

Basal Cell Adenoma Parotid: A case report

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Abstract

Basal cell adenoma is a very rare form of parotid tumor. Diagnosis of this disease is extremely challenging. We present a 51 yr old lady who is a known cause of an uncommon disease myasthenia gravis with this rare tumor

Neurology opinion was sought and advice regarding anesthetic precautions was given. The pulmonologist advised PFT which showed moderate obstruction features and the patient was advised to be taken for surgery with moderate risk.

Background

Basal cell adenomas are a rare form of salivary gland tumor representing 1–2% of salivary gland tumors [1,3]. Around 80% of these are seen in the salivary glands, mostly parotid gland [2,3]. It is rarely seen in the buccal mucosa with only 3% involving minor salivary glands [4,6]. Basal cell adenoma was first described by Kleinsasser and Klein in 1967. WHO defines it as a distinctive benign neoplasm composed of basaloid cells organized with a prominent basal cell layer and distinct basement membrane-like structure and no myxochondroid stromal component [2]. Four cellular patterns are solid (sheets of basaloid cells separated by collagenous stroma), trabecular (nests and cords of basaloid cells separated by cellular stroma), tubular (glandular formations), and membranous (thick bands of hyaline material at the periphery of basaloid cells) [5]. Basal cell adenoma is a slow-growing, asymptomatic, freely movable parotid mass [4]. It is often observed in women >50 years of age.

Although the membranous type of basal cell adenoma can occur as a multifocal lesion within the parotid gland, it may present as one of two synchronous parotid tumors of different types [7].

Case Presentation

A 51-year-old lady presented to us with left-sided neck swelling for 2 years. On examination, was found to have left parotid swelling of 3×2 cm, which was firm, mobile, and non-tender. Ultrasound revealed a large, well-defined heterogeneously hypoechoic, solid mass lesion in the lower pole of the superficial lobe of the left parotid gland measuring 3.2×2.1×2.7 cm with no internal vascularity/calcification/necrosis.

She is a known case of congenital myasthenia gravis (COLQ mutation) with a history of tracheostomy in the year 2017 and was later decannulated in the year 2021. She had received five cycles of plasmapheresis for the same in 2017.



She underwent left superficial parotidectomy under GA on 29/12/2021. The mass was located at the superficial lobe of the left parotid gland. It has adhered to the surrounding normal parenchyma of the parotid gland and marginal mandibular nerve. Other branches of the facial nerve were preserved with the main trunk. The patient developed marginal mandibular nerve palsy after the procedure as the nerve couldn't be saved due to its fixity with the tumor. Histopathology showed a circumscribed tumor surrounded by a pseudocapsule within the salivary gland. The tumor is composed of basaloid cells arranged in closely packed trabecular pattern separated by dense eosinophilic basement membrane-like material. Focal areas show squamous morules and ductal structures. Features favoured basal cell adenoma.

One week later, the patient was followed up in the OP. marginal mandibular nerve palsy was present. The wound was healing well.

Discussion

Basal cell adenomas arise almost exclusively in adults, with the average patient age being 57.7 years. There is a 2:1 female predominance for most basal cell adenoma [2]. On pathologic examination, 65% of cases of BCA showed various degrees of cystic changes. They have characteristic, numerous, endothelial-lined vascular channels, in which small capillaries and venules are prominent, which can explain why BCAs are well-enhanced [1].

It has to be differentiated from pleomorphic adenoma, Warthin tumor, and other low-grade malignant tumors. The monomorphic appearance and the absence of chondroid tissue and myxoid stroma differentiate basal cell adenoma from pleomorphic adenoma. Pleomorphic adenoma shows heterogeneously intermediate signal intensity on T1-weighted images and high signal intensity on T2-weighted images. Other salivary gland tumors, including Warthin tumor and other low-grade malignant tumors, show intermediate signal intensity on T1- and T2-weighted images, with more frequent cystic change. The basal cell adenoma is sometimes mistaken for adenoid cystic carcinoma. There are two features that help to distinguish these lesions. One is the circumscription of the basal cell adenoma, which contrasts with the invasive pattern of adenoid cystic carcinoma. The other is the lack of vascularity in the microcystic areas of adenoid cystic carcinoma, which contrasts with the numerous endothelial-lined channels in basal cell adenoma. Although basal cell adenocarcinoma is an epithelial neoplasm that has the cytological characteristics of basal cell adenoma, it is characterized by invasive and destructive morphologic growth, in contrast to the noninvasive appearance of basal cell adenoma. Even in the multinodular forms of membranous basal cell adenoma, the individual tumor nodules are well-circumscribed and non-infiltrative. In cases of basal cell adenocarcinoma, invasion of the salivary gland parenchyma and adjacent tissue is the rule [2].

All variants of basal cell adenoma are managed by local excision of the involved lobe except the membranous type which might need extensive surgery due to a high rate of recurrence. Total parotidectomy rather than superficial parotidectomy has been proposed in the membranous type of basal cell adenoma. It is due to the elevated tendency to multicentricity, multiple recurrences, and occasional malignant transformation. It is important not to disrupt the capsule, so as to lessen the chance of recurrence [8].

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