Involvement of hypoglossal nerve in interscalene block is extremely rare and is only once reported where hypoglossal nerve palsy was associated with 10th cranial nerve palsy.\[1\]

In Tapia’s syndrome, the extracranial part of the recurrent laryngeal nerve and the hypoglossal nerve are affected and results in ipsilateral paralysis of the vocal cord and the tongue.\[2\] It can be unilateral or bilateral. Rhinoplasty/septorhinoplasty, orotracheal intubation, malposition of the head and neck, compression neuropathy by mass effect, cardiac surgeries were found to be responsible for producing this syndrome.\[3\]-\[5\] Other than pressure neuropathy, dissection of the ascending pharyngeal branch of the carotid artery and direct injury to the nerve are the other possible mechanisms for this syndrome.\[1\] Hypoglossal nerve damage can be caused by stretching or compression of the nerve against the greater horn of the hyoid bone resulting in neuropathic type of nerve injury. Recovery is a slow process and can take weeks to months.\[4\]

In our case, the hypoglossal palsy was not associated with recurrent laryngeal nerve palsy and was unilateral. Unlike other studies, the hypoglossal nerve paralysis persisted for a very brief period (about 4 h) and its onset and offset coincided with that of brachial plexus block. Also, the function of hypoglossal nerve recovered without any intervention. These factors led us to conclude the hypoglossal nerve paralysis as a complication of interscalene block. The diffusion of the lignocaine solution to the neighboring area due to manual compression of the drug injection site might have caused the hypoglossal palsy. Although, the direction of the needle was far away from the anatomic site where the hypoglossal nerve rests, possibility of a direct injury by the needle cannot be ruled out. The use of nerve stimulator and ultrasonogram has increased the success rate of nerve block and reduced the incidence of complications, and should therefore be used in every possible case.\[6\]

**References**

1. Johnson TM, Moore HJ. Cranial nerve X and XII paralysis (Tapia’s syndrome) after an interscalene brachial plexus block for a left shoulder Mumford procedure. Anesthesiology 1999;90:311-2.
2. Schoenberg BS, Massey EW. Tapia’s syndrome. The erratic evolution of an eponym. Arch Neurol 1979;36:257-60.

**Ipsilateral paralysis of hypoglossal nerve following interscalene brachial plexus block**

Sir,

We are reporting an interesting case, where a patient temporarily developed unilateral hypoglossal nerve paralysis following brachial plexus block using interscalene approach.

A 15-year-old male patient, who was diagnosed with acute osteomyelitis of right humerus, was posted for emergency incision and drainage of the right upper arm. Preoperative systemic examinations did not find any clinically relevant abnormality. Right-sided brachial plexus block through interscalene approach was chosen to provide anesthesia. The nerve block was accomplished by eliciting paresthesia using a 22-gauge beveled needle followed by injecting 245 mg of lignocaine with adrenaline (7 mg/kg) in 25 ml solution in the interscalene groove at the level of the cricoid cartilage. The direction of the needle was kept caudal and slightly medial. The injected area was compressed by dry gauge pieces keeping the head end of the table 30° elevated, with the idea to spread the drug along the brachial plexus. The nerve block was confirmed by sensorimotor blockade as well as evidence of ipsilateral ptosis. Soon, the patient developed ipsilateral hypoglossal nerve palsy as evident by right-sided deviation of the tongue producing difficulty in articulation. No hoarseness of voice or aphonia was noted. The cough reflex was intact.

On clinical examination, other cranial nerves were found to be functioning normally. No swelling or hematoma was found at the injection site. During intraoperative period, the patient, however, needed general anesthesia with intubation as he felt pain and discomfort when the surgical incision was extended downward up to medial epicondylar area. The hypoglossal nerve paralysis disappeared in the postoperative period after about 4 h since its onset, during which the effect of lignocaine also waned. As hypoglossal palsy reversed completely within 4 h of onset further investigations such as ultrasonogram, color Doppler or carotid angiogram were not done.

Saswata Bharati, Manas Karmakar, Sujata Ghosh

Department of Anaesthesiology, Calcutta National Medical College, Kolkata, West Bengal, India

Address for correspondence: Dr. Manas Karmakar,
Department of Anaesthesiology, Calcutta National Medical College, Kolkata - 700 014, West Bengal, India.
E-mail: drmanaskarmakar@gmail.com
Letters to Editor

3. Lykoudis EG, Seretis K. Tapia's syndrome: An unexpected but real complication of rhinoplasty: Case report and literature review. Aesthetic Plast Surg 2012;36:557-9.
4. Tesei F, Poveda LM, Strali W, Tosi L, Magnani G, Farneti G. Unilateral laryngeal and hypoglossal paralysis (Tapia’s syndrome) following rhinoplasty in general anaesthesia: Case report and review of the literature. Acta Otorhinolaryngol Ital 2006;26:219-21.
5. Nalladaru Z, Wessels A, DuPreez L. Tapia’s syndrome—a rare complication following cardiac surgery. Interact Cardiovasc Thorac Surg 2012;14:131-2.
6. Antonakakis JG, Ting PH, Sites B. Ultrasound-guided regional anesthesia for peripheral nerve blocks: An evidence-based outcome review. Anesthesiol Clin 2011;29:179-91.

Access this article online

| Quick Response Code: | Website: | DOI: |
| --- | --- | --- |
| | www.joaacp.org | 10.4103/0970-9185.137304 |