

MULTIFOCAL OSTEOCLASTOMA OF THE SKULL

Case report

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ABSTRACT - We describe the case of a 35 years old man with a nonspecific complaint of a slow growing solid mass in the frontal region. Radiological exams evidenced two more lesions : in the superior and lateral walls of the orbit. Treated with total excision of the lesions and a cranioplastic procedure at the same act, with favorable outcome. Microscopic findings suggested giant cell tumor in the three lesions that was confirmed by imunohistochemical examination.

KEY WORDS: osteoclastoma, giant cell tumor, multifocal, skull.

Osteoclastoma craniano multifocal: relato de caso

RESUMO - Descrevemos o caso de homem de 35 anos, com história de lesão endurecida de crescimento progressivo na região frontal direita. Exames radiológicos evidenciaram duas outras lesões: uma na parede superior e outra na parede lateral da órbita direita. Submetido a exérese total das lesões com margem de segurança e cranioplastia no mesmo tempo cirúrgico. O exame anatomo patológico sugeriu tumor de células gigantes nas três lesões, diagnóstico confirmado pela imuno-histoquímica.

PALAVRAS-CHAVE: osteoclastoma, tumor de células gigantes, multifocal, crânio.

Osteoclastoma or giant cell tumor is a benign but often locally aggressive neoplasm of the bone. It occurs more frequently between the third and fifth decades of life, sometimes after patients are fifty years old and rarely after they are sixty years old. This is one of the few osseous neoplasms showing higher occurrence in women¹⁻³. Giant cell tumor accounts for about 5 % of biopsed primary bone tumors and about 20% of benign bone tumors. Most of the osteoclastomas are located near the articular end of tubular bones. The skull is rarely involved, only 1 to 2% of the cases described in the literature³⁻⁶. We describe a case of osteoclastoma.

CASE

A 35 year-old white man presented with a 1 year history of a slow growing solid mass at the right frontal region with about 2 cm of diameter. The lesion was surgically resected in another hospital, but probably partially because 4 months later it was back. The CT scan at our service showed two other lesions in the skull: in the superior and lateral walls of the right orbit (Figs 1

and 2). All the three lesions were completely resected and a cranioplastic procedure was performed at the same act. Microscopic findings suggested giant cell tumor in the three lesions, and that was confirmed by imunohistochemical exams (Fig 3).

DISCUSSION

Giant cell tumor or osteoclastoma is a rare tumor, representing only 3 - 7% of all bone tumors. About 70 - 90% are located at or close the extremities of long bones, 10 - 30% are located in the sacrum, region of the knee, small bones of the hands and vertebrae, 2% affect the skull, more commonly the mandible and maxilla^{1,2,7,8}. A review of the literature demonstrated 7 series of giant cell tumors totalizing 2404 cases^{1,2,6-10}, and 24 (1%) occurred in the skull, excluding the ones found in the mandible. When located in the skull they are more frequently found at the sphenoid and temporal bones, and rarely at the ethmoidal, frontal or occipital bones⁵.

Multifocal osteoclastoma is rare, usually occur-

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Fig 1. CT showing lesions in the superior and lateral walls of the orbit and right frontal bone.

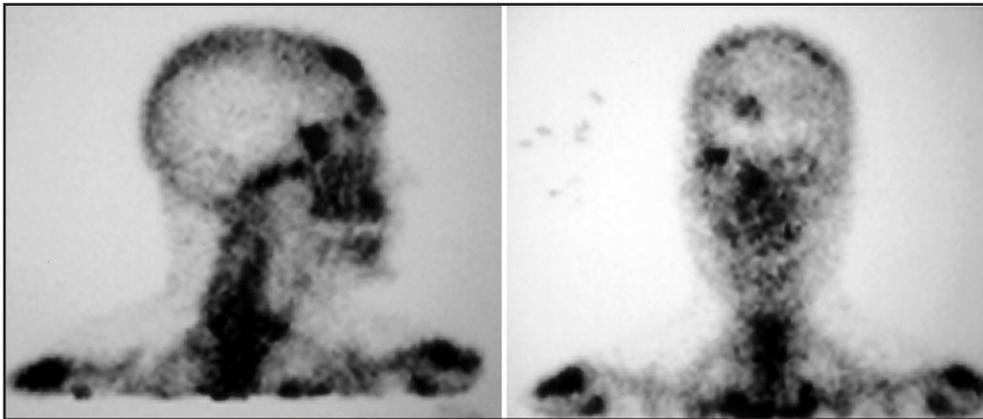


Fig 2. Bone scintigraphy showing the three lesions.

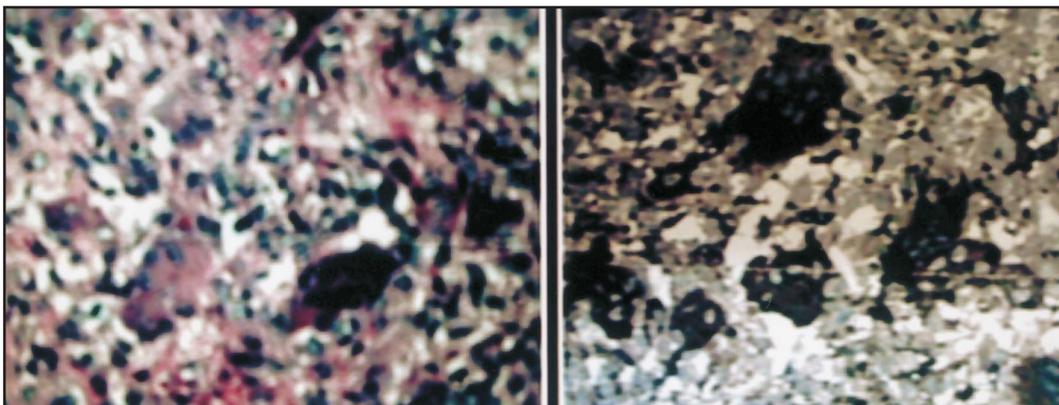


Fig 3. Positive imuno-histochemical exam for CD 68.

ring in the hands and feet¹⁰. The multifocal osteoclastoma should not be confused with giant cell reparative granuloma, which is often multifocal and presents a high incidence of recidivation. In an extensive review of the literature no other case of multifocal osteoclastoma of the skull was found, and we believe this is the first published case. The most common radiological appearance of osteoclastoma in the skull is an expanding and/or lytic neoplasm that may appear to extend into the sur-

rounding soft tissues, dura or sinuses. The rarity of these lesions explains the few numbers of MRI and CT descriptions of skull giant cell tumors^{7,11}.

The presence of giant cells in the histochemical study does not confirm the diagnosis. The differential diagnosis includes: giant cell reparative granuloma, benign fibrous histiocytoma and osteosarcoma with prominent giant cells⁶. The most common macroscopic appearance of osteoclastoma is a grayish, soft lesion with small cysts and occasion-

al necrotic areas. Our patient presented in the microscopic exam: multinucleated giant cells, mononuclear cells and few histiocytes with hemosiderin deposition. The immunohistochemical study confirmed CD68, a bone giant cell marker.

More than 60% of giant cell tumors will recidivate if treated with partial resection. In addition to local intraosseous recurrence, surgery-related contamination may lead to implantation of cells of the tumor in the perilesional soft tissues in 10 - 15% of patients. The use of radiotherapy should probably be limited to lesions that cannot be subjected to total excision, and that is an issue for further literature discussion¹²⁻¹⁵.

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