dexamethasone in upper limb surgeries as it reduces analgesic consumption, increases analgesia by 3 h, and reduces pain intensity at 12 and 24 h postoperatively.^[4]

Preoperative team planning and choice of SCP as an alternate to GA provided a successful perioperative outcome.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images

and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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