

## Superficial Cervical Plexus Block Produces Effective Analgesia in Auricular Reconstruction Using Postauricular Flap in a Pediatric Patient

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### *Yüzeyel Servikal Pleksus Bloğunun Pediatrik Hastada Postaurikular Flap ile Aurikula Rekonstruksiyonunda Etkin Analjezik Etkinliği*

Dear editor,

Superficial cervical plexus (CPB) block is a well defined regional anesthesia technique and most commonly preferred for superficial neck surgeries. Local anesthetic is injected into the vicinity of the sensory branches of the nerve roots C2-4 which innervate the scalp and neck. This block can be performed easily with both landmark technique or ultrasound guidance, and using ultrasound ensures the spread of local anesthetic through the correct plane and increases the success rates while decreases the complication rates <sup>(1)</sup>.

A 13 year-old ASA I, 170 cm tall male patient, weighing 62 kg with auricular laceration due to traffic accident presented for reconstruction using a reversed flap from postauricular area. Informed consent was obtained from the patient's parents to present details of the case. The anesthetic block was performed preoperatively. After the appropriate skin disinfection, linear ultrasound transducer (10-18 MHz Esaote My Lab 5, Geneva, Italy) was placed over the lateral side of the neck in transverse orientation and cervical plexus was visualized under sternocleidomastoid (SCM) muscle. The 22G, 50 mm needle (Braun, Ultraplex, Melsungen, Germany) was inserted using out-of plane approach. After negative aspiration test, 10 ml 0.5% bupivacaine was injected into the fascial plane under SCM (Fig.).

General anesthesia was induced with 2 mg kg<sup>-1</sup> iv propofol, 1 mcg kg<sup>-1</sup> iv fentanyl and maintained with sevoflurane in 60% N<sub>2</sub>O/40% oxygen. Surgery lasted for one hour without any adverse event. For postoperative pain management. 2 mg morphine iv and 1 gr paracetamol iv were administered

The patient was pain free for the first 20 hours. He reported mild pain for the first time at postoperative 20<sup>th</sup> hour and responded to 500 mg paracetamol iv. The patient did not require any systemic analgesic and was discharged home 48 hours after the surgery. Overall, the child and her parents were satisfied with the analgesia technique provided.

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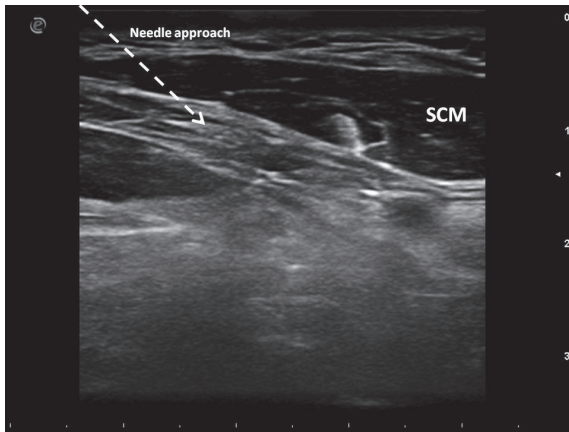


Figure. Ultrasound image of superficial cervical plexus block. SCM: sternocleidomastoid muscle.

As CPB is frequently performed to provide anesthesia for carotid endarterectomy procedures, this block can be also used to provide postoperative analgesia for thyroid and parathyroid surgeries<sup>(2)</sup>. Two branches of cervical plexus, namely greater auricular nerve (C2-C3) innervates auricula and lesser occipital nerve (C3) postauricular area. There are few cases of CPB performed for ear surgeries in the literature. In our clinic, we previously performed CPB for auricula surgery to provide anesthesia<sup>(3)</sup>. For anesthesia Ritchie et al.<sup>(4)</sup> applied CPB only on greater auricular nerve as sole anesthetic block in elderly patient with high risk for resection of auricular skin lesions. Flores et al.<sup>(5)</sup> performed greater auricular nerve block in emergency department for the repair of ear laceration and drainage of ear abscess. Greater auricular nerve block is sufficient for auricular interventions,

but for this case, to provide adequate postoperative analgesia for auricula and postauricular area, we preferred CPB.

Although this case demonstrates that CPB achieves excellent pain control in a pediatric patient who underwent auricular reconstruction using flap harvested from postauricular area, further studies are needed to determine the analgesic effects for ear surgeries.

## REFERENCES

1. Senapathi TGA, Widnyana IMG, Aribawa IGNM, et al. Ultrasound-guided bilateral superficial cervical plexus block is more effective than landmark technique for reducing pain from thyroidectomy. *Journal of pain research*. 2017;10:1619. <https://doi.org/10.2147/JPR.S138222>
2. Gürkan Y, Taş Z, Tokar K, Solak M. Ultrasound guided bilateral cervical plexus block reduces postoperative opioid consumption following thyroid surgery. *Journal of Clinical Monitoring and Computing*. 2015;29:579-84. <https://doi.org/10.1007/s10877-014-9635-x>
3. Türkyılmaz N, Aksu C, Gürkan Y. Superficial cervical plexus block in ear surgery: a case report. *The Journal of The Turkish Society of Algology*. <https://doi.org/10.5505/agri.2018.45762>
4. Ritchie MK, Wilson CA, Grose BW, Ranganathan P, Howell SM, Ellison MB. Ultrasound-guided greater auricular nerve block as sole anesthetic for ear surgery. *Clinics and Practice*. 2016;6:856. <https://doi.org/10.4081/cp.2016.856>
5. Flores S, Herring AA. Ultrasound-guided greater auricular nerve block for emergency department ear laceration and ear abscess drainage. *Journal of Emergency Medicine*. 2016;50:651-5. <https://doi.org/10.1016/j.jemermed.2015.10.003>