

Original Article**Dealing with Parotid Tumours in a Tertiary Level Hospital**

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ABSTRACT

Salivary gland tumours represent widespread varieties of tumours due to their histological diversity. Management of salivary gland tumours demands detailed knowledge about its anatomy and pathological processes. Most of the salivary gland tumours usually develop at parotid glands, and most of them are benign. Surgical excision is the primary modality for the management of parotid tumours. In certain circumstances, malignant tumours of parotid gland also require adjuvant therapy in addition to surgery. It was a cross-sectional study that was conducted on 30 patients who underwent parotid surgery from January 2021 to January 2023 in the department of ENT and Head-Neck Surgery, Jalalabad Ragib-Rabeya Medical College Hospital. The aim of the present study was to understand the distinct types of parotid tumours, their surgical management, and possible complications. Our study showed 26 (87%) of the parotid tumours were benign; among them, pleomorphic adenoma 19 (71%) was the most common type. Among the malignant tumours, most common type was mucoepidermoid carcinoma 3 (75%). As a part of tumour management, the most common approach to surgery was superficial parotidectomy 21 (70%). Among the patients underwent surgery, 8 (26.7%) developed complications. Parotidectomy can be a very safe approach to tumour management if it is conducted by skilled hand with optimal facilities.

Keywords: Parotid tumour, Functional neck dissection, Parotidectomy.

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INTRODUCTION

Salivary gland tumours are one of the unique and complex diseases of the head and neck region. Salivary

gland tumours account for 3% of all head and neck tumours¹. Out of all types of salivary gland tumours, parotid gland accounts for about 80% of all neoplasms. Parotid tumours represent various patterns of tumours due to its histological diversity. Fortunately, most of them are benign. Among parotid gland tumours, benign tumours account for about 80%, and malignant tumours account for 20%². Surgical treatment is the first choice for benign parotid tumours. The parotid gland has a very complex anatomical structure due to its relationship with

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the facial nerve and large vessels. The special anatomy around the parotid gland and the pathological nature of the tumour makes the surgical complications of the parotid gland particularly high, such as facial paresis, parotid fistula, facial depression deformity, etc^{3,4}. With the continuous improvement of parotid surgery, patients' quality of life has improved to a certain extent. However, malignant tumours of the parotid gland demand total parotidectomy with adjuvant functional neck dissection (FND) to a certain extent, and adjuvant radiotherapy is often needed to prevent any micro-metastasis⁵. The aim of the present study was to understand the distinct types of parotid tumours, their surgical management, and possible complications.

MATERIALS AND METHODS

This is a cross-sectional study that was carried out in the department of ENT and head-neck surgery, Jalalabad Ragib-Rabeya Medical College Hospital, Sylhet, from January 2021 to January 2023. A total of 30 patients with parotid tumours, irrespective of age and sex were included in this study based upon the inclusion and exclusion criteria by consecutive sampling method. Ethical issues were properly maintained. Patients representing slow-growing painless swelling in the parotid region with or without a certain amount of paresis, and histological diagnosis by fine needle aspiration cytology were included in this study. Patients with inoperable parotid mass with adjacent structure involvement, and histologically and radiologically determined advanced cases were not included in this study. All patients meeting the inclusion and exclusion criteria were properly examined regarding the lobe of parotid involvement as well as any evidence of facial nerve involvement, which was also assessed clinically. All the patients were treated either by superficial parotidectomy or total parotidectomy, depending on the degree of tumour mass involvement. Neither tumour enucleation nor conservative parotidectomy was performed in order to prevent any recurrence. A few malignant cases that were associated with cervical lymphadenopathy were also treated by functional neck dissection in addition to total parotidectomy and later referred to the department of oncology, JRRMCH for further management. Data including age, gender, histologic findings, complications, mode of surgical approach were collected from medical charts. The data was analysed manually and presented as frequency and percentage. Microsoft excel was used for demographic presentation.

RESULTS

A total of 30 patients were admitted during the course of the study period. The age of the patients with parotid tumours ranged from 20-60 years, with a mean age of 40. Among the patients, 17 (57%) were females and the remaining 13 (43%) were males (Figure-3). Most of the patients with parotid tumours (87%) were diagnosed as benign. Among them, 19 (71%) were diagnosed as pleomorphic adenoma, and the remaining 7 (29%) were diagnosed as Warthin's tumour. Among the admitted patients, 4 (13%) were diagnosed as malignant. Out of them, 3 (75%) patients had mucoepidermoid carcinoma, and the remaining one patient (25%) had features of adenoid cystic carcinoma (Table-II). Most of the patients with parotid tumours were operated on by superficial parotidectomy 21 (70%), the second most common approach of surgery was total parotidectomy 7 (23%), and the rest of the cases 2 (7%) were treated by total parotidectomy with functional neck dissection (Table-III). Among the patients with parotid tumours who underwent surgery, 8 (26.7%) developed certain complications. The complications were flap necrosis 3 (37%), seroma 2 (25%), facial nerve paresis 2 (25%) and parotid fistula 1 (13%) (Table-IV).

Table-I: Distribution of the patients according to age, N- 30

Age (Years)	Number of Patients	Percentage
20-30	3	17
31-40	13	40
41-50	12	37
51-60	2	6
Total	30	100

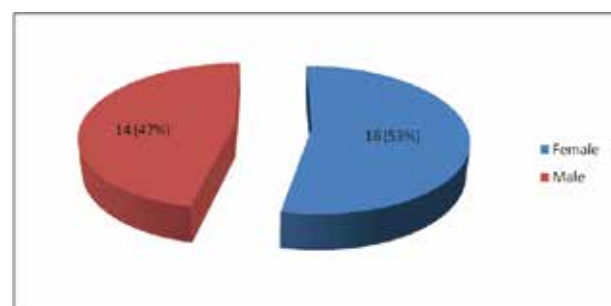


Figure-1: Gender distribution of the patients, N=30



Figure-2: Pleomorphic Adenoma



Figure-3: Warthin's Tumour

Table-II: Histological subtypes, N=30

Histologic Subtype	Frequency	Percentage
Benign		
Pleomorphic adenoma	19	71
Warthin's tumour	7	29
Malignant		
Muco epidermoid carcinoma	3	75
Adnoid cystic carcinoma	1	25

Table-III: Mode of surgical approach, N=30

Surgical Approach	Number of the Patients	Percentage
Superficial parotidectomy	21	70
Total parotidectomy	7	23
Total parotidectomy with FND	2	7

*FND= Functional neck dissection

Table-IV: *Complications associated with parotid surgery, N=8*

Complications	Number of Patients	Percentage
Flap necrosis	3	37
Seroma	2	25
Facial nerve paresis	2	25
Parotid fistula	1	13

DISCUSSION

Head and neck surgical procedures always demand great expertise and optimal surgical facilities. Out of all types of head and neck surgeries, parotidectomy is the most challenging one due to its diverse anatomy and relationship with other major anatomical structures.

This cross-sectional study was carried out to understand the distinct types of parotid tumours, their surgical management, and possible complications. During the course of study, a total of 30 patients were able to fulfil the inclusion criteria. The entire management was carried out at department of ENT and Head-Neck Surgery, JRRMCH. A few malignant cases were later referred to department of Oncology, JRRMCH, for further management. All of the cases were assessed pre-operatively by a brief history-taking and proper clinical examination, along with the aid of FNAC and various extents of radiological analysis. Among the participants, ages of the patients ranged from 20-60 years. Out of them, the most common age group was 31-40 years (40%). These findings were relatively similar to the studies conducted by Smith et al.⁶, Junior AT et al.⁷ and Glerek et al.⁸ In the present study, the frequency of parotid tumours was slightly higher in females 16 (53%) than males 14 (47%). This finding correlated with the study of Cunha et al.⁹ and Skalova et al.¹⁰. In our study, most of the patients with parotid tumours were diagnosed as benign 26 (87%). Out of them, the most common histological type was pleomorphic adenoma 17 (71%) and the remaining portions were diagnosed as Warthin's tumour 9 (29%). Out of the entire study population, 4 (13%) were diagnosed as malignant tumours. Out of them, 3 (75%) were diagnosed as mucoepidermoid carcinoma and the remaining 1 (25%) was diagnosed as adenoid cystic carcinoma. These findings are relatively similar to the findings of Bobati et al.¹¹ and Sando et al.¹². Among the study sample, all of the patients underwent various extents of parotid surgery as an aid to management. The most common type of surgery was superficial

Among other procedures, 7 (23%) of patients underwent total parotidectomy with preservation of facial nerve and 2 (7%) malignant cases were treated by total parotidectomy with FND. This result was correlated with the studies of Guntinas-Lichius et al.¹³ and McGurk et al.¹⁴. During the course of managing parotid tumours, 8 (26.7%) patients developed post-surgical complications. Out of them, the most common one was flap necrosis 3 (37%), few of them developed seroma 2 (25%), facial nerve paresis 2 (25%) and parotid fistula 1 (13%), respectively. These results are relatively similar to those of the study carried out by Bovenzi et al.¹⁵ and Fareed et al.¹⁶.

CONCLUSION

Most of the parotid tumours in our study were benign in nature, and the most common type of surgical procedure conducted in these patients was superficial parotidectomy. Nearly one-third patients developed various types of complications. Dealing with parotid tumours is really challenging due to their complex anatomical relationship, especially with the branches of the facial nerve. The precise surgical management of parotid tumours with proper clinical knowledge and meticulous dissection by skilled staff ensures a great outcome with minimal complications.

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