Oncocytoma of the parotid gland: Case report with 6-year follow-up

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ABSTRACT

Introduction: Oncocytoma is an uncommon salivary gland tumor. We highlight the importance of histopathological examination in the positive diagnosis of parotid oncocytoma as well as in its differential diagnosis.
Observation: A 56-year-old woman presented to our hospital's ENT department with a complaint of a slow growing painless swelling of the right parotid gland during 5 months. Radiologic studies revealed an expansive mass confined to the right parotid gland. The patient was treated with exofacial parotidectomy with complete tumor resection. Oncocytoma was diagnosed on the basis of histological examination. The patient is disease free during six years of follow-up.
Conclusion: Clinical features of oncocytoma of the parotid gland are similar to those of other benign and low-grade malignant salivary tumors. That's why clinical diagnosis is often challenging. A superficial parotidectomy or local excision is generally curative for oncocytomas with little chance of recurrence, but the possibility of malignant transformation should be considered and therefore long-term follow up is still advised.
Keywords: Oncocytoma, Parotid gland, Histopathology.

INTRODUCTION

Oncocytomas are rare tumors in the head and neck region. They occur commonly in salivary glands, especially in parotid glands. The prevalence is 0.5% to 1.2% of parotide neoplasms [1]. They are benign epithelial tumors that most commonly occur between the sixth and the eighth decades of life with a slightly higher incidence in women[2]. Clinical diagnosis is often challenging since the features of oncocytomas resemble to those of others benign salivary gland tumors such as pleomorphic adenomas and Warthin tumors. We herein describe the case of a 56-year-old woman with parotid oncocytoma exposing clinical, radiologic, pathologic findings and treatment options.

OBSERVATIONS

A 56-year-old woman presented to ENT department with a slow growing painless swelling of the right parotid gland. Physical examination found a painful firm nodule in the right parotid gland of 20x20 mm. The overlying skin was unaffected. There was no cervical lymphadenopathy. Ultrasonography (USG) showed a 34x16.9mm hypoechoic, homogeneous, well-defined parotid mass within the lower pole of the right parotid gland.
The patient underwent exofacial parotidectomy with complete tumor resection. Frozen section histological examination was performed during the operation and concluded to benignity of the tumor. Gross examination showed that the specimen was an encapsulated, rounded, lobular pink-white nodule. Microscopic examination showed epithelial cell proliferation with acini or follicular patterns of monotonous large polygonal cells (Figure 1).

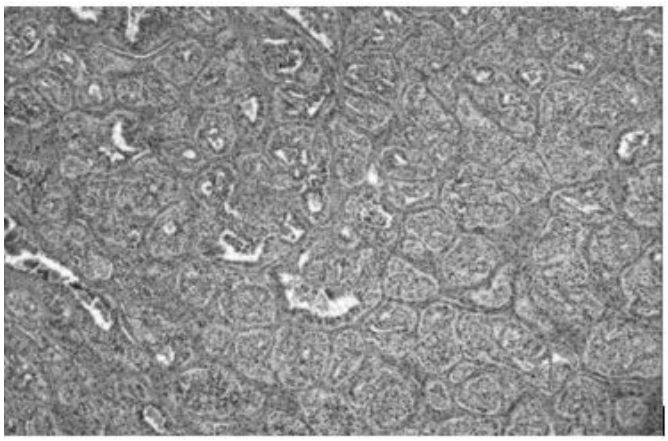

Figure 1 : Histological features of oncocytoma: acinar and follicular pattern (Hematoxylin and eosin X 10).

The cells had well defined cell borders, deeply eosinophilic granular cytoplasm and small round eccentric nuclei (Figure 2).

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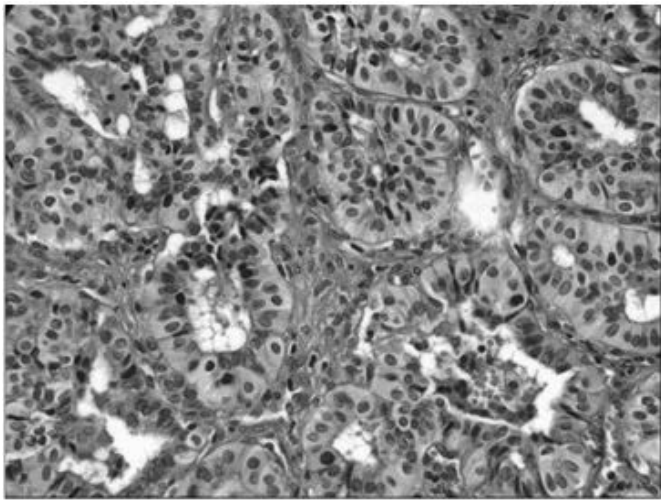

Figure 2 : Oncocytoma: oncocytic cells with granular eosinophilic cytoplasm (Hematoxylin and eosin X 20)

A mitotic count was negative. The mass was surrounded by a thin fibrous capsule. These findings were consistent with oncocytoma of the parotid gland.
Post operative period was uneventful without neurological deficit. The patient is free of disease without signs of recurrence during six years of follow up.

DISCUSSION

Oncocytomas are benign neoplasms composed of oncocytes: large cells with abundant granular and eosinophilic cytoplasm [3]. Oncocytomas, first described by Jaffé in 1932, are rare tumors ,comprising only about 0.1 to 1.5% of all salivary gland tumors and only 2.3% of benign epithelial salivary gland neoplasms [2,4]. They have been described in the submandibular gland, sublingual gland, larynx, soft palate, hard palate, and nasal cavities [5].
The clinical presentation is similar to other benign salivary tumors, as a solitary slow growing painless masses which are smooth and with some mobility upon clinical examination. In our case it was a firm painless swelling arising in the right parotid gland.
Imaging is indispensable for parotid tumors characterization. Oncocytomas and Warthin's tumors have very similar imaging features; thus, they are indistinguishable in standard CT and MRI images [6]. The common CT finding of the parotid oncocytomas described in the literature is a well-defined parotid mass showing homogeneous enhancement. MRI has been established as the first-line imaging modality in the assessment of major salivary gland tumors [5]. MRI imaging of the parotid described oncocytoma as o lesion in hyposignal on both T1 and T2 sequences. This has been related to the high cellularity and low water content displaying homogeneous contrast enhancement [5]. In our case the patient had neither MRI nor CT scan examination. She had ultrasonography examination that showed a 34x16.9 mm hypoechoic, homogeneous and well-defined parotid mass arising from the lower pole of the right parotid gland.
Chakrabarti reported that diagnosis of parotid oncocytic lesion by fine needle aspiration cytology (FNAC) pose a diagnostic dilemma for histopathologist [7]. It is diffcult to diagnose oncocytoma based on the findings of FNAC due to the small number of eosinophilic cells. In our case, we did not perform FNAC.
Surgical management with parotidectomy is necessary for diagnosis and treatment [2]. The extent of the excision is dictated by preoperative clinical and radiological (CT,MR) examinations and intra operative finding [2].Total surgical excision with radical or superficial parotidectomy is the treatment of choice [2]. In our case the patient had an exofacial parotidectomy.
Histopathological examination must distinguish oncocytomas from oncocytic carcinomas. Oncocytic carcinomas are composed of malignant oncocytes with adenocarcinomatous architectural phenotypes and infiltrative signs, including local invasion and regional or distant metastasis [8]. Furthermore, the frequency of Ki-67-positive cells with nuclear staining was shown to be higher in oncocytic carcinomas than in oncocytomas [8]. In our case the epithelial oncocytic proliferation was encapsulated with thin fibrous capsule. There was no capsule invasion. There were no mitotic nuclei. It was easy to distinguish oncocytoma from others differential diagnoses such as pleomorphic adenoma and Warthin's tumor. Warthin's Tumor is made of papillary or tubular structures composed of bi-layered oncocytic epithelium surrounded by stroma with dense lymphocytic infiltrate. Pleomorphic adenoma is a benign tumor with epithelial and myoepithelial components.
The recurrence rate of oncocytoma has been reported to be 20–30% in incomplete excision or multinodular cases. Malignant differentiation and metastasis are rare [2].
A follow-up imaging exam, preferably an MRI at 12 and 24 months after treatment are recommended since most head and neck cancers recur within the first 2 years. Our Patient remained in a good health during six years of follow up with no signs of recurrence.

CONCLUSION

Through this case, we highlight the importance of histopathological examination in the positive diagnosis of parotid oncocytoma as well as in its differential diagnosis. Surgery is generally curative for oncocytomas with little chance of recurrence, but the possibility of malignant transformation should be considered and therefore long-term follow up is still advised.

Conflicts of Interest : The authors declare that they have no conflicts of interest.

REFERENCES

1. Uzunkulaoğlu H, Yazici H, Can IH, Doğan S, Uzunkulaoğlu T. Bilateral oncocytoma in the parotid gland. J Craniofac Surg. 2012;23(3):e246-247.
2. Sepúlveda I, Platín E, Spencer ML, et al. Oncocytoma of the Parotid Gland:A Case Report and Review of the Literature. Case Rep Oncol. 2014;7(1):109-16.
3. Patel ND, van Zante A, Eisele DW, Harnsberger HR, Glastonbury CM. Oncocytoma: the vanishing parotid mass. AJNR Am J Neuroradiol. 2011;32(9):1703-6.
4. Palakshappa SG, Bansal V, Reddy V, Kamarthi N. Oncocytoma of minor salivary gland involving the retromolar region: A rare entity. J Oral Maxillofac Pathol JOMFP. 2014;18(1):127-30.
5. Shellenberger TD, Williams MD, Clayman GL, Kumar AJ. Parotid Gland Oncocytosis: CT Findings with Histopathologic Correlation. Am J Neuroradiol. 2008;29(4):734-6.
6. Araki Y, Sakaguchi R. Synchronous oncocytoma and Warthin's tumor in the ipsilateral parotid gland. Auris Nasus Larynx. 2004;31(1):73-8.
7. Oncocytic lesion of parotid gland: A dilemma for cytopathologists [Internet]. [cité 13 août 2018]. Disponible sur: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3307464/
8. Zhou C-X, Shi D-Y, Ma D, Zhang J, Yu G-Y, Gao Y. Primary oncocytic carcinoma of the salivary glands: A clinicopathologic and immunohistochemical study of 12 cases. Oral Oncol. 2010;46(10):773-8.