

Recurrent parotid pleomorphic adenoma with transcranial spread

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ABSTRACT

Recurrence of pleomorphic adenoma after excision is a well-known phenomenon and can present years after surgical resection of the primary tumor. Recurrent lesions are frequently located in the parapharyngeal space whereas transcranial spread with intracranial invasion is exceptionally rare and has only been sparsely reported. A rare case of transcranial spread of recurrent Pleomorphic adenoma in a 40-year-old patient with preauricular swelling is presented.

Key words: Adenoma, parotid, pleomorphic, recurrence, transcranial

INTRODUCTION

Pleomorphic adenomas, also known as benign mixed tumor, are usually slow growing, well-circumscribed benign tumors arising from the salivary or lacrimal glands. In general, complete excision is curative. Nevertheless, recurrence is not uncommon due to inadequate resection or dispersion of tumor cells during surgery and might present decades after surgery of the primary tumor. Recurrent lesions are frequently located in the parapharyngeal space, on the other hand, intracranial extension is rare unless the mass has undergone malignant transformation or originated in the middle ear and mastoid.^[1-4] We present a rare case of transcranial spread of recurrent pleomorphic adenoma in a 40-year-old patient who presented symptoms related to ear and preauricular swelling.

CASE REPORT

A 40-year-old female presented with swelling in the right preauricular region, ear fullness, otalgia, and

conductive hearing loss 10 years after undergoing total parotidectomy and external beam radiotherapy for pleomorphic adenoma. Magnetic resonance imaging revealed a large mass appearing isointense to muscle on T1-weighted images, predominantly hyperintense on T2-weighted images and showing heterogeneous enhancement in postcontrast images. It was seen to extend into the parapharyngeal space and was causing an outward bulge in the skin, subcutaneous tissue, and parotid fascia. The lesion was seen to involve the mastoid part of the right temporal bone and was extending medially along the floor of the posterior fossa and abutting the right cerebellar hemisphere [Figure 1]. The mass was further seen to spread through the mastoid laterally and inferiorly into the upper cervical soft tissues. Intraoperatively a transcranial mass invading the mastoid part of temporal bone, skull base, posterior semicircular canal, the aditus ad antrum, the dura of the posterior fossa, the jugular foramen, the infratemporal fossa, and the parapharyngeal space was noted. Gross examination, histopathology [Figure 2] and positivity for glial fibrillary acidic protein on immunohistochemical evaluation established that the mass was a recurrent pleomorphic adenoma.

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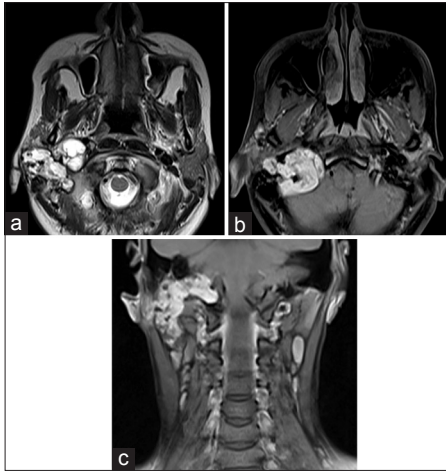


Figure 1: (a) Axial T2, (b) axial postcontrast T1 and (c) coronal T2-weighted magnetic resonance images reveal a heterogeneously enhancing mass in the right mastoid air cells extending medially along the floor of the posterior fossa and abutting the right cerebellar hemisphere

DISCUSSION

Surgical resection is the treatment of choice for pleomorphic adenoma due to potential malignant transformation and its potential to reach huge size. The invasion of skull bones is rare.^[1,2] In this case report, we ascertain an exceptional pattern of intracranial invasion of a recurrent pleomorphic adenoma and only one case has been reported with such transcranial spread of this benign tumor.^[1] Recurrence of pleomorphic adenoma after excision is a familiar phenomenon and may present decades after surgical resection of the primary tumor. The incidence of recurrent pleomorphic adenoma has been stated as high as 17%, varying with the surgical technique employed in the primary excision. Enucleation of the adenoma leads to a higher rate of recurrence as compared to superficial or total parotidectomy as these lesions are not all truly encapsulated and some possess “pseudopodia” that extend from the tumor surface, contributing to postoperative recurrence. Therefore, the occurrence of residual microscopic satellite tumors after resection has been stated to contribute to pleomorphic adenoma recurrence. However, recurrence may also be due to distinctive histological and genetic features.^[1-4] In the present case, classic pleomorphic adenoma histology and evidence of malignant transformation absolutely assigned this tumor into the group of a recurrent pleomorphic

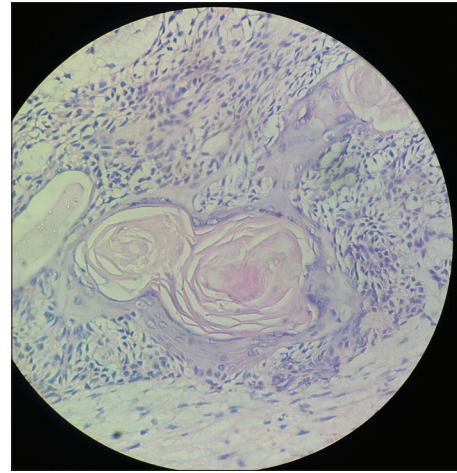


Figure 2: Histopathology of pleomorphic adenoma showing mixed epithelial and mesenchymal cell components with chondromatous differentiation

adenoma. To conclude, an exceptional case of transcranial invasion of a recurrent benign mixed tumor arising from the parotid is presented. Therefore, recurrent pleomorphic adenoma must be considered as the differential diagnosis of any patient presenting with a malignant appearing transcranial mass and an old history of pleomorphic adenoma resection.

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Conflicts of interest

There are no conflicts of interest.

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