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A unilateral tumor of the left wall of the maxillary sinus - a case study

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Abstract

Neoplasms of the maxillo-facial area, including the sinuses paranasal, nasal, become an increasingly difficult challenge for contemporary oncology. Information on the frequency of occupation of the anatomic area is of great importance especially in the diagnosis of tumors infiltrating poorly available physical examination, because in these cases there is a greater risk of overlooking the disease at an early stage. Maxillary sinus tumors are rare cancers and commonly reported with nasal sinus cancers and other paranasal sinuses. A 68-year-old woman with visible lesions near the left cheek, in whom there was a limitation of the field of view due to the extensive nature of the pathological change. The tumor causes the features of the segmental destruction of the left nasal bone and segmentally destroys the anterior bone wall of the left maxillary sinus. Medical imaging is essential in diagnosing and assessing the severity of these cancers.

Keywords: maxillary sinus, tumor, computed tomography

Introduction

Neoplasms of the maxillo-facial area, including the sinuses paranasal, nasal, become an increasingly difficult challenge for contemporary oncology. Unfortunately, they are often recognized in advanced stages, which prevents effective treatment. An appropriate diagnosis is conditioned by the knowledge of the location of neoplastic lesions, especially the frequency of attachment of individual anatomical structures of the head and neck region. Information on the frequency of occupation of the anatomic area is of great importance especially in the diagnosis of tumors infiltrating poorly available physical examination, because in these cases there is a greater risk of overlooking the disease at an early stage. Based on the presented case, it is possible to confirm the high usefulness of computed tomography in the diagnosis of face craniofacial tumors [1-3].

Case presentation

A 68-year-old woman with visible lesions near the left cheek, in whom there was a limitation of the field of view due to the extensive nature of the pathological change. After the physical examination, the invasiveness and the depth of the change were ordered. The patient underwent computed tomography (CT) examination. The study was conducted using a contrast agent - Omnipaque 350 (contains 755 mg of iohexol equivalent to 350 mg of organic iodine per ml). For diagnostic imaging was used the SOMATOM Definition AS (Siemens) and analyzed with SYNGO Multi-Modality CT Workstation (Siemens). The study revealed on the left side a large, irregular, tuberous infiltration of 40x27x40 mm, the upper pole reaching the left nasal-ocular angle, and the lower reaches the left anterior wall of the left and right lateral attachment of the medial rectus muscle of the eye and slightly occupies the intraorbital fat and slightly inflates in the direction of the nasal vestibule. The tumor adheres to the wall with the base width, move the left maxillary sinus. The tumor causes the features of the segmental destruction of the left nasal bone and segmentally destroys the anterior bone wall of the left maxillary sinus (Figure 1 A and B).

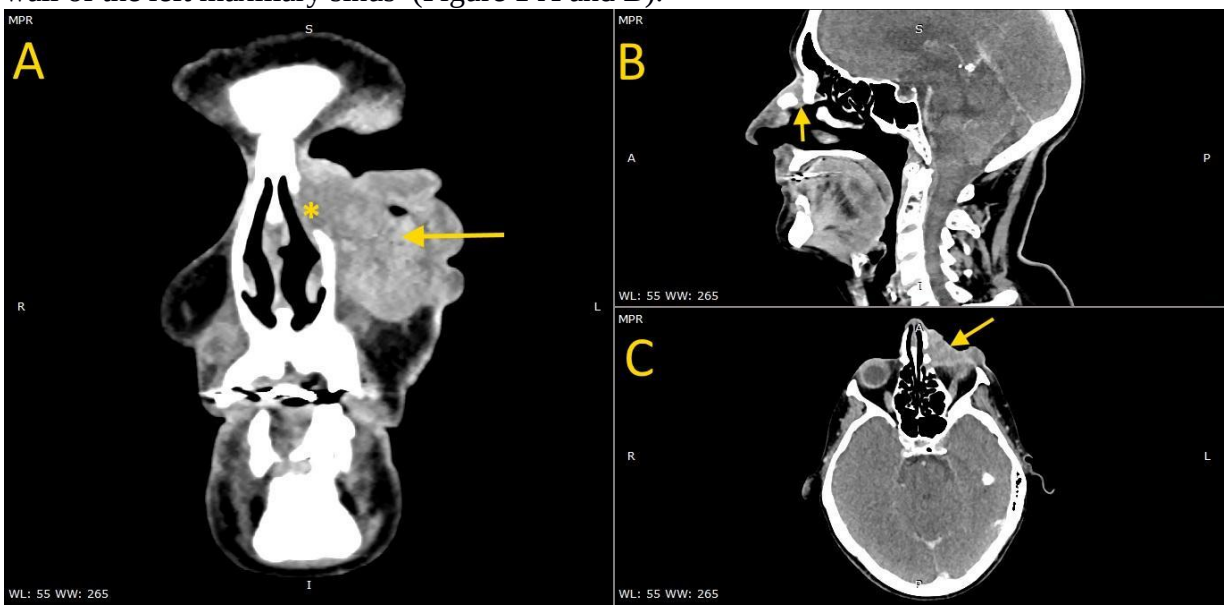

Figure 1. The CT scan detects the tumoral mass (yellow arrow) and segmentally destroys the anterior bone wall of the left maxillary sinus (yellow asterisk): A – coronal reconstruction; B – sagittal reconstruction; C – axial reconstruction.

Discussion

Maxillary sinus tumors are rare cancers and commonly reported with nasal sinus cancers and other paranasal sinuses. The maxillary sinus tumor accounts for 0.2% of malignant tumors in humans and only 1.5% of all head and neck malignancies [4]. The highest incidence of sinus cancer was recorded in the seventh decade of life. The factors that can determine the development of cancer include chronic sinusitis, smoking cigarettes and the work performed in the places where the chemical processes develop [5-6]. Most tumors arise from the side wall of the nasal cavity, with 50% developing on the turbinates [4]. Medical imaging is essential in diagnosing and assessing the severity of these cancers. Computer tomography scan with contrast is better in assessing the bone limitations of the sinonasal section and the base of the skull [7-9].

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