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Transoral Endoscope Assisted Excision of Parapharyngeal Mass

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I. Introduction

Parapharyngeal space tumors are rare tumors comprising less than 1% of all head and neck neoplasms. Majority of these tumors (70–80%) are benign[1] while 20–30% of these tumors are malignant. They can arise fro m any structure contained within the parapharyngeal space.The parapharyngeal space is a space lateral to the up per pharynx shaped like an inverted pyramid, extending from the skull base superiorly to the greater cornu of the hyoid bone inferiorly. The parapharyngeal space consists of two compartments. The anteromedial or prestyloid compartment containing the retromandibular portion of the deep lobe of the parotid gland, adipose tissue, and ly mph nodes associated with the parotid gland, and a posterolateral or poststyloid compartment containing the inte rnal carotid artery, the internal jugular vein, IX–XII cranial nerves, the sympathetic chain, and lymph Nodes.Mo st parapharyngeal space tumors are of salivary[1] (prestyloid compartment) or neurogenic origin (poststyloid com partment), although metastatic lesions, lymphoreticular lesions, and a variety of uncommon,unusual lesions may develop in this location. Surgery[1] is the main therapy option for tumors of the parapharyngeal space and is often challenging due to limited surgical exposure and associated morbidity. The choice of surgical approach depends on the size of the tumor, its location, its relationship to the great vessels, and the suspicion of malignancy. Vario us approaches are; transoral and externalapproaches (i.e. transcervical, Transparotid, transmandibularand combi ned approach). First time transoral approach was described by Ehrlich[2] in 1950 and it was indicated for small, n on vascular tumors, as it offers poor exposure and does not give adequate control in the event ofhaemorrhage. B ut with advent of endoscope assistance to thistransoral approach, has provides direct and magnifiedvisualization, less amount of bleeding, reduced tissuedamage, improved cosmetic appearance, and fewer wound related compl ications and less post op morbidity.

II. Case Report

A 40 year old female was referred from a hospital with a swelling in oropharynx after a health checkup . She had no other complaints. Examination revealed a smooth bulge in the posterior pharyngeal wall on right si de of size 5x3cm from level of soft palate to the level of pharyngoepiglottic fold and medially upto the midline which is firm,not warm, non-tender, non-pulsatile, irreducible and not compressible. Posterior pillar was pushed anteromedially. Both vocal cords mobile on indirect laryngoscopy. Bilateral tympanic membrane retracted and mobile. Nasopharynx free on diagnostic nasal endoscopy. All cranial nerves were normal. CT neck with carotid angiogram revealed well enhancing soft tissue density mass lesion in the right parapharyngeal space with feedin g vessels from right ascending pharyngeal artery and right maxillary artery(Fig 1,2). Endoscopic transoral excisi on was planned.Patient was put in tonsillectomy position with mouth gag applied.Mass in the parapharyngeal sp ace visualised.Mucosa over the mass incised and longus colli muscle retracted.Assisting surgeon holding 0 degr ee endoscope and surgeon with his hands delineating mass in the parapharyngeal space and cauterising the vasc ulature and mobilising mass from its bed with proper identification of the internal carotid artery and the assistant carefully moving endoscope to the areas operated by the surgeon.After removing the mass intoto, haemostasis a chieved& mucosa sutured with 3.0 vicryl.Oral feeds started from 1st post.op day without any difficulty in swallo wing.The 2nd case was also operated in the same manner.The histopathology for the cases came as paragangliom a &schwannoma for the next one.

III. Discussion

Majority of parapharyngeal space tumors are either salivary glands tumors originating from the deep lo be of the parotid gland or neurogenic tumors originating from the cranial nerves, the cervical symphatetic chain or the glomus bodies (chemoreceptors). Metastatic tumors are mainly thyroid carcinoma, osteogenic sarcoma, a nd squamous cell carcinoma. Tumors may also extend from surrounding structures and spread to the parapharyn geal space (i.e. mandible, maxilla, nasopharynx, neck, oralcavity, oropharynx, and temporal bone).Clinical prese ntation is very variable. Tumors can present as an oropharyngeal or neck mass[1] or with other symptoms such as dysphagia, dyspnea,unilateral conductive hearing loss, hoarseness, true vocal cord palsy, Horner's syndrome an

d symptoms of catecholamine excess like hypertension and flushing.Treatment has to be individualized[3].Differe nt surgical approaches exist (transoral,transcervical, trannscervical-transparotid, transcervical-transmandibular a nd infratemporal-fossa approach).Most commonly used is transcervical[4] approach especially for larger lesions e xtending into skullbase.Nonoperative management of parapharyngeal space lesions is an option for elderly patie nts, those who have a comorbid disease, unresectable lesions and for those who have benign, slow-growing tum ors. Transoral approach was reported to be best suitable for small, isolated pleomorphic adenomas that originate from a small salivary gland in the soft palate or lateral pharyngeal wall tumors. The main disadvantage of this ap proach is limited exposure, increased risk of tumor spillage, and possibility of neurovascular injury. However, th is approach gives the best possible postoperative recovery[5] for the patient (lack of postoperative scar, no damage to the cranial nerves, preservation of the superficial lobe of the parotid gland and facial nerve, absence of Frey's syndrome, no need for mandibular osteotomy)[6] But with advent of video assisted endoscopic assistance,transor al route has provides direct and magnifiedvisualization. Thus transoral approach allows safe[7] excision of sizable benigntumors near to critical anatomical structures.

IV. Conclusion

Traditionally surgeons were considering,

transoral route to the parapharyngeal space as poor and unsafe.Because of the advent of endoscope,end oscopic assisted transoral approach should be one of the primary surgical options for benign tumor not involving the critical structures.

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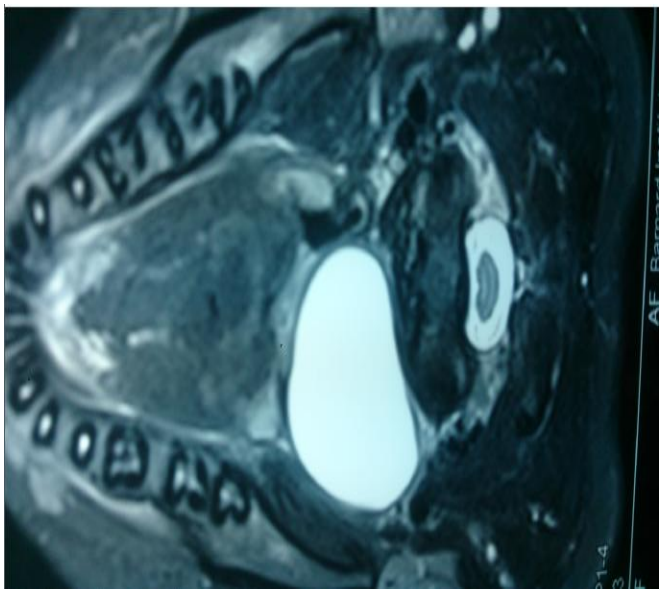
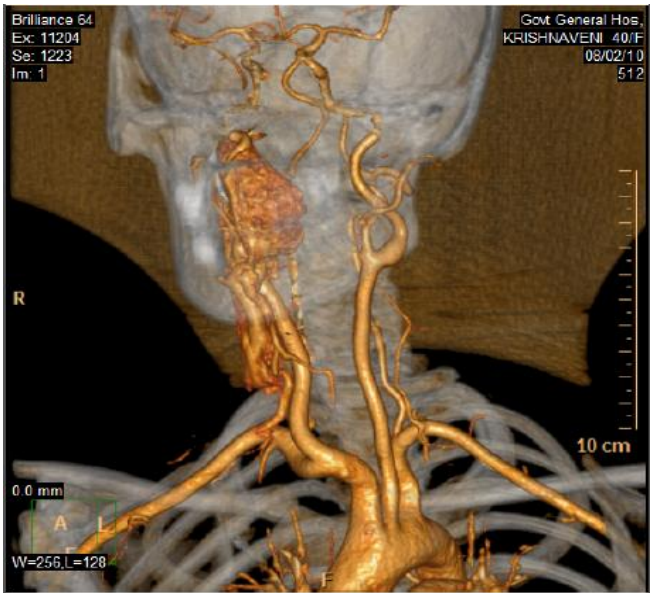
[8]. FIGURE CAPTION:FIGURE 1 &2 Shows Well enhancing soft tissue density mass lesion in the right parapharyngeal space with feeding vessels from Rt ascending pharyngeal A and Rt maxillary A.

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