Intratonsillar Metastasis of EBV-positive Nasopharyngeal Carcinoma

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OBJECTIVES

• To present an atypical case of EBV-positive nasopharyngeal carcinoma metastatic to the tonsil.
• To present a literature review with a focus on recurrent and metastatic nasopharyngeal carcinoma and the differential diagnosis of intratonsillar metastasis.

INTRODUCTION

• Intratonsillar metastasis is a rare occurrence, with only 100 reported cases of such metastasis from any primary site.1
• To date, intratonsillar metastasis has been reported from skin, lung, breast, kidney, testicle, and gastrointestinal tract primaries.1,5
• Nasopharyngeal carcinoma commonly presents as an enlarged cervical lymph node, and typically spreads by direct, lymphatic, and hematogenous extension.
• This is the first reported case of intratonsillar metastasis from nasopharyngeal carcinoma.

CASE

• A 47-year-old Chinese male with T4N1MO EBV-positive nasopharyngeal carcinoma was referred to our clinic 3 years after completion of chemoradiation and salvage neck dissection.
• He had been doing well until he developed painless left tonsillar enlargement.
• Physical examination demonstrated a firm, non-ulcerated 2 cm mass confined to the mid-portion of the left palatine tonsil. The mass did not extend into the soft palate, and the contralateral tonsil appeared normal. His neck exam was clinically negative.
• Flexible fiberoptic examination demonstrated a normal nasal cavity and nasopharyngeal mucosa, with stable radiation changes and no evidence of recurrent disease.
• MRI demonstrated the mass was confined to the tonsil with no evidence of extratonsillar infiltration and a clear plane between the mass and the parapharyngeal space. The nasopharynx and neck were radiographically negative.
• An exam under anesthesia was negative for masses or ulceration of the nasopharynx.
• A radical tonsillectomy was performed, and pathology revealed a 2.7 cm undifferentiated nasopharyngeal carcinoma with extensive comedo-type necrosis and multifocal lymphovascular invasion (Figures 1 and 2).
• All surgical margins from the oropharyngeal mass were negative. In situ hybridization for EBV-encoded RNA (EBER) performed on the tonsillar tissue was strongly positive (Figure 3). These findings were consistent with intratonsillar metastasis from his original nasopharyngeal tumor.

DISCUSSION

• Nasopharyngeal carcinoma spreads in several ways.
• Local extension commonly involves the parapharyngeal space, sphenoid sinus, nasal fossa, and ethmoid sinus.6 Erosion of the skull base and cranial nerves is seen in advanced disease.
• Hematogenous spread of nasopharyngeal carcinoma occurs through the submucosal venous plexus which drains into the pterygoid plexus superiorly and the posterior facial or internal jugular venous inferiorly.7
• Lymphatic metastasis most commonly occurs initially in the node of Rouvière and subsequently to superior cervical lymph nodes.7 The most common presentation of nasopharyngeal carcinoma is an enlarged cervical lymph node. In our patient, the nasopharynx was both clinically and radiographically negative, and the oropharyngeal surgical margins were all clear of tumor, confirming intratonsillar metastasis rather than local extension.

• Treatment of intratonsillar metastasis of nasopharyngeal carcinoma should include wide local excision and adjuvant chemoradiation. For patients with locoregional recurrence, re-irradiation is considered. Nasopharyngectomy can also be considered for limited local recurrences. If metastatic disease is treated, median survival can be prolonged to 12-15 months.6

REFERENCES


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