Mucoepidermoid carcinoma is the most common malignant tumor of the parotid gland; however, its synchronous occurrence in both of the parotid glands is extremely rare. Herein, we presented a case of a 53-year-old man with bilateral synchronous mucoepidermoid carcinoma of the parotid gland treated with surgery.

The patient mainly complained of a painless mass in the left parotid gland. A mass located in the right parotid gland was incidentally detected by imaging. Based on cytopathology, left total parotidectomy was performed while preserving the facial nerve with ipsilateral neck dissection, and 5 weeks later, right superficial parotidectomy was performed. At the 3-year follow-up, there was no recurrence in the parotid regions and the neck.

A detailed examination for parotid masses is suggested for identifying possible occult synchronous tumors in the contralateral side or in other salivary glands. A close follow-up is also recommended for the risk of future occurrence of metachronous tumors.

Keywords: mucoepidermoid carcinoma, parotid gland, bilateral, synchronous, salivary gland


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Submitted Date: March 07, 2017 Accepted Date: April 17, 2017 Available Online Date: May 21, 2018

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the right parotid gland (Figs. 1, 2). The morphology of the upper jugular lymph nodes was reported as benign in MRI. Fine needle aspiration biopsy (FNAB) of the left parotid mass was reported as mucoepidermoid carcinoma. FNAB of the right parotid mass was reported as cytology with lymphocytes and epithelial and myoepithelial cells.

The patient was scheduled for staged left and right parotidectomy. On the first stage, left total parotidectomy was performed while preserving the facial nerve. The intraoperative frozen section confirmed mucoepidermoid carcinoma, and left neck dissection (levels 1, 2, 3, and 4) was also performed. The facial nerve functions were normal postoperatively. Five weeks later, the right parotid mass was excised through superficial parotidectomy. The intraoperative frozen section of the lesion revealed low-grade mucoepidermoid carcinoma. Owing to the histological grade of the tumor, neck dissection was not performed. The right facial nerve functions were also intact postoperatively.

The final histopathology of left and right surgical specimens confirmed the frozen section findings and was reported as intermediate- and low-grade mucoepidermoid carcinomas, respectively (Figs. 3, 4). The pathology of the
left neck dissection specimen revealed nonmetastatic lymphadenopathies. Further therapy was not considered due to tumor-free surgical margins and negative cervical lymph nodes. At the 3-year follow-up, the patient’s postoperative course was uneventful without evidence of recurrence and metastasis.

Discussion

Bilateral malignant salivary tumors of the parotid glands may be synchronous or metachronous. Synchronous tumors are defined as separate but simultaneous neoplasms and usually have a tendency of the same histologic type. Whartin’s tumor, pleomorphic adenoma, acinic cell carcinoma, adenocarcinoma, and myoepithelial carcinoma are among the previously reported bilateral synchronous tumors of the parotid gland. The most common histopathologic type is acinic cell carcinoma, which accounts for six previously reported cases. Two cases of adenocarcinoma have been reported. Bilateral synchronous mucopidermoid carcinoma of the parotid gland is extremely rare; only two cases have been reported previously. Metachronous bilateral mucopidermoid carcinoma of the parotid gland is also rare, and only two cases have been reported previously.

US provides bilateral evaluation of the parotid gland and contributes to the diagnosis of bilateral parotid masses. US and FNAB contribute to the diagnostic work-up of parotid neoplasms. The malignancy detection rate of ultrasound-guided FNAB for parotid tumors is remarkable, whereas its diagnostic accuracy in tumor typing and grading is low. Intraoperative frozen sections have been reported to be superior in tumor typing and grading in comparison to FNAB. In the present case, FNAB clarified the left parotid mass as mucopidermoid carcinoma but was inconclusive for the diagnosis of the right parotid mass. The histological grade of a tumor may not be clearly defined using intraoperative frozen sections in all cases. In the present case, the intraoperative frozen section confirmed mucopidermoid carcinoma in the left parotid gland but was inconclusive for the tumor grade. However, the intraoperative frozen section was conclusive for typing and grading of the right parotid mass.

Superficial parotidectomy is performed for treating low-grade mucopidermoid carcinoma of the superficial lobe of the parotid gland. The suggested management for intermediate-grade mucopidermoid carcinoma is excision of the lesion with negative surgical margins using total parotidectomy with preservation of the facial nerve. Selective neck dissection in N0 patients is recommended both for intermediate- and high-grade mucopidermoid carcinomas. In the present case, the management of intermediate-grade mucopidermoid carcinoma in the left parotid gland was accomplished with total parotidectomy along with lateral neck dissection, whereas that of low-grade mucopidermoid carcinoma in the right parotid gland was accomplished with superficial parotidectomy.

Conclusion

The diagnosis of malignant tumors of the parotid gland warrants a detailed examination. US is the first choice in imaging modalities. MRI and/or computerized tomography are suggested to determine the expanse of malignant tumors or the presence of metastatic lymph nodes. The radiographic images should be carefully analyzed to identify the possible occult synchronous tumors in the contralateral parotid gland and other salivary glands. FNAB and intraoperative frozen sections contribute to tumor typing and grading for the establishment of a surgical plan. Surgical removal is recommended for the management of synchronous bilateral parotid mucopidermoid carcinoma, as likewise for all benign and malignant tumors of the salivary glands. A close clinical follow-up is also suggested for the risk of future occurrence or recurrences of metachronous tumors.

Disclosures

Inform consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

Acknowledgement: We are deeply grateful to Dr. Tulay Basak (pathologist) for conducting the histopathological examination of the specimens and providing the microscopic images.
References