Parotid Gland as Initial Metastatic Site of Nasopharyngeal Carcinoma

Yan Wang1, Liu Yang2, Wen Li2
1Department of Orthodontics, State Key Laboratory of Oral Diseases, West China School of Stomatology, Sichuan University, Chengdu, Sichuan 610041, China
2Department of Otolaryngology, Head and Neck Surgery, West China Hospital, Sichuan University, Chengdu, Sichuan 610041, China

To the Editor: Squamous cell carcinoma (SCC) of the parotid gland normally occurs as metastasis or primary malignancy. Most of them metastasize from cutaneous SCC in the head and neck region. Nasopharyngeal carcinoma (NPC) metastasis in the parotid gland is even more rare. There are only four cases reported in literature to date. Here, we reported a rare case of NPC metastasis, in which a lump in the parotid gland was shown as the first manifestation.

With a lump in the left parotid gland, a 50-year-old man was admitted to the Department of Otolaryngology, Head and Neck Surgery, West China Hospital in July 2012. Previous history revealed that intermittently obscure nasal obstruction had occurred for half a year; in addition, no symptoms such as epistaxis, hearing loss, and cranial nerve dysfunction were observed. Nasopharyngeal fiberoscope revealed a little swelling of Eustachian cushion on the left side. Enhanced computed tomography also showed a mass in the left parotid gland, together with an obvious enhancement and a vague margin. Obvious enhancement of nasopharyngeal submucosal tissue was also observed. Biopsy of nasopharynx under rigid nasal endoscope, total parotidectomy, and selective neck dissection of the left side were performed. Pathological results revealed that the lesion of the parotid gland was poorly differentiated SCC while a total of 7 lymph nodes sized 5–10 mm from the neck dissection were confirmed to be reactive hyperplasia. Because the specimen from nasopharynx pathologically accorded with the lesion in the parotid gland, the metastasis from NPC was definitely confirmed. After surgery, radiotherapy of full-dose external beam radiation (65 Gy) to the nasopharynx, a prophylactic dose of 50 Gy to the rest of the neck, and concurrent cisplatin-based chemotherapy were employed, and completely clinical response was obtained. No recurrence took place during the 3-year follow-up.

The parotid gland is an uncommon site of metastasis from carcinomas arising in the head and neck region in Chinese population since the incidence of cutaneous SCC is very low compared with that of Western countries. Lymph nodes in the parotid gland might be the first step for lymphatic metastases of cutaneous SCC and melanoma occurring in the scalp and facial skin. Therefore, if there is no history of cutaneous SCC or melanoma in the maxillofacial region, a solitary lump in the parotid gland is often diagnosed as primary parotid benign or malignant tumor rather than metastasis from any organ of the head and neck.

An NPC normally turns up with a variety of symptoms such as nasal obstruction, epistaxis, cranial nerve palsy, serous otitis, or cervical metastasis. The superior cervical lymph nodes are the most common organs where NPC metastasizes. Without nasal or auditory symptom, NPC can be easily ignored at early stage. Theoretically, NPC cells can retrograde to the lymphatic system of the parotid gland, together with cervical lymph nodes enlargement, and then they germinate and develop as a late-stage lump; meanwhile, obstruction of the routine cervical lymphatic channels may also facilitate this process. In clinical practice, parotid gland can be infiltrated directly by late-stage primary lesion in the nasopharynx. Although the metastases usually occur in the neck, the lymphatic network of the parotid gland may also serve as a site for the metastatic deposits.

There is no mature treatment for this disease because of its paucity. In general, if NPC is confirmed through nasopharyngeal biopsy, a lump in the neck should be suspected as metastasis first. A rare metastatic lesion in the parotid gland complicated this diagnosis. Before concurrent radiotherapy and chemotherapy, a total parotidectomy is recommended as a treatment for metastasis of parotid glands in literature because facial nerve function may not be preserved well enough under unsatisfactory

Address for correspondence: Dr. Wen Li, Department of Otolaryngology, Head and Neck Surgery, West China Hospital, Sichuan University, Chengdu, Sichuan 610041, China. E-Mail: church.ent.wc@163.com

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

© 2016 Chinese Medical Journal | Produced by Wolters Kluwer - Medknow

Received: 11-06-2016 Edited by: Xin Chen
How to cite this article: Wang Y, Yang L, Li W. Parotid Gland as Initial Metastatic Site of Nasopharyngeal Carcinoma. Chin Med J 2016;129:2265-6.
locoregional control; on the other hand, if the facial nerve has been involved in a metastatic NPC lesion of parotid glands, radiotherapy deserves consideration before surgery because more or less postoperative facial nerve palsy might be inevitable after surgical intervention.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

References
1. Chen MM, Roman SA, Sosa JA, Judson BL. Prognostic factors for squamous cell cancer of the parotid gland: An analysis of 2104 patients. Head Neck 2015;37:1-7. doi: 10.1002/hed.23566.
2. Wanamaker JR, Kraus DH, Biscotti CV, Eliachar I. Undifferentiated nasopharyngeal carcinoma presenting as a parotid mass. Head Neck 1994;16:589-93.
3. Saw D, Ho JH, Lau WH, Chan J. Parotid swelling as the first manifestation of nasopharyngeal carcinoma: A report of two cases. Eur J Surg Oncol 1986;12:71-5.
4. Veness MJ, Morgan GJ, Palme CE, Gebski V. Surgery and adjuvant radiotherapy in patients with cutaneous head and neck squamous cell carcinoma metastatic to lymph nodes: Combined treatment should be considered best practice. Laryngoscope 2005;115:870-5. doi: 10.1097/01.MLG.0000158349.64337.ED.