Intraparotid facial nerve schwannoma

S H Chandrashekarayya, S. S. Doddamani, Prabhu Khavasi1, Rudresh S Halawar[1], Sudheendraswamy V P[1]
Department of ENT and Head and Neck Surgery, [1]Department of Radiology, S N Medical College, Bagalkot, Karnataka, India.

Abstract

Schwannoma of intraparotid facial nerve are rare, whereas benign tumors of parotid are more common. Most of the times these rare tumors are operated as benign tumors of the parotid as the preoperative diagnosis is missed. The surgeon is not aware of the fact that he is operating a facial nerve tumor which may result in damage to the facial nerve which is difficult to explain to the patient after surgery. The need for awareness regarding this entity is stressed for the proper management of the tumor with presentation of two cases.

Keywords: Schwannoma, facial nerve, parotid tumor

Introduction

Both benign and malignant tumors of the parotid gland frequently present a significant challenge to the surgeon because of their nature and extension [1]. Schwannoma of the facial nerve is a rare tumor of Schwann cells which is a type of glial cell of peripheral nervous system. It is a slow growing tumor, well capsulated and nearly always benign which was known as neurilemmoma earlier [2]. About 9 % of facial nerve schwannomas [FNS] occur in intraparotid portion. Multiple segment tumors are more common (63.6%) than single segment tumors (36.4%). This emphasizes the need for evaluation of the entire length of the nerve; infact, any segment may be involved, either singly or in conjunction with its contiguous neighbours. The most frequently involved segments are labyrinthine and geniculate ganglion [3]. FNS present with or without facial weakness /palsy, hearing loss , vestibular disturbances, palpable parotid mass depending on site involved [4,5]. In this article we present two cases of intraparotid FNS, their manifestations, diagnostic dilemma and treatment outcome.

Case reports

Case 1 A 25 year old women presented with the history of right sided cheek swelling since two years. On examination, the mass was ill-defined, non-tender, firm, mobile measuring around 2x3cms. Ear nose throat examination and facial nerve functions were normal. Rest of the general physical examination was within normal limits. Fine needle aspiration cytology (FNAC) indicated benign spindle cell lesion (pleomorphic adenoma). The mass was exposed through a classical parotidectomy incision. After superficial parotidectomy, a well encapsulated mass was present in the deeper lobe of parotid and enucleated easily (Figure 1). There was no demonstrable connection of the mass with any branch of the facial nerve. Histopathological examination revealed a benign schwannoma. Patient was followed up for one year and is doing well.

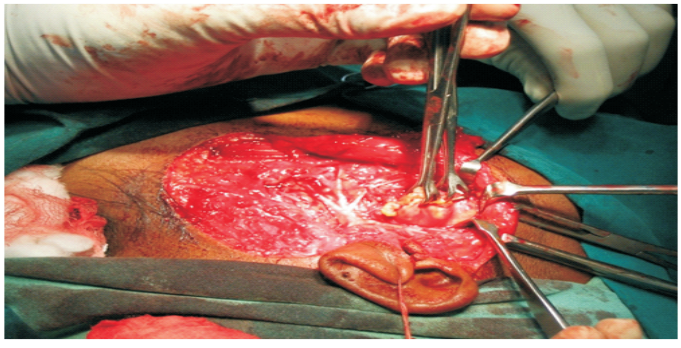

Figure 1. Tumor being removed. Branches of facial nerve are seen

Address for Correspondence
Dr. Chandrashekharayya S H, Associate Professor, Department of ENT and Head and Neck Surgery,
S. Nijalingappa Medical College, Bagalkot-587102, Karnataka, India.
E-mail:-drcshent@rediffmail.com

Case 2 A 28 year old women presented with parotid mass in the tail of parotid since 3 years. Tumor had gradually increased in size with no facial nerve dysfunction. On examination swelling was 3x4 cms, firm, non tender, mobile, ill defined. Clinically diagnosis of benign tumor of parotid, possibly a pleomorphic adenoma was done. FNAC report was inconclusive showing cystic lesion. Computerized tomography (CT) scan of parotid with contrast showed possibility of a cystic degeneration of pleomorphic adenoma. Patient was posted for surgery under general anesthesia. Modified Blair incision was used, flap elevation done. After dissection of superficial part of parotid, well encapsulated tumor 3x 4 cm with branches of facial nerve stretched over it was seen (Figure 2). Tumor was dark brown in color with cystic consistency. Locating the main trunk of facial nerve was difficult. After we dissected the tumor all around facial nerve trunk was visible. Tumor had attachment to mandibular and buccal branches of facial nerve. Tumor was separated in toto, teasing out nerve branches from tumor. Post operatively patient developed grade II facial paralysis with deviation of angle of mouth. She was treated with steroids for 21 days in tapering dose and subjected to physiotherapy. Patient showed satisfactory improvement.

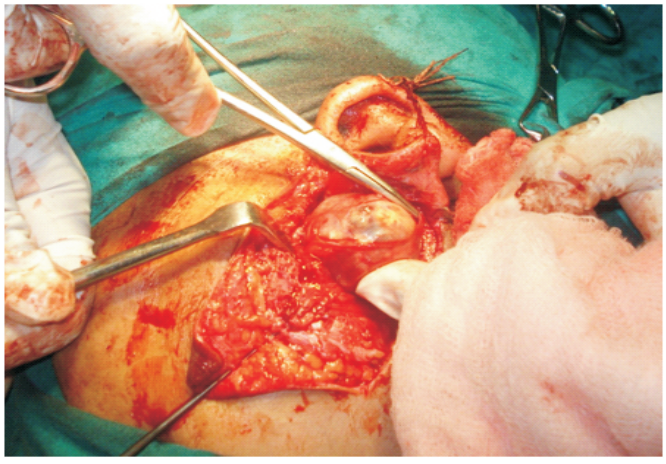

Figure 2. Tumor with branches of facial nerve stretched over it

Discussion

Benign schwannoma is a slow growing encapsulated tumor arising from the neuro ectodermal sheath of schwann cells[6]. Intraparotid facial nerve schwannomas present as a slow growing non tender parotid swelling without facial weakness. Although they arise at any age, the peak incidence is between 3rd and 6th decade[7]. Most authors find it difficult to establish a correct preoperative diagnosis of facial nerve schwannoma[6,8]. Out of 17 patients with 23 schwannomas of facial nerve, only in three cases a correct preoperative diagnosis was made. Balle and Graisen reported two cases who had FNAC performed a total of five times, four of these were non diagnostic, while in fifth there was a suspicion of adenolymphoma (cystic lesion of parotid) [9]. Histopathology usually helps in making correct diagnosis. Tumor shows verocay bodies with nuclear palisading(Figure 3).

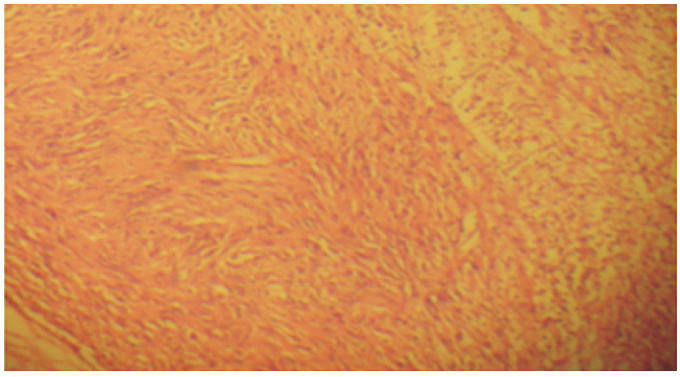

Figure 3. Microscopic picture of tumor showing verocay bodies with nuclear palisading. H and E stain x20

Usually schwannoma arise from the main trunk or branches of the facial nerve. Rarely the tumor might be found to have no relation with facial nerve or its branches[10]. The neurogenic tumors should be suspected intra operatively when they are inseparable from the nerve and electrical stimulation of tumor elicits facial movements [7]. Preservation of facial nerve is of paramount importance when dealing with these benign tumors.

Conclusion

Schwannomas of facial nerve in parotid are rare tumors. Most of the times they are undiagnosed preoperatively and taken up for surgery assuming them to be a benign parotid tumor. It is important to keep in mind the possibility of schwannoma arising from facial nerve while operating benign parotid tumor. Because of high chances of facial nerve injury in these cases patient should be informed about possibility of injury to facial nerve and morbidity arising out of it before surgery. The surgeon must be ready to deal with the situation even if it is the tumor arising from the facial nerve.

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Eccrine Spiradenoma – A painful dermal nodule

Jayakar Shushan Shweta, Sharmila SP, Rajaram T, Sushma TA
Department of Pathology, Rajarajeswari medical college and hospital, Bangalore, Karnataka, India

Abstract
Eccrine spiradenoma is an uncommon benign adnexal neoplasm occuring mainly in young adults. Here we report a case of eccrine spiradenoma with unusual presentation and concise review for the dermatopathologist.

Introduction

Eccrine spiradenoma also known as spiradenoma is an uncommon, well differentiated benign tumour historically designated as a tumour of eccrine differentiation, although current reconsideration indicates an apocrine process. It is one of the ten painful tumours of skin with characteristic histopathological findings.

Case Report

A 35 year-old woman presented with history of swelling in the lower part of posterior triangle of neck over right side since many years but from 6 months the swelling slightly increased in size with pain. Examination of the lesion revealed a tender, skin coloured, firm swelling in the subcutaneous plane ranging in size from 1.5 – 2.0 cms. So, initially a differential diagnosis of cervical lymphadenitis or angiolipoma was made. Routine haematological and biochemical investigations were normal.The patient underwent surgical excision under local anaesthesia and tissue was sent for histopathological examination. Histological findings demonstrated sharply delineated dermal nodules that display small rosettes and interwining cords (Figure 1). In higher magnification the tumor nodules were comprising of two cell types. First type being small, dark, basaloid cells with hyperchromatic nuclei at the periphery of the lesions and second type cells with large, pale vesicular nuclei located at the central area (Figure 2). Also, basement membrane like hyaline material was present in the stroma or within the cords along with lymphocytic infiltrate. PAS stain revealed eosinophilic Per-Iodic Acid Schiff's (PAS) positive diastase resistant material in the lumen. So, the diagnosis of eccrine spiradenoma was prompted.

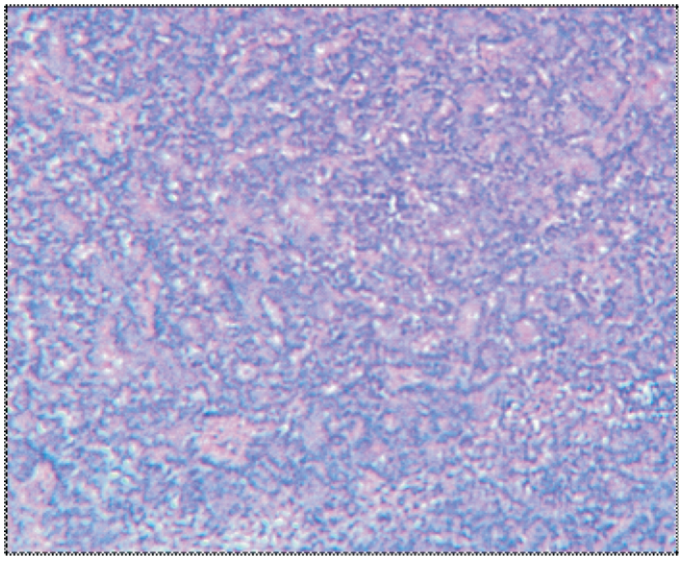

Figure 1. Tumor cells arranged in small rosettes with numerous lumen (H and E 200)X

Address for Correspondence
Dr. Shushan Shweta J, Assitant Professor, Department of Pathology
Rajarajeswari Medical College and Hospital, Kambipura, Kengeri, Bangalore, Karnataka, India
E-mail:-shwetajayker@gmail.com