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Incidence of facial nerve palsy in parotidectomy as observed in a tertiary care centre: A retrospective study.

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Abstract

This was a retrospective study through non probability convenient sampling technique carried from December 2020 to January 2022 in the Department of General Surgery in a tertiary care centre in Ghaziabad, Uttar Pradesh.. Clinical data were recorded from 52 patients and out of them 46 patients had undergone surgery with parotid gland tumours and were reported on the morphology, age, sex, surgical procedure and complications, particularly facial nerve dysfunctions. In most cases ante-grade technique was performed to identify the facial nerve, whereas retrograde technique was used in recurring tumours, and in difficult cases. The stimulator of the nerve has not been used. The nature or severity of Facial nerve dysfunction was investigated in terms of whether it is permanent or temporary, total or incomplete in respect to its branches.

Keywords: Facial Nerve Palsy, Parotidectomy, Complications

Introduction

Tumours of the salivary gland account for approximately 3 % of total tumours while 5 % of the tumours of head and neck.(1)

When the facial nerve emerges from the stylomastoid foramen, it passes over the postero-medial portion of the parotid gland for a short distance.(2) Within the parotid, the division of facial nerve is seen as two main trunks i.e. the cervico-facial and the temporo-zygomatic branches, which also divides within parotid gland to form terminal branches. About 80% of the parotid gland tumours are of benign variety with majority of them i.e. 80 % being pleomorphic adenoma, followed by Warthin's tumor and mono-morphic adenoma.(3)

Parotid gland surgery necessitates appropriate tumor excision and, whenever possible, preservation of the anatomical and functional integrity of the facial nerve.(4) Facial nerve paralysis is a frightening complication of parotidectomy that has received

considerable attention. Because parotid gland tumors are located very close to the facial nerve, this nerve is one of the most critical structures encountered during surgical excision.(5) Facial nerve injury can result in cosmetic and functional morbidity, ocular problems, decreased quality of life, and medical malpractice litigation.(6) The impairment of nerve function can be total (paralysis) or partial (paresis) and can result from damage to the main trunk or specific branches. According to statistics from the international literature, up to 46.1% of patients experience postoperative temporary facial nerve dysfunction.(7) Permanent facial nerve paralysis is less frequent, occurring in 2.5% to 5.0% of cases.(8)

Materials And Methods

This retrospective study focused on patient outcomes following parotidectomy at a single tertiary care centre from 2020 to 2022. All patients provided written consent before surgery. The data acquired from the centre's medical records included the patients' age, sex, details of the presentation, preoperative examination findings, fine needle aspiration cytology results, type of parotidectomy, final pathology, and postoperative sequelae.

Inclusion Criteria

This study included all patients who underwent parotidectomy (total or superficial) for benign tumors, malignant tumors, and chronic inflammatory diseases and had a normally functioning facial nerve preoperatively.

Exclusion Criteria

Patients having preoperative facial nerve weakness or recurrent malignancy were excluded as well as patients who were unfit for general anesthesia were excluded**.**

Surgical Procedure

All patients underwent general anesthesia with endotracheal intubation. The neck was extended and the head turned to the unaffected side. Skin preparation was performed using povidone iodine disinfectant, and the site of the lazy S incision was marked with a skin marker. The incision was then made using local anesthetic infiltration. The skin flap was elevated until just the hair follicles became visible. In most patients, the greater auricular nerve, especially the posterior branch, was identified and preserved. Using familiar landmarks, the facial nerve trunk was identified and tracked, and its branches were conserved. The anterior surface of the gland was dissected intra-capsularly, whereas the posterior surface was dissected extracapsularly. In this way, superficial parotidectomy was accomplished. In certain cases, the pathology was positioned in the deep portion of the parotid gland, necessitating total parotidectomy.

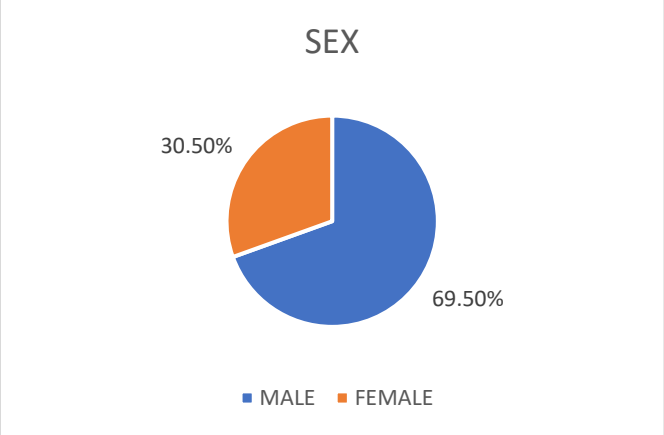
Follow-up: uptil 3 months after surgery

Results

Tumor morphology

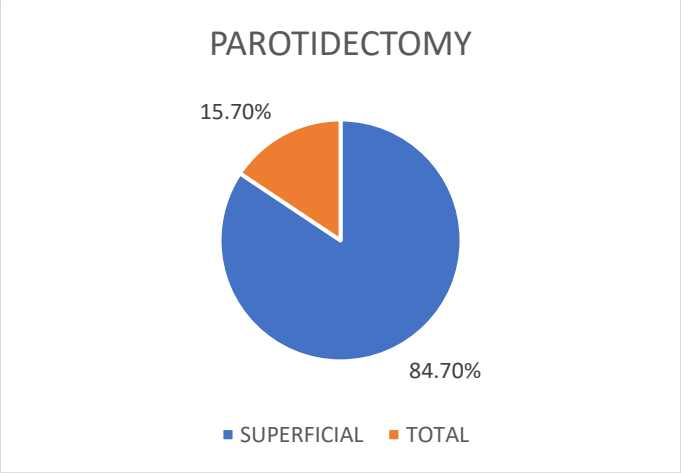
Sn.	Morphology	No. of Patients	%
1.	Pleomorphic adenoma	23	50
2.	Warthin's tumor	17	37
3.	Parotid abscess	6	13

Sex: Out of 46 patients undergoing parotid surgery, 32 (69.5%) were male and 14 (30.5%) were female.



Age: ranged from 36 to 73 years, (median, 52.88 years).

Out of total 46 patients, 39 (84.7%) underwent superficial parotidectomy and 7 (15.3%) underwent total parotidectomy.



Complications

Facial Nerve Injury: Out of 39 patients undergoing superficial parotidectomy, 13 (33%) developed Facial nerve palsy out of which 3 (7.7%) patients were permanently impaired and 10 (25.6%) recovered full function within 2 months.

Out of 7 patients undergoing total parotidectomy, 5 (71.4%) patients developed facial nerve palsy out of which 4 (57.1%) patients were permanently impaired and 1(14.28%) patient recovered full function within 3 months.

1. No instances of Frey's syndrome were observed.
2. 1 patient who underwent total parotidectomy developed flap necrosis (2.1%).
3. No instances of ear numbness following surgery were illicited.

REFERENCES

1. Musani MA, Sohail Z, Zafar A, Malik S. Morphological pattern of parotid gland tumours. J Coll Physician Surg Pak. 2008;18(5):274–277. doi:05.2008/JCPSP.274277.
2. El-Shakhs S, Khalil Y, Abdou AG. Facial nerve preservation in total parotidectomy for parotid tumors:a review of 27 cases. Ear Nose Throat J. 2013;92(6):15.
3. Nepal A, Chettri ST, Joshi RR, Bhattarai M, Ghimire A, Karki S. Primary salivary gland tumors in eastern Nepal tertiary care hospital. J Nepal Health Res Counc. 2010;8(1):31–34.
4. Gaillard C, Périé S, Susini B, et al. Facial nerve dysfunction after parotidectomy: the role of local factors. Laryngoscope 2005; 115: 287–291.
5. Pather N, Osman M. Landmarks of the facial nerve: implications for parotidectomy. Surg Radiol Anat 2006; 28: 170–175.
6. Eisele DW, Wang SJ, Orloff LA. Electrophysiologic facial nerve monitoring during parotidectomy. Head Neck 2010; 32: 399–405.
7. Stodulski D, Skorek A, Mikaszewski B, et al. Facial nerve grading after parotidectomy. Eur Arch Otorhinolaryngol 2015; 272: 2445–2450.
8. Savvas E, Hillmann S, Weiss D, et al. Association between facial nerve monitoring with postoperative facial paralysis in parotidectomy. JAMA Otolaryngol Head Neck Surg 2016; 142: 828–833.