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Tonsillar leiomyoma

by

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Abstract

Tumors of smooth muscle origin are rare in the oral cavity. To date, only eighty-three cases of oral leiomyomas have been reported. A first case of tonsillar leiomyoma in a 73-year-old male is presented. The theories of origin and the various histologic types of oral leiomyomas are discussed. Leiomyoma can easily be confused with other spindle-cell tumours. Special stains are necessary to reach a correct diagnosis. It is sometimes difficult to differentiate benign leiomyoma from malignant leiomyosarcoma. The use of mitotic figure count to indicate malignant behaviour is not always reliable. The need for wide surgical excision of the tumour, complete sectioning and examination of the specimen and meticulous follow-up of the patient for evidence of recurrence are emphasized.

The leiomyoma is a benign tumour derived from smooth muscle and thus may arise in any location where smooth muscle is found. The most common site is the uterus, where 20 per cent of women over 30 years of age are affected (Walter and Israel, 1974). Leiomyomas are also common in the gastrointestinal tract, skin and subcutaneous tissue. To a certain extent, the occurrence of smooth muscle tumours follows the wide distribution of smooth muscle in the body. The paucity of significant masses of smooth muscle in the oral cavity accounts for the rarity of oral leiomyomas (Batsakis, 1979). To date, 83 cases of oral leiomyoma have been reported (Natiella *et al.*, 1982; Praal *et al.*, 1982; Giles and Gosney, 1982; Hemani *et al.*, 1983; Yamamoto, 1983) (Table I). The most common intraoral site for a leiomyoma is the hard palate, followed by the tongue and buccal mucosa. The purpose of this report is to present a first case of tonsillar leiomyoma and to discuss the nature of the lesion with respect to the literature.

Case report

A 73-year-old caucasion male was referred to the ENT department at Lady Davis Carmel Hospital (Haifa, Israel) with the complaint of a foreign body sensation in the throat, of three weeks' duration. Examination revealed an oval 1×1×0.5 cm mass, bulging from the inferior pole of the right palatine tonsil. The mass appeared whitish and smooth. There were no other significant findings in the remainder of the physical examination.

A lateral neck radiograph (Fig. 1) showed an oviod, well demarcated mass with the density of soft tissue. The location of the mass corresponded with that of a palatine tonsil. A chest radiograph, electrocardiogram, complete blood count, elec-

TABLE I
ORAL LEIOMYOMAS: SITE DISTRIBUTION

Hard palate	16
Tongue	15
Buccal mucosa	15
Lower lip	9
Upper lip	7
Buccal sulcus	6
Gingiva	5
Floor of mouth	3
Jaw bone	2
Major salivary gland	2
Soft palate	2
Lip unspecified	1
Total	83

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FIG. 1
Lateral neck radiograph showing (arrowed) an ovoid, well demarcated mass, in a location corresponding with that of a palatine tonsil.

trolytes, blood enzymes, urinalysis and results of liver function tests were all within normal, limits.

The right palatine tonsil, including the entire lesion, was dissected under general anaesthesia. The patient made an uneventful recovery and was discharged on the second post-operative day. There were no signs of recurrence one year following the operation.

Pathology—macroscopic (Fig. 2): A sandglass-shaped specimen measuring 2×2.5×1.5 cm., covered by partially ulcerated mucosa. On cross-section, a well demarcated round pale mass, 1 cm. in diameter, was seen. A small amount of firm grey tissue was attached to the specimen.

Microscopic (Fig. 3): The mass was a circumscribed lesion consisting of whorls and interlacing bundles of smooth muscles cells (based on special stains: Mallory's PTAH; Van Gieson and Masson's trichrome). Some thick-walled vessels were found, especially in the reticulin-stained preparation. No mitosis or atypical cells were seen.

The tumor was surrounded by some connective tissue and covered by ulcerated squamous cell epithelium. The tissue attached to the specimen was a tonsil.

Conclusion: Vascular leiomyoma of the tonsil. No signs of malignancy.

Discussion

The oral cavity, which is normally deficient in

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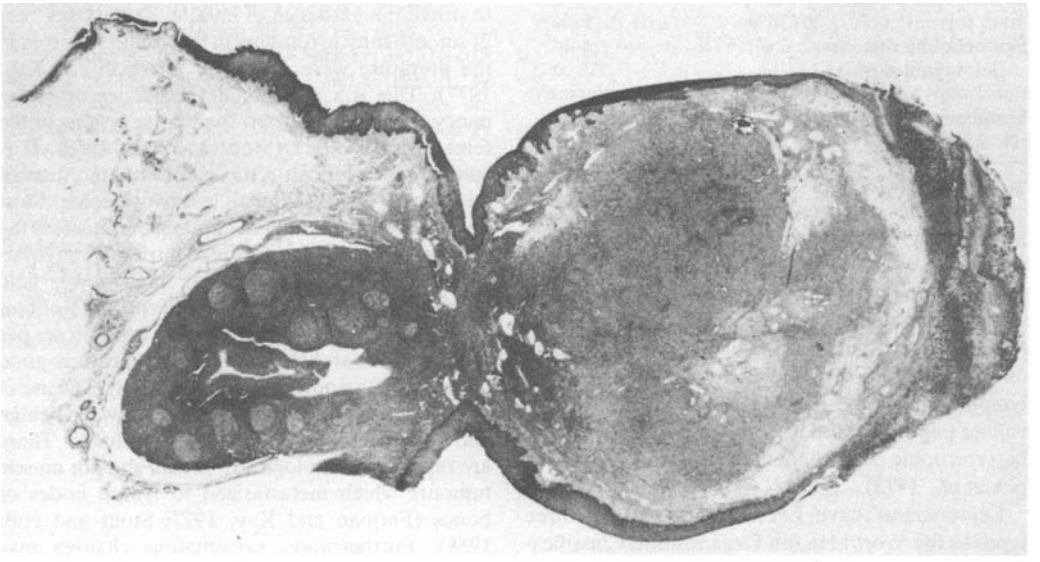


FIG. 2
Macroscopic specimen (H&E ×6) showing tonsil with crypt (left) and ulcerated leiomyoma (right).

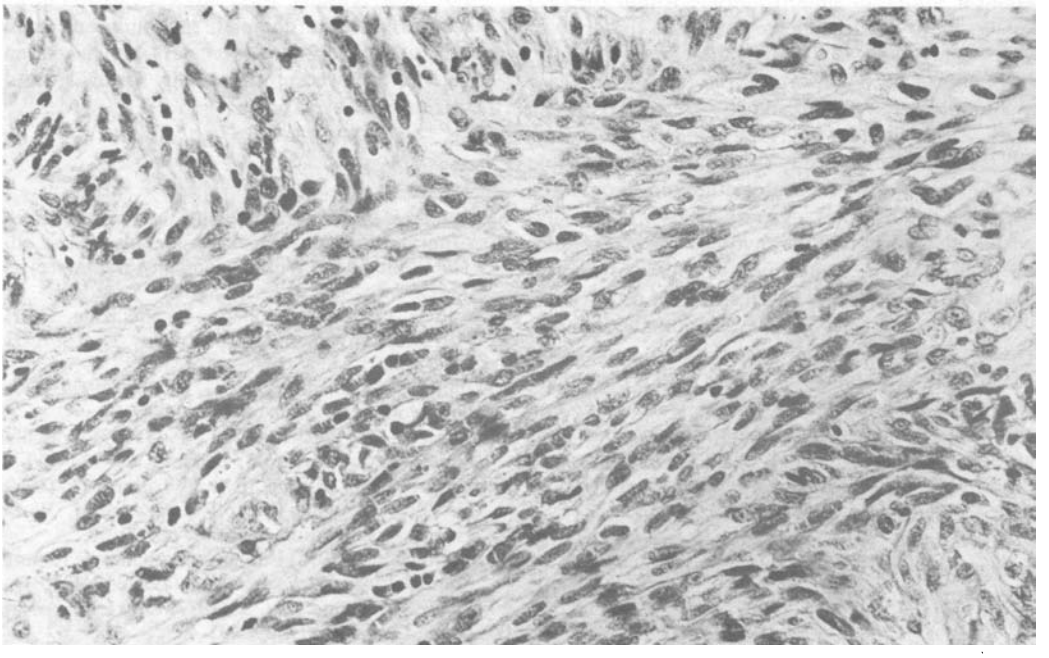


FIG. 3
Photomicrograph (H&E ×400), showing smooth muscle cells and vascular spaces.

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TABLE II
ORAL LEIOMYOMAS: HISTOLOGICAL TYPES

Angiomyoma (vascular)	59 (70%)
Leiomyoma (solid)	20 (24%)
Epithelioid leiomyoma (leiomyoblastoma)	1 (1%)
Unspecified	4 (5%)
Total	84 (100%)

smooth muscle, is an unusual site of origin for smooth muscle neoplasms. The chief source of smooth muscle in the oral cavity is the tunica media of the blood vessels and the walls of the larger lymphatics. Other sites suggested are the circumvallate papillae of the tongue, ductus lingualis and heterotrophic embryonal tissue (Stout, 1938; Cherrick *et al.*, 1973).

Leiomyomas have been separated into three types in the World Health Organization Classification: leiomyomas (solid); angiomyomas (vascular); epithelioid leiomyomas (leiomyoblastoma) (Enzinger *et al.*, 1969). As blood vessels are the greatest source of smooth muscle within the oral cavity, it would be expected that the majority of oral leiomyomas would be of the vascular variety. Fifty-nine of the 84 reported cases (the present case included), were vascular and 20 were solid (Natiella *et al.*, 1982; Praal *et al.*, 1982; Giles and Gosney, 1982; Hemani *et al.* 1983; Yamamoto, 1983) (Table II). One case only of oral epithelioid leiomyoma has been reported (Hagy *et al.*, 1964). It was suggested that vascular leiomyomas may represent only one stage in a continuous process of smooth muscle proliferation. The sequence of progression which was postulated is hemangioma, angioma, vascular leiomyoma, leiomyoma and solid leiomyoma (Duhig and Ayer, 1959). Others pointed out that, if that theory were true, one would expect to find angiomyomas in a younger age group than that in which solid leiomyomas are found. No such distribution in age groups was noticed (Farman, 1975).

It is difficult to differentiate a leiomyoma microscopically from other spindle cell tumours such as neurofibroma. Only upon evaluation with the aid of Mallory's PTAH (phosphotungstic acid hematoxylin), Masson's trichrome and Van Gieson's techniques can a proper diagnosis be reached (Damm and Neville, 1979; Kelly and Harrigon, 1977). The Van Gieson and Masson's trichrome are special stains for the identification of collagen, but may give up to 25 per cent false-positive reactions for muscle. Mallory's PTAH is a special stain for myofibrils and should always be used where one is trying to prove the existence of muscle. Twenty per cent of smooth muscle tumours in the mouth reported in the literature were malignant (Farman and Kay, 1977). This is a much higher incidence of malignancy than that reported for similar lesions in the female genital tract (Stout and Hill, 1958). It is sometimes difficult to differentiate benign leiomyoma from malignant leiomyosarcoma. Most investigators agree that the finding of mitoses is the most important feature in recognizing leiomyosarcoma. Ten mitotic figures per high power field denote probable malignant behaviour (Robbins and Corten, 1979), where less than two mitoses per ten high power fields generally indicate a good prognosis (Ravindranathan *et al.*, 1978). The use of mitotic figure count to differentiate between benign and malignant lesions is not always reliable. There are reports of histologically benign smooth muscle tumours which metastasized to lymph nodes or bones (Farman and Kay, 1977; Stout and Hill, 1958). Furthermore, sarcomatous changes may appear only in a part of the tumour. These can be found only if the whole specimen is examined serially (Ravindranathan *et al.*, 1978).

For these reasons, wide surgical excision of the tumour is indicated, complete sectioning and examination of the specimen is necessary, and the patient should be followed up thoroughly for evidence of recurrence.

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