Vallecular Neurofibroma Successfully Managed with Endoscopic Assisted Coblation: A Novel Technique

Sidharth Pradhan¹ · Swagatika Samal² · Pradeep Pradhan^{1,3} · C. Preetam¹ · Pradipta Parida¹

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Abstract Although solitary neurofibroma can affect the various subsites of the head and neck region, oropharyngeal neurofibroma is very rare and total five cases (four in the soft palate and one in the palatine tonsil) have been reported. Here we present a 42-year old female patient presented to the out patient department with respiratory obstruction and voice change for 3 months. Complete excision of the mass was achieved by endoscopic coblation and which was confirmed to be a neurofibroma.

Keywords Solitary neurofibroma · Oropharynx · Endoscopic coblation

Neurofibroma is a benign nerve sheath tumour affecting the peripheral nervous system, constituting about 5% of all the benign soft tissue neoplasms in the body, originating from the Schwann cells or the perineural fibroblast cells [1]. Total five cases of oropharyngeal neurofibroma (four in the soft palate and one in palatine tonsil) have been reported in the literature [2–4]. An occurrence of vallecular neurofibroma is extremely rare and to the best of our

knowledge, no case report has been documented in the literature to date. A 42-year old woman presented to the outpatient department with respiratory obstruction and change in voice for 30 days. Flexible endoscopy revealed a smooth mucosa covered mass in the oropharynx, occluding the whole of the lumen. Contrast MRI (T1-weighted) revealed, an enhanced soft tissue mass attached to the vallecula. The routine hematological tests were found normal and no cervical lymphadenopathy was detected in the patient. The patient had undergone laryngoscopic excision of the mass with the help of endoscopic coblation. A 0° 4 mm rigid nasal endoscope was inserted through the direct laryngoscope and the cyst was completely visualized with its fibrous attachment (Fig. 1). The Procise max Coblation wand was inserted along with rigid endoscope and the mass was completely excised (Fig. 2) which was confirmed to be a neurofibroma on histopathology (Fig. 3). Coblation uses bipolar waves to create a plasma field, which disassociates molecular bonds within soft tissues, providing haemostasis with minimal thermal damage to the adjacent structures and allowing for early wound healing which can be safely used in micro-laryngeal surgeries as an alternative to cold knife or laser [5, 6]. The temperature varies between 40 and 70 °C with minimal thermal penetration (< 1100 µm). The utility of the coblation have been described in the literature especially for the obstructive sleep apnoea [7, 8]. We present an endoscopic assisted coblation for the excision of the oropharyngeal mass which not only provides a wide angle view in a narrow space, but ensures a complete clearance of mass in a bloodless surgical field without the risk of fire or collateral thermal damage.

✉ Pradeep Pradhan
padiapradhan@gmail.com

¹ Department of Otorhinolaryngology, All India Institute of Medical Sciences Bhubaneswar, Bhubaneswar, Odisha 751019, India

² Department of Pathology and Laboratory Medicine, All India Institute of Medical Sciences Bhubaneswar, Bhubaneswar, Odisha 751019, India

³ Department of ENT and Head Neck Surgery, All India Institute of Medical Sciences Bhubaneswar, Bhubaneswar, Odisha 751019, India

Fig. 1 Flexible endoscopy revealed a smooth mucosa covered mass in the oropharynx, occluding the whole lumen

Fig. 2 Tip of epiglottis was visualised after complete removal of the mass with endoscopic coblation

Fig. 3 Microscopy revealed a spindle cell lesion in the subepithelium and the spindle cells are arranged in loose fascicles admixed with bundles of collagen without any cellular atypia (H&E, ×40)

Compliance with Ethical Standards

Conflict of interest There are no conflicts of interest among the authors.

Ethical Standard The procedure performed in the study involving human participant was in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Written informed consent has been taken from the patient prior to the surgery and same has been informed to the institute reviewer board. No part of the body has been demonstrated in the case report without the permission of the concerned patient.

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