

An audit of surgery for seventy-one primary parotid tumours

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Abstract

Seventy-one consecutive patients who presented with lumps in the parotid gland over an eight year period (1981-1989) were analysed. Two-thirds of the patients presented with a history of swelling for over one year, while a quarter (24%) had a parotid mass for over five years at initial referral.

The pathology of these masses was diverse, with pleomorphic adenoma being the commonest (64%). Superficial parotidectomy was the commonest procedure employed (50/71) with local excision being performed only in the initial part of our series (15/71). There were five cases of permanent facial palsy, four following radical resection for malignancy. Tumour recurrence rate was 2/15 (13%) in cases treated by local excision while none of the 50 patients treated by superficial parotidectomy had tumour recurrence at a mean follow-up of five years. Only three patients developed Frey's Syndrome.

It is recommended that increased community awareness of early referral of a parotid mass is necessary, as surgical treatment in the form of superficial parotidectomy, which is the ideal procedure for such lumps, carries minimal morbidity when performed by a surgeon with a special interest in parotid surgery.

Introduction

The management of parotid tumours has undergone gradual evolution over the last thirty years owing to a better understanding of these lesions. Operations on the parotid gland present a considerable surgical challenge because the anatomy is delicate and the pathology diverse. The clinical examination of a patient with a swelling in the parotid region is rarely helpful in making a diagnosis of its pathological nature. The usual clinical diagnosis is that of a parotid tumour, 70% of which are pleomorphic adenomas.¹

A review of patients treated for parotid tumours in the Northern Regional Health Authority of the United Kingdom revealed an incidence of new parotid tumours of 2.4 per 100,000 per annum.² This low incidence of parotid tumours and their management by a relatively large number of surgeons results in limited experience for individual surgeons and few opportunities for training in parotid surgery. In view of its medico-legal implications, we have analysed our experience with 71 consecutive patients, presenting with a parotid mass to the Adelaide and Meath Hospitals over an eight year period.

Patients and Methods

The majority of the 71 patients in this series were male (43 male, 28 female). They ranged in age from 18 to 74 years, with a mean age of 52 years. Fine needle aspiration cytology

or open biopsy were not performed. The surgical procedures were classified as radical or superficial parotidectomy or local excision. All patients were seen at one year following surgery and told to report back if they had any cause for concern about the results of their operation. If a facial palsy had persisted for more than six months, it was classified as permanent.

Result

Most of the patients (68%) presented with a history of parotid swelling for over one year, while 17 (24%) had a parotid mass for a period exceeding five years at initial surgical referral. The pathological entities that presented as a parotid mass were diverse, (table 1). Forty-five (64%) of the patients in this series had a parotid pleomorphic adenoma, of which 30 (66%) occurred in patients aged under 50 years at presentation, while all of the adenolymphomas occurred in patients aged over 50 years. Fourteen (20%) of the patients had an adenolymphoma, of which 80% were male. Interestingly, at initial presentation, 12 patients (17%) had frank parotid malignancy (table 1). Three of these 12 patients had a history of a parotid swelling for a period of over five years. All of the parotid carcinomas occurred only in patients aged over 50 years.

The distribution of the surgical procedures over the eight-year study period is depicted in table 2. In the earlier part of the series 15 patients had local excision of a parotid mass

Table 1 - **Histology of parotid swelling. N = 71.**

Pathological Diagnosis	Patient Number (%)	Males	Females
Pleomorphic Adenoma	45 (64)	23	22
Adenolymphoma	14 (19)	11	3
Parotid Malignancy	12 (17)	7	5
- Squamous cell carcinoma	2	1	1
- Muco-epidermoid carcinoma	3	2	1
- Malignant mixed salivary tumour	4	2	2
- Lymphoma	2	2	-
- Adenocarcinoma	1	-	1

performed. Five patients developed a postoperative permanent facial nerve palsy, four following a radical resection for malignancy. Of the 50 patients undergoing superficial parotidectomy, one developed a permanent seventh nerve palsy. The operative procedure in this case was performed by a surgeon in training. Significantly, this palsy has had grave socio-economic consequences as this patient has been unable to work since surgery, six years previously.

Table 2 - **Surgical procedures for parotid tumours. N=71**

Operation	Patient number
Superficial parotidectomy	50
Radical parotidectomy	6
Local excision	15

Two of the 15 patients who were managed by local excision developed tumour recurrence, while none of the 50 patients who had a superficial parotidectomy has had evidence of recurrent tumour at a mean follow-up of 5 years, (table 3). Surgery was complicated by a traumatic neuroma in one case, while one patient sustained a transient parotid fistula. Three of the 71 patients developed Prey's Syndrome, all of which were mild.

Table 3 - **Morbidity following parotid surgery. N=71**

Complication	Patient number
Permanent facial nerve palsy	5
Temporary facial nerve palsy	11
Recurrent tumour	2
Wound sepsis	1
Parotid fistula	1
Traumatic Neuroma	1
Prey's syndrome	3

Discussion

Prior to 1950, the surgical management of parotid tumours was unsatisfactory, due largely to the fear of trauma to the facial nerve. By 1958, Patey's classic review³ of a personal experience, with both conservative and radical parotidectomy, made a strong case for formal superficial lobar or total parotid resection. However, many reports attest to the fact that enucleation of pleomorphic adenomata is still being widely performed.^{4,5} It is claimed that enucleation of parotid tumours will result in fewer complications^{5,6}, however tumour recurrence is higher with enucleation.⁷ Prophylactic radiotherapy is of dubious value in salvaging inadequate parotid tumour surgery and carries the long-term risk of initiating further parotid malignancy.^{8,9}

Present evidence suggests that superficial parotidectomy is the correct approach for a parotid mass. The survey of Gunn et al² may be assumed to reflect the practice of parotid surgery in the United Kingdom. It demonstrated the problems and

complications of surgical management which result in slight, but not negligible, risk to the facial nerve, (22% temporary facial nerve palsy) and often inability to prevent tumour recurrence. The predominant operation in their series was local excision, 38% of which were incompletely excised. Seventy-six of 232 pleomorphic adenomas were managed by conservative parotidectomy, of which 12 (16%) were incompletely excised.

Based on the results of our audit, we propose that the correct management for a parotid mass is formal lobe or gland resection after facial nerve dissection, by a surgeon with a special interest in salivary gland surgery. Twenty-five percent of our patients presented with a mass that had been present for over five years duration. Therefore, increased community awareness of the importance of early referral of a parotid mass is necessary as expert surgical excision carries minimal morbidity.¹⁰ Any surgical approach to a parotid swelling should be tempered by the knowledge that 17% may be frankly malignant and enucleation is an unsatisfactory form of management for these patients.

References

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Correction Notice

Pelly H.

The natural tuberculin conversion rate in the western health board region. A review 1980-86. June 1991 Volume 84 No 4

The Heaf records of all school children were reviewed for the period 1980-86 inclusive. An average annual conversion rate of 1.8% was found with a range of 1.5%-0.7%.

This sentence was omitted from the abstract of the above paper.