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Case Report

Non-infiltrating angiolipoma of the cheek: a case report and review of the literature

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Abstract: Angiolipoma, spindle cell lipoma, mylelolipoma, chondrolipoma and myxolipoma are histologic variants of lipomas arising from fat tissue. Although angiolipoma is the most common tumor in the trunk and extremities of young people, it occurs infrequently in the head and neck region. The authors present the clinical and histological features of a non-infiltrating angiolipoma excised from the cheek of a 22-year old man. Clinical examination showed a soft, mobile, approximately 4 × 3 cm mass that could be palpated anterior to the masseter muscle. The mass was removed by an intraoral approach. Angiolipoma was confirmed on histopathologic evaluation. Lipomas represent about 1 to 5% of all neoplasms of the oral cavity. They are usually painless, soft, round and mobile. The diagnosis is based on both clinical and histologic characteristics. The treatment is surgical excision. (J Oral Sci 51, 137-139, 2009)

Keywords: angiolipoma; cheek; fine needle aspiration biopsy.

Introduction

Lipomas are the most common neoplasms arising from fat tissue. They are usually slow-growing, soft and asymptomatic masses. Even though these neoplasms tend to be highly vascular, identification of vessels is difficult because of compression. Lipomas are subclassified into multiple different histologic subtypes based on the appearance of the associated stroma. Angiolipoma, spindle cell lipoma, myelolipoma, chondrolipoma and myxolipoma are some histologic variants of lipomas (1).

Although angiolipoma is the most common neoplasm seen in the trunk and extremities of young people, it occurs infrequently in the head and neck region. Thirteen percent of all lipomas occur in the head and neck, including cheek (2-5), tongue (6), palate (7), parotid gland (8), neck (9), and larynx (10). In this report, the authors present the clinical and histological features of non-infiltrating angiolipoma excised from the cheek.

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Case Report

A 22-year-old man presented with swelling of the right check. He had noted a slight swelling 7 months earlier (Fig. 1a). Clinical examination revealed a soft, mobile, approximately 4 × 3 cm mass that could be palpated anterior to the masseter muscle. The overlying skin was normal. The lesion was tethered to the superficial and deeper structures. There were no neurologic defects, but the mass was tender. No fluctuation and bruits were present (Fig. 1b).

Lipoma was suspected from the ultrasonographic imaging. Findings of fine needle aspiration biopsy were consistent with a benign and angiomatous neoplasm. The mass was removed with an intraoral approach. Enucleation

Fig. 1 a: Extraoral view of the patient, b: Intraoral view of the patient.

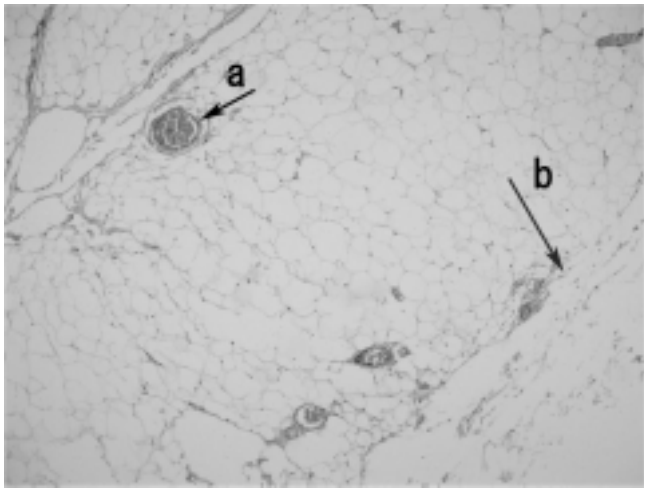

Fig. 2 Photomicrograph showing a mixture of fat cells and vascular channels (a: full of eritrocyte, b: peripheral portion of the tumor, H-E staining ×100).

of the tumor was accomplished after detaching it from the facial nerve, the facial vessels, and buccinator muscles. It was easily elevated from the surrounding tissue. No invasion into the masseter muscle was evident. The mass was multilobulated, yellow, moveable and extended into the buccal space. The case was diagnosed as angiolipoma, which was confirmed by the histopathologic evaluation revealing mature adipose tissue intermixed with dilated vascular elements containing thrombi in the lumen. The dilated vessels showed no cellular atypia (Fig. 2).

The recovery period was uneventful. The patient showed no evidence of recurrence during a 19-month follow-up period.

Discussion

Lipomas represent about 1 to 5% of all neoplasms of the oral cavity. They are usually painless, soft, round and mobile. Angiolipomas, histologic variants of lipoma, are benign mesenchymal tumours made up of mature lipocytes and blood vessels. Angiolipoma was first described as a distinct entity in 1912 by Bowen (11). Based on studies by Gonzales-Crussi et al. (12), angiolipoma has two histologic types: infiltrating and non-infiltrating. Non-infiltrating angiolipomas are encapsulated. The size can vary from 1 cm to 4 cm. Angiolipomas tend to be located on the forearms, upper arms, thighs and anterior abdominal wall and are more common in males than in females. The face, scalp, palms or soles are hardly ever involved. Infiltrating angiolipomas are characterized by a non-capsulated tumor (13).

Infiltrating angiolipomas extend into surrounding tissues. They are usually diagnosed in older patients. They have two anatomical forms: intermuscular and intramuscular (4,9,14,15). The present case was that of a non-infiltrating angiolipoma of 4-cm diameter located in the cheek of a young male.

History of trauma, lipomatous differentiation by hormones during puberty, fatty degeneration of a central hemangioma and vascular proliferation of a congenital lipoma (congenital origin) have been implicated as possible etiologic factors (9,14,15).

As differential diagnosis, hemangioma, leiomyoma, neurilemmoma, and Kaposi's sarcoma can be considered. Presence of phleboliths in CT, pulsation and fluctuation are helpful to rule out hemangioma. However, histopathologic evaluation is required for exclusion of leiomyoma and neurilemmoma (16). Kaposi's sarcoma is a vascular malignancy, while lipoma is an adipose mesenchymal neoplasm. Palate, gingiva, and tongue are the most common locations, and clinically, Kaposi's sarcoma occurs as ulcerative exophytic reddish lesion (1). Ultrasonography and fine needle aspiration biopsy may be useful to diagnose angiolipomas. In the present patient, we used both diagnostic procedures. The diagnosis is based on both the clinical and histologic characteristics. There

Table 1 Non-infiltrating angiolipoma of the head and neck.

Year	Author	Age/Sex	Size (cm)	Location
1980	Campos et al. (2)	44/M	2.5 × 2	Cheek
1981	Brahney et al. (6)	81/F	4 × 3	Tongue
1990	Ancieto et al. (3)	11/M	8 × 4	Cheek
1996	Ali and el-Zuebi (4)	13/F	5 × 3	Cheek
1998	Alvi et al. (5)	10/F	2 × 3	Cheek
2005	Saydam et al. (9)	28/F	10 × 7	Neck
2007	Mesolella et al. (10)	71/M	2	Larynx

is no evidence that angiolipomas undergo malignant transformation, due to lack of atypia, pleomorphism, or mitotic figures in angiomatous or adipose tissue (17).

Surgical excision is the treatment for both infiltrating and non-infiltrating angiolipomas (9). Carbon dioxide laser and liposuction may be alternative options for treatment of single or multiple angiolipomas (10,13,17,18). In the present case, we performed surgical excision.

Few cases of non-infiltrating angiolipoma have been described in the head and neck. Previously reported lesions are listed in Table 1. The present case showed typical clinical and histologic features of non-infiltrating angiolipoma.

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