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CASE REPORT

Head and neck solitary fibrous tumor: a challenging diagnosis

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Abstract

Solitary fibrous tumors are uncommon soft-tissue neoplasms of mesenchymal origin, typically benign and well-circumscribed. While these tumors most frequently arise in the pleura, extra-pleural manifestations are less common. However, there have been instances of head and neck involvement documented in the literature. Despite the complexities in diagnosis, it is crucial to accurately diagnose and treat head and neck solitary fibrous tumors due to their potential for recurrence. This report presents the case of a 65-year-old female diagnosed with a solitary fibrous tumor impacting the oral cavity, as well as the submandibular and sublingual regions.

Keywords: solitary fibrous tumors; submandibular gland; sublingual gland.

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Introduction

Solitary fibrous tumors are uncommon neoplasms that typically arise in the pleura or other serous surfaces[1]. There are reports in the literature of these tumors in extra-pleural sites, with their diagnosis proving challenging because of their microscopic resemblance to other types of spindle cell tumors[1,2].

Few cases of this type of tumor have been reported in head and neck locations[2], leading to gaps in the understanding of this pathology in this region.

Here, we report a rare case of a 65-year-old woman with a solitary fibrous tumor extending through the submandibular, sublingual, and oral cavity regions.

Case report

A 65-year-old female patient, a smoker for 53 years and diagnosed with diabetes mellitus, noticed a mass in the right cervical region about 4 months ago and was referred to a head and neck surgery service. Upon physical examination, the patient presented with a cervical mass at levels I and II, measuring approximately 10 cm, painless and mobile, without lymphadenopathy. The patient denied fever, weight loss, secretion discharge, and bleeding. The clinical presentation was suggestive of neoplastic etiology, and a contrast-enhanced neck computed tomography (CT) scan was requested to investigate this mass.

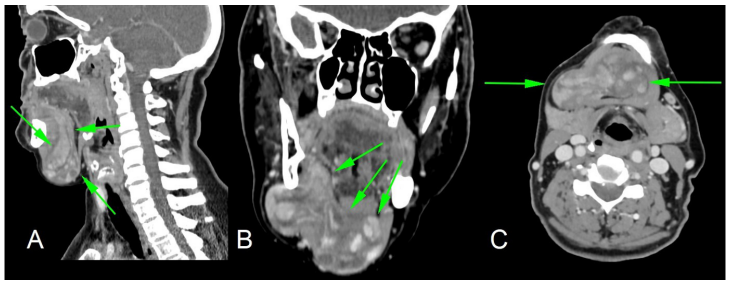

Figure 1. Computed tomography scan with contrast in parasagittal (**A**), coronal (**B**), and axial (**C**) sections showing an expansive, nodular, heterogeneous lesion with foci of hypervascular uptake.

The CT scan (Figure 1) revealed an expansive, nodular, heterogeneous lesion with foci of hypervascular uptake, located in the oral cavity to the right of the midline, extending inferiorly to the right sublingual and submandibular spaces. Surgical treatment of the lesion was chosen.

The complete resection of the lesion occurred without complications. Macroscopically, the lesion was smooth and grayish, closely associated with the surface of the sublingual and submandibular glands. The histopathology showed clear margins and suggested that the lesion was a neoplasm of mesenchymal origin. Subsequent immunohistochemistry (IHC) revealed positive CD34 and STAT-6 markers, confirming the diagnosis of a solitary fibrous tumor.

At the follow-up consultation 1 month after the surgery, the patient remained asymptomatic. Upon physical examination, the surgical wound looked good, and there were no signs of disease.

Discussion

Solitary fibrous tumors are uncommon mesenchymal tissue neoplasms, well-defined, and generally benign[3]. Although their most common site is the pleura, there are various reports of this type of tumor in extra-pleural sites[1,2].

In the head and neck region, there are literature records of solitary fibrous tumors in the nasal cavity, paranasal sinuses, soft palate, epiglottis, parotid gland, submandibular gland, and parapharyngeal spaces[4,5].

The diagnosis of extra-pleural solitary fibrous tumors is usually challenging because of their histological characteristics[1,2]. Furthermore, in the head and neck region, the vast majority of cases present with nonspecific symptoms, making diagnosis even more difficult[2].

The challenging diagnosis of these neoplasms highlight the importance of IHC, notably the CD34 marker, as this antigen is overexpressed in solitary fibrous tumors, and this characteristic differentiates these tumors from other spindle cell neoplasms[2,3].

A rare subgroup of solitary fibrous tumors, which exhibit certain histological characteristics (variable size and shape of the nucleus and high mitotic activity), behaves malignantly[3]; however, none of them have been reported in the head and neck region[2,3].

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Usually, complete surgical excision is the treatment of choice, while radiotherapy and chemotherapy are options in cases of incomplete lesion resection[2,5].

After surgical treatment, outpatient follow-up plays an important role, as the disease can recur even after several years[5]. The review study by Cox et al.[2] revealed that 4 out of 9 cases with positive margins showed recurrence, and only 1 recurred among 10 cases with negative margins.

Cox et al.[2] point out that there is no significant difference in disease incidence between men (44% of cases) and women (56% of cases) reported in the literature.

Thus, although rare, solitary fibrous tumors of the head and neck should be considered in the differential diagnosis of cervical masses. Furthermore, appropriate surgical treatment seems to be associated with a better prognosis.

Ethical aspects

The patient agreed to the publication of this study by signing an informed consent form.

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