

MASTOID OSTEOMA OF THE TEMPORAL BONE

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Abstract

Osteomas are osteoblastic neoplasms affecting the parietal and frontal bone.

Mastoid osteomas of temporal bone are rare benign tumors with incidence of 0.1%-1% of all benign tumors of the skull. We present a case of a young 19-year-old female who complained of right posterior auricular hard swelling which had gradually increased in size over the past 2 years and felt pain for less than a year.

There was no history of trauma, symptoms of inflammation or occlusion of the ear canal. She felt a pain during the eruption of her second molar teeth. Non-contrast CT was done and it showed a well-defined densely calcified lesion of bone attenuation in the right mastoid posteriorly measuring $1.7 \times 1 \times 2.3$ cm. The middle ear cavity, ossicular chain, inner table of skull and diploe were normal with no extension intracranially and no bony destruction.

These findings spoke in favor of a mastoid osteoma.

Key words: osteoma, temporal bone, ear

Introduction

Osteomas are osteoblastic neoplasms affecting the parietal and frontal bone [1-3].

Mastoid osteomas of temporal bone are rare benign tumors with incidence of 0.1%-1% of all benign tumors of the skull. They usually present as asymptomatic unless they gradually increase in size to cause cosmetic deformity and sometimes pain. Mastoid osteoma form a rare entity with only 150 cases being reported in the literature [4].

Radiological investigations are required to find extent with non-contrast CT as modality of choice. Osteomas are osteoblastic mesenchymal, slow-growing tumors that affect the head and neck with an estimated prevalence of 0.42%, the most frequent modality of choice.

Case report

We present a case of a young 19-year-old female who complained of right posterior auricular hard swelling which had gradually increased in size over the past 2 years and felt pain for less than a year.

There was no history of trauma, symptoms of inflammation or occlusion of the ear canal. При растење на нејзинит умник се појавва болка. She felt a pain during the eruption of her second molar teeth.

Non-contrast CT was done and it showed a well-defined densely calcified lesion of bone attenuation in the right mastoid posteriorly measuring $1.7 \times 1 \times 2.3$ cm. The middle ear cavity, ossicular chain, inner table of skull and diploe were normal with no extension intracranially and no bony destruction. These findings spoke in favor of a mastoid osteoma.

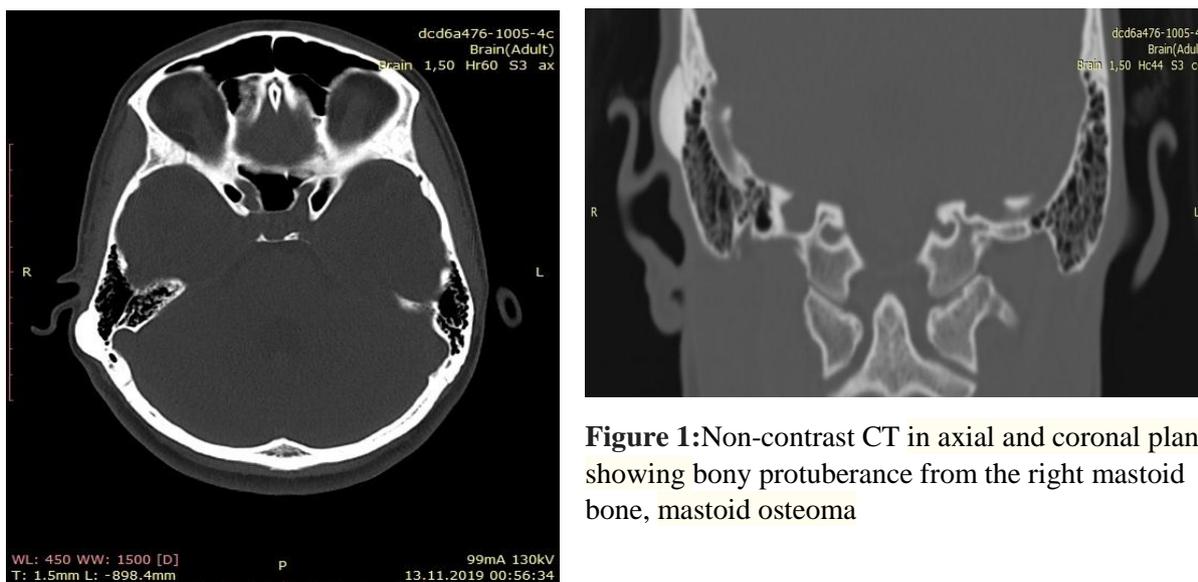


Figure 1:Non-contrast CT in axial and coronal plane showing bony protuberance from the right mastoid bone, mastoid osteoma

Discussion

Osteomas are benign osteoblastic tumors of mesenchymal origin [1,5] which affect the head and neck, and most often the parietal and frontal bone.

Mastoid osteomas are rare. In general, the incidence of mastoid bone osteomas is 0.1% - 1% of all benign tumors of the skull [6].

Osteomas are reported in the external auditory meatus, middle ear, styloid process, temporomandibular joint, internal auditory canal. But, a bone tumor of the mastoid region is rarely reported, and one of them is our case.

It is difficult to clinically classify the osteomas due to their similar presentation. There are three types of mastoid osteomas:

- Osteoma compactum
- Osteoma cancellare
- Osteoma cartilagineum

Compact osteomas have a wider base and are very slow growing whereas spongy osteomas are more likely to be pedunculated and grow relatively fast [7].

Osteoma occurrence can be divided into syndromic and nonsyndromic [8].

Temporal bone osteoma swellings are usually painless, but this was not the case with the patient we present in this paper. It overlaps with the eruption of the second molars which is the main cause for paying a visit to a plastic surgeon.

The petrous part of the temporal bone may be involved along with the facial nerve and part of the internal ear that leads to hearing loss as a complication [1].

The etiology is not clear and various theories have been proposed: congenital theory, based on the fact that some osteomas occur in male patients in puberty; infectious theory, reported in patients with recurrent suppurative otitis media; and traumatic theory, in cases with microtrauma of subperiosteal hematoma [9].

Differential diagnosis of mastoid osteomas include isolated eosinophilic granuloma, osteosarcoma, osteoblastic metastasis, isolated eosinophilic granuloma, osteoid osteoma, calcified meningioma and monostotic fibrous dysplasia [7].

Non-contrast CT is the imaging method of choice for evaluating osteomas. On the CT image osteomas appear as hyperdense mass, similar to normal cortex.

The choice of treatment is a surgical resection, which is mostly used if the indication is cosmetic imperfection or complications that are usually caused by giant osteomas.

Conclusion

Mastoid osteoma is a rare benign, slow growing tumor of the head and neck, usually asymptomatic with unsightly disfigurement.

Also, it can present with symptoms of ear occlusion and hearing loss. Computer tomography is the method of choice. If indicated, a surgical excision is made. By complete resection, recurrence is rare and with good cosmetic results for the patient.

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