Kobe J. Med. Sci., Vol. 58 , No. 2, pp. E60- E62, 2012

Tongue Paraesthesia and Dysgeusia Post Suspension Laryngoscopy

HAZAMA MOHAMAD and IRFAN MOHAMAD

Department of Otorhinolaryngology-Head & Neck Surgery, School of Medical Sciences, , Universiti Sains Malaysia, Health Campus,16150 Kota Bharu, Kelantan, Malaysia.

Received 17 November 2011/ Accepted 11 January 2012

Key words: nerve injury, complication, suspension laryngoscopy, endolaryngeal microsurgery

Suspension laryngoscopy is a common laryngeal procedure in Endolaryngeal microsurgery (ELMS). Oral mucosa and dental injuries are the known complications of the procedure. Nerve injury however is an infrequent encounter. We report a rare complication of lingual nerve injury which manifested as tongue numbness and altered taste following Endolaryngeal microsurgery procedure. The condition improved completely after few months of conservative management.

CLINICAL CASE

A 57 years old Malay housewife presented to Otorhinolayrngology clinic with complaint of persistent hoarseness for 2 months duration. There was no preceeding history of sore throat, chronic cough, voice abuse, dysphagia or odynophagia. She also denied any history hemoptysis, shortness of breath and contact with pulmonary tuberculosis patient. Nasal symptoms were negative and there was no constitutional symptom reported.

On examination, the voice was hoarse but with good phonation time and cough reflex. There was no stridor. The laryngeal framework was palpable and normal laryngeal crepitus was present. The trachea was centrally located and there was no palpable mass or any cervical lymphadenopathy. Oral examination revealed no abnormality with normal tongue appearance and mobility. Indirect laryngoscopy examination showed a hemorrhagic polyp at the anterior part of the right vocal cord. It was removed via ELMS under general anaesthesia. The surgery was uneventful and she was discharged well on the next day.

During follow up at 2 week post surgery, she complained of right side of tongue numbness and altered taste. However there was no paralysis of the tongue. After 2 months, the voice recovered fully but the tongue problems still persisted. Only after 4 month, the altered taste and right tongue numbness fully recovered.

Phone: +6097676417 Fax: +6097676424 E-mail: hazama678@yahoo.com.sg

DISCUSSION

Endolaryngeal microsurgery (ELMS) is a common procedure for benign vocal cord lesion such as vocal cord polyp, vocal cord cyst or nodules. The procedure is done under general anaesthesia. Rigid direct laryngoscope is introduced into the throat and the blade placed against the tongue base and suspended on a mayo trolley using a suspender (suspension laryngoscopy). This procedure of suspending the laryngoscope by placing it against the tongue is needed to enable the surgeons to freely use the both hands for microsurgical procedures.

Although suspension laryngoscopy is routinely used in laryngeal surgery, the complication of this procedure is rarely reported. The most common complications are mucosal injuries (1). Other complications include injury to teeth, lips or gums, bleeding, new or persistent hoarseness, difficulty in swallowing, airway blockage and difficulty in breathing. Temporary nerve injuries are among the rare complications. Besides lingual nerve, hypoglossal nerve is also known to be involved in this procedure (1,2).

The incidence of lingual nerve injury varies significantly between authors. Klussmann JP et al, 2002 observed 13 out of 339 patients(3.8%)(2) whereby Rosen et al., 2005 and Tessema et al, 2006 reported a higher rate of 12.5% and 18% respectively (3,4).

Lingual nerve is the terminal branch of the mandibular nerve. It carries general sensory fibres from the anterior two thirds of the tongue. The secretomotor fibre to the submandibular and sublingual salivary gland and gustatory fibres to the anterior two third of the tongue also distributed through the lingual nerve(5). The part of the nerve that is usually subjected to compression during suspension laryngoscopy is when it travels over the hyoglossus muscles and on the surface of genioglossus muscles deep to mylohyoid muscles. The precise mechanism of injury in this case was not obvious, but stretching of the lingual nerve caused by pressure of the suspended laryngoscope on the tongue or retrolingual region was likely (6).

The symptoms are usually transient and the recovery should be expected in few days or weeks. The average duration of the post suspension laryngoscope complaints was 11 days (3). In other study, showed that the symptoms mostly disappear by 3 months (4). There is a correlation between duration of suspension, size of laryngoscope and risk of developing a minor oropharyngeal complications(3). Female gender was found to be an independent risk factor and the longer the operative time increase the risk of the nerve injury(4).

Although minor complications frequently occur, suspension laryngoscope is a relatively safe procedure with low risk of significant morbidity(2). Besides suspension laryngoscopy, lingual nerve injury has been reported to occur even in easy intubations (7). Evers KA et al, 1999 reported that forceful laryngoscopy, hyperextension of the head and tightly packed throat pack can result in injury of the lingual nerve and hypoglossal nerve(8). The use of oropharyngeal airway for prolonged period also has been reported to end up with lingual nerve complication (9).

In conclusion, although altered taste and tongue numbness are rare complications of suspension laryngoscopy during ELMS, this possibility should be explained to patient especially during taking informed consents preoperatively.

REFERENCES

1. **Corvo MA, Inacio A, Mello MB, Eckley CA, Duprat Ade C**. 2007. Extralaryngeal complications of suspension laryngoscopy. Braz J Otorhinolaryngol;**73(6)**:727-32.
2. **Klussmann JP, Knoedgen R, Wittekindt C, Damm M, Eckel HE**. 2002. Complications of suspension laryngoscopy. Ann Otol Rhinol Laryngol:**111(11)**: 972-6.
3. **Rosen CA, Anrade Filho PA., Scheffel L, Buckmire R**. 2005. Oropharyngeal complications of suspension laryngoscopy: a prospective study. Laryngoscope:**115(9)**:1681-4.
4. **Tessema B, Sulica L, Yu GP, Sessions RB**. 2006. Tongue paresthesia and dysgeusia following operative microlaryngoscopy. Ann Otol Rhinol Laryngol:**115(1)**:18-22.
5. **Chaurasia BD**. 1992. Human Anatomy, regional and applied. Second ed, ed. I. Singh. **Vol. 3**.: CBS publishers and Distributors. 150.
6. **Gaut A, Williams M.** 2000. Lingual nerve injury during suspension microlaryngoscopy. Arch Otolaryngol Head Neck Surg: **126(5)**:669-71.
7. **Baumgarten V, Jalinski W, Bohm S, Galle S**. 1997. Hypoglossal paralysis after septum correction with intubation anesthesia. Anaesthesist: **46(1)**: 34-7.
8. **Evers KA, Eindhoven GB, Wireda JM**. 1999. Transient nerve damage following intubation for trans-sphenoidal hypophysectomy. Can J Anaesth: **46(12)**:1143-5.
9. **Wang KC, Chan WS, Tsai CT, Wu GJ, Chang Y, Tseng HC**. 2006. Lingual nerve injury following the use of an oropharyngeal airway under general anesthesia. Acta Anaesthesiol Taiwan: **44(2)**:119-22.