Hemangiopericytoma of the Nasolabial Fold Area : A Case Report

Hyun Jung, MD[1], Seong Kook Park, MD, PhD[1], Byeong Jin Kim, MD[1] and Soo Jin Jung, MD, PhD[2]

[1]Department of Otorhinolaryngology-Head and Neck Surgery; [2]Pathology, College of Medicine, Inje University, Busan Paik Hospital, Busan, Korea

－ ABSTRACT －

Hemangiopericytoma is uncommon mesenchymal tumor that represents 1% of all vascular neoplasms. Approximately 15 to 30% of hemangiopericytoma occur in the head and neck region, of which the sinonasal tract is the most common site. The lesions that manifest as nasolabial fold fullness are rare, and any lesion appearing as a well-circumscribed, soft mass occurring beneath the alar base should be evaluated as a possible nasolabial cyst. We report the unusual case of a nasolabial mass histologically proven to be hemangiopericytoma with clinical manifestations that were similar to a nasolabial cyst. The postoperative course was uneventful, and follow-up during 28 months revealed no locoregional recurrence. **(J Clinical Otolaryngol 2012;23:289-291)**

KEY WORDS : Hemangiopericytoma · Nasolabial cyst · Nasolabial folds.

Introduction

Hemangiopericytoma (HPC) comprises 1% of all vascular neoplasms, and approximately 5% of HPC arise from the sinonasal cavity.[1)] HPC only rarely presents as medial cheek or nasolabial fold masses, some of which are developmental abnormalities, some are neoplastic in origin, and a portion are related to inflammation.[2)] However, any lesion appearing as a well-circumscribed soft mass occurring beneath the alar base should raise the possibility of a nasolabial cyst.[3)] We report the unusual case of HPC in the nasolabial fold, which clinical manifestations were similar to a nasolabial cyst.

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전화 : (051) 890-6375 · 전송 : (051) 892-3831
E-mail : sinus4@paik.ac.kr

Case Report

A 38-year-old female was referred to our clinic with a painless swelling in the right nasolabial fold in November 2007. She presented with swelling on the right the nasolabial fold area that had slowly increased over the preceding 12 months. Clinical examination revealed a painless, movable, round, and elastic-soft mass in the right nasolabial fold area. Computed tomography (CT) showed a homogeneous, enhancing mass located anterior to the right piriform aperture (Fig. 1). The mass was easily removed from the surrounding soft tissue through a sublabial incision under general anesthesia. The isolated mass was a well-circumscribed, encapsulated solid lesion measuring $1.7 \times 1.8 \times 1.9$ cm, with no obvious areas of necrosis. The wound was closed with 4-0 chromic gut suture.

Histopathological evaluation of the surgical specimen showed that the tumor was composed of dilated, branching (staghorn-like) vessels surrounded by tightly packed fusiform cells (Fig. 2A). The tumor had one mitotic figure per 10 high-power fields. Fusiform tumor cells and branching vessels were positive for CD34

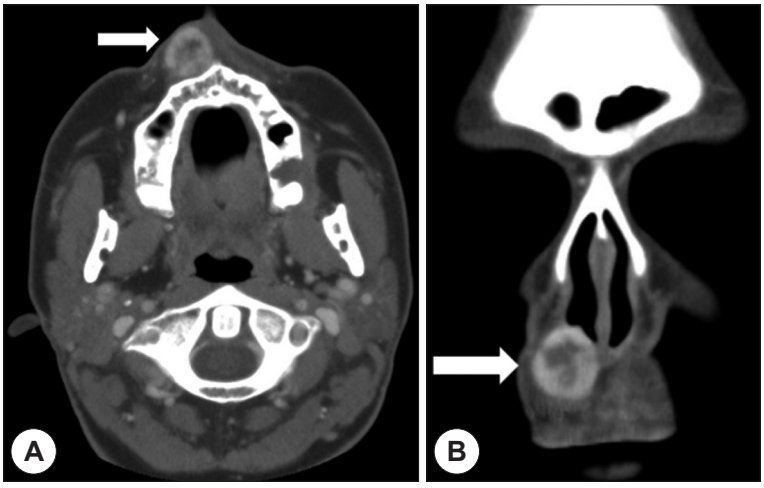

Fig. 1. Computed tomography scans of the paranasal sinus (A : Axial and B : Coronal view) revealed a partially contrast-enhanced, round, soft tissue mass (arrow) at the right nasolabial fold area.

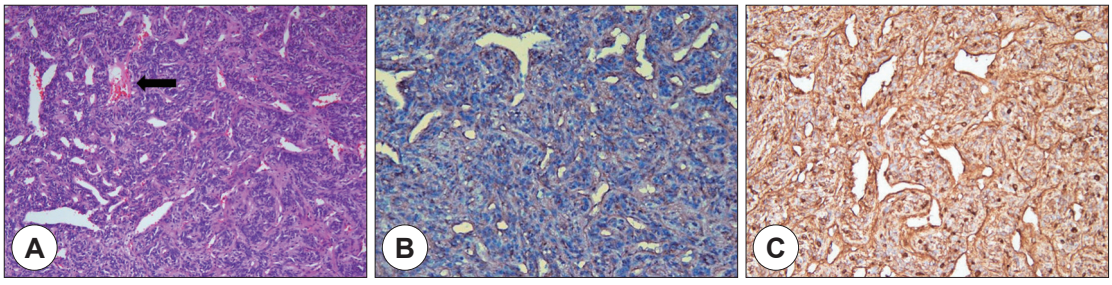

Fig. 2. A : The tumor was composed of dilated, branching (staghorn-like) vessels (arrow) with surrounding tightly packed fusiform cells (H&E, ×100). B : The fusiform tumor cells and branching vessels were positive for CD34 (immunohistochemistry, ×100). C : Tumor cells were also positive for vimentin (immunohistochemistry, ×100).

(Fig. 2B), and tumor cells were also positive for Vimentin (Fig. 2C). These histopatholgical findings and immunohistochemical staining led to a diagnosis of HPC. The postoperative course was uneventful, and follow-up at 28 months revealed no locoregional recurrence.

Discussion

Of the lesions that present as medial cheek or nasolabial fold masses, almost all are uncommon and some are rare. Differential diagnosis of a nasolabial fold mass is developmental abnormalities (nasolabial cyst and possibly hemangioma), neoplastic origin (carcinomas, schwannomas, leiomyomas, lymphomas, Merkel cell tumors, and benign mixed tumors), and a portion is related to inflammation (mucormycosis and aspergillosis).[2] However any lesion appearing as a well-circumscribed, soft mass occurring beneath the alar base or nasolabial fold area should be evaluated as a possible nasolabial cyst.

HPC commonly presents as a slowly enlarging, painless mass. Unless the lesion is located in an area where it is readily detectable by the patient, it is typically not detected until it causes functional interference. Pain is usually only associated with large lesions that are locally invasive or confined in unyielding spaces such as the paranasal sinuses.[1]

Radiological examinations, such as CT and magnetic resonance imaging (MRI), are helpful for distinguishing between HPC and a nasolabial cyst. CT clearly demonstrates that HPC is enhanced after intravenous contrast administration, whereas a nasolabial cyst is

not.[4] On MRI, HPC appears as a solid mass with isointense signals on T1-weighted imaging with diffuse enhancement after intravenous administration of gadolinium; and isointense to low-intensity signals on T2-weighted imaging.[4] A nasolabial cyst was hyperintense in weighted T1 and T2 sequences.[5] In the present case, we did not find any differential clinical manifestations as compared to a nasolabial cyst, and so the initial diagnosis prior to CT was the presence of a nasolabial cyst. After intravenous contrast CT scans, a nasolabial cyst was ruled out.

However, HPC cannot be diagnosed by clinical characteristics or radiological examination. Definitive diagnosis of HPC is made on the base of careful histopathology alone and is supported by immunohistochemical studies.[2] Microscopically, HPC is characterized by a proliferation of variably sized pericytes and by branching, thin-walled vascular channels. Vimentin is the only protein marker that is consistently expressed in HPC.[6]

HPC is histologically similar to glomangiopericytoma (hemangiopericytoma-like tumor). The cells are overlapping with irregular nuclear contours and are arranged more haphazardly with no distinct growth pattern in HPC than glomangiopericytoma. Unlike glomangiopericytoma, HPC stains positively for CD34, with less consistent actin staining, and prominent coarse collagen bundles, not seen in glomangiopericytoma, are present.[7] Glomangiopericytoma is an indolent tumor and has a low malignant potential with excellent prognosis after surgical resection.[8]

Wide local excision is the treatment of choice, although some reports advocate the use of radiation therapy for patients with a high-grade lesion or incomplete resection.[9] Because the well-encapsulated, low-grade tumor was completely removed, and HPC in sinonasal tract near the nasolabial fold area is generally benign, with a low potential for local recurrence or metastasis via the blood stream and lymphatic system,[10] additional radiation therapy was not indicated in this case. The prognosis of HPC is somewhat unpredictable, but is usually favorable. The malignant nature of an individual HPC malignancy can only be established following tumor recurrence or metastasis.[1]

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