



Original Article

Parotid Tumour Surgery- Personal Experience of 30 Cases

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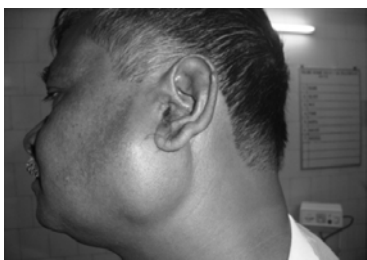
Abstract

Parotid gland is the most common site for salivary gland neoplasm. Most of the parotid tumours are benign and are commonly pleomorphic adenoma. Parotid tumours usually present with painless slow growing lobulated masses but may be associated with pain and paresis of the facial nerve if it is malignant. However it is difficult to differentiate clinically between benign and low grade malignant tumours. We studied thirty (30) patients with parotid gland tumours during Jan/2012 to April/2016 in dept. of surgery, Rajshahi Medical College Hospital. Twenty eight (28) were pleomorphic adenoma and two (2) were mucoepidermoid carcinoma. Superficial parotidectomy done in twenty five (25) patients and total parotidectomy done in five (5) patients. In all patients facial nerve dissection and preservation were performed safely without the facilities of nerve stimulator. Two years post operative follow up was satisfactory with no residual effect. This study highlights some of the important aspects in the management of the parotid gland tumours.

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Introduction

The parotid glands are the largest salivary glands in humans and are frequently involved in disease processes. Approximately 75% of parotid masses are neoplastic; the remaining 25% are non neoplastic. The vast majority (approximately 80%) of parotid neoplasms are benign and are commonly pleomorphic adenoma or mixed tumour (85%).



The gland is divided into a superficial and deep portion by the facial nerve which passes through the gland. 80% of the parotid gland lies superficial & 20% deep to the nerve(1). The etiological agent of salivary gland tumour remain unclear. Some study suggest possible risk factors include therapeutic radiation for other head neck cancer, occupational exposure in rubber manufacturing and woodworking and also employment of hairdresser or beauty shops. (2-3) HIV infection was also found to increase the risk of salivary gland tumour. (4) Sex distribution of salivary gland cancer is equal and majority of the cases arises in the six decade.(5) It is difficult to differentiate clinically between benign and low grade malignant tumours. FNAC is the useful

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diagnostic investigation and MRI provide good information in detecting deep lobe extension, local infiltration and involvement of facial nerve. Here 30 patients of parotid tumours has been studied based on their age, gender distribution, clinical manifestations, diagnosis and treatment. This paper highlights some of important aspects in the management of parotid gland tumours.

Materials & Methods

It was a cross sectional descriptive study. 30 patients have been studied in the dept. of surgery in Rajshahi Medical college Hospital from Jan/2012 to April/2016 by purposive sampling method.

Selection of cases:

Exclusion criteria:

- Parotitis
- Parotid abscess
- Sialoadenitis
- Sialolithiasis

Inclusion criteria

- All patients with parotid tumours (Age>13yrs)

Result

- Total no of patients – 30
- Male-13 , Female- 17
- Male female ratio 1:1.30

Age distribution of the patient:

Age (years)	Number of patient	Percentage
10-20	0	0%
21-30	3	10%
31-40	7	23.33%
41-50	14	46.66%
51-60	6	20%
total	30	100%

Occupation of the patients :

Out of 30 patients six were farmer, eight were service holder, fourteen were housewife, one was tailor & another one hairdresser.

Presentation

- Painless slow growing lobulated mass-89%
- painful mass- 11%
- Facial nerve palsy -0%

Investigation:

- FNAC (fine needle aspiration cytology) was done in all patients.
- 28 patients diagnosed as pleomorphic adenoma
- 2 patients diagnosed as mucoepidermoid carcinoma
- Histopathology (following surgery)-
- 28 cases diagnosed as pleomorphic adenoma
- 2 cases as Treatment mucoepidermoid carcinoma (low grade)

Treatment:

Superficial parotidectomy with facial nerve dissection and preservation was done in 25 patients for benign pleomorphic adenoma. Total parotidectomy with facial nerve preservation was done in 5 patients, 2 for malignancy and 3 for benign tumour arising from deep lobe of the gland. In all patient 'lazy S' pre auricular- mastoid-cervical incision was made A skin flap was then raised anteriorly in the relatively avascular plane of the superficial musculoaponeurotic system. Facial nerve trunk dissection is the main stay of surgery. Most important landmark of identification of facial trunk is- it lies 1 cm deep and inferior to conleys pointer (tragal pointer), the inferior portion of the cartilagenous canal. Once the facial trunk is identified further branhes of facial nerve can be exposed by scissor dissection in the perineural plane immediately above the nerve. When a branch of the facial nerve is adherent to the tumour or running through the tumour it may require elective division. Hemostasis can be achieved with bipolar diathermy. A suction drain was applied for a period of 24-48 hours.

Complications:



Fig : Skin flap & great auricular nerve.



Fig : Branches of facial nerve

Complications	Number	Percentage
Temporary facial nerve weakness	12	40%
Temporary numbness of ear lobule	9	30%
Freys syndrome (gustatory sweating)	5	16.66%
Seroma	4	13.3%
Superficial infection	0	0
Sialocele	0	0
Transsection of facial nerve and Permanent facial weakness	0	0

After operative treatment, malignant cases were referred to oncology department.

Within 2 years follow up they were found without any residual effect.

Discussion

Surgery is the key stone management of the salivary gland tumour since it serves both diagnostic and therapeutic purposes. Superficial parotidectomy with facial nerve dissection and preservation is the choice of treatment for benign parotid tumour .However several recent study suggested that a more limited resection in the form of extracapsular dissection or Partial Superficial Parotidectomy where pleomorphic adenoma is resected only with a cuff of normal glandular tissue. It offers greater post operative cosmetic result and fewer side effects,without increasing tumour recurrence and facial nerve injury.(6-8) Whether a superficial parotidectomy or limited extra capsular dissection is carried out the surgical approach is similar . Enucleation is avoided because it greatly increase recurrence and nerve damage.(9) If the benign tumour arises from the deep lobe or parotid malignancy ,total parotidectomy with facial nerve preservation is indicated unless facial nerve is paralised or found

to be directly invaded by the tumour. Elective section of the facial nerve is only necessary if the tumour is involving or infiltrating the facial nerve. After facial nerve resection the nerve is most often repaired with nerve graft from great auricular or sural nerve. Fortunately we did not need nerve grafting either elective or accidental transection of facial nerve. Post operative radiotherapy or neck dissection is considered in case of high grade tumor or positive lymph node. The role of chemotherapy is not yet well established and remains largely in palliative treatment for metastatic, recurrent or unresectable salivary gland tumor. (10)

Conclusion

Though the Salivary gland tumours are best managed in specialized Head-Neck clinics but in tertiary hospitals even without the facility of nerve stimulator it can be managed effectively with MDT approach. Moreover for a safe parotid surgery it is essential to have adequate exposure, good light and surgeons patience.

References

1. William P Smith. Disorder of the salivary glands. in Baileys & Loves short practice of surgery, 26th edition. CRC press, Taylor & Francis group, UK 2013; 52: 723-740.
2. P. L. Horn – Ross, B. M. Ljung, and M. Morrow, "Enviornmental factors and the risk of salivary gland cancer", Epidemiology, vol. 8 no. 4 pp. 414-419, 1997
3. G. M. Swanson and P. B. Burns, "Cancer of the salivary gland: workplace risks among women and men". Annals of Epidemiology, vol. 7 no. 6, pp. 369-374, 1997.
4. E. C. Sun, R. Curtis, M. Melbye, and J. J. Goedert, "Salivary gland cancer in the United States", Cancer Epidemiology Bipmarkers and Prevention, vol.8 no. 12, pp. 1095-1100, 1999.
5. L. Licitra, C. Grandi, F. j. Prott, J. H. Schornagel, P. Bruzzi, and R. Molinari," Major and minor salivary glands tumours0", Critical Reviews in Oncology /Hematology, vol. 45, no. 2, pp. 215-225, 2003.
6. J.T. Johnson, A. Farllito, J. J. Fagan, P. J. Bradley, and A. Rinaldo, "Role of limited Parotidectomy in management of pleomorphic adenoma", Journal of Laryngo logy and Otology, vol. 121, no. 12 pp. 1126-1128, 2007.

7. K. H. Lam W.I. wei. H. C. Ho, and C. M. Ho. "Whole organ sectioning of mixed parotid tumours", *American Journal of surgery*, vol. 160, no. 4, pp.377-381.1990.
8. Y. Uyar, F. Caglac, B. Keles, G. Yildirim, and Z. Salturk, "Extracapsular dissection versus superficial parotidectomy in pleomorphic adenomas of the parotid gland", *Kulak Barun Bogaz Ihtisas Degisi*, vol. 21, no. 2 pp. 76-79, 2011.
9. Samuel W. beenken, Marshall M. Urist, *Head & Neck tumours in current surgical diagnosis & Treatment*.11th edition, Lawrence W. Way, Gerard M. Doherty editor, 16: 282-297.
10. Victor Shing Howe To, Jimmy yu wai chan, Raymond K. Y. Tsang and William I. Wei. "Review of Salivary gland neoplasm", *International Scholarly research Network ISRN Otolaryngology*, vol.2012, Article ID 872982, pp. 6, 2012.

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