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Fibrous dysplasia of the clivus with a second T8 bone lesion: case report

Filiberto Contratt, MD[a,*], Agazio Menniti, MD[a], Mario Francesco Fraioli, MD[a], Bernardo Fraioli, MD[b]

[a]*Neuroscience Department-Neurosurgery, University of Rome "Tor Vergata," Rome*

[b]*Neuroscience Department-Neurosurgical Institute, University of Rome "Tor Vergata," Rome*

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Abstract

Background: We present a rare case of a probably poliostotic fibrous dysplasia of the clivus in a young woman with a clival and vertebral involvement. We also compare our case with data reported in tables that include all cases of clival fibrous dysplasia present in literature.

Case Description: Thirty-year-old women presented with headache. We reviewed radiological and clinical literature before surgery. It was possible to perform a preoperative diagnosis of fibrous dysplasia of the clivus so it was possible to adopt a minimally invasive surgical approach on the clivus. The diagnosis of fibrous dysplasia of the clivus was confirmed after the operation. As the patient was asymptomatic, we did not operate on the vertebral lesion which was stable after 1 year.

Conclusion: We draw the conclusion that it is possible to obtain a correct preoperative diagnosis of fibrous dysplasia based on magnetic resonance imaging and computed tomographic scans; this makes it possible to avoid major surgical operations. The reported case is particularly interesting because apart from the clival fibrous dysplasia, a vertebral involvement of the same type can be assumed; this association has never been reported in literature.

Keywords: Fibrous dysplasia; Clivus; Occipital condyle; Cystic type; Dorsal vertebral body

1. Background

The fibrous dysplasia of the clivus has already been studied by Adada and Al-Mefty [1], who have well formulated the criteria for the diagnosis. We describe a case of fibrous dysplasia of the clivus that gives us the possibility to confirm, once again, the importance of the preoperative diagnosis to avoid useless invasive surgical procedures. Our aim is also to signal the possible presence of a rare poliostotic type of fibrous dysplasia of the clivus.

2. Case report

A 30-year-old woman presented with headache and irregular menses. The hormonal study did not show abnormalities. The neurologic examination was normal. A CT scan of the skull showed a ground-glass lesion of the clivus with intact cortical tables and a ballooning cyst in the left condylar area (Fig. 1). MRI scans of the brain and of the spine were performed. The MRI appearance of the examined regions was low signal on T1 and T2-weighted spin echo images with mild contrast enhancement (Fig. 2). Radionuclide scintigraphic evaluation of the bone (MDP-Tc99m) showed increased uptake in the regions of the clivus and the body of D8 (Fig. 3). Another scintigraphy using indium In 111 pentetreotide showed no uptake in both lesions. The case was discussed with the neuroradiologist, and the possible preoperative diagnosis of fibrous dysplasia was evaluated in light of the paper of Adada and Al-Mefty [1]. That the absence of bone lesions in the radiological differential diagnosis of the clival lesion could be exchanged with fibrous dysplasia was stressed. Most of the data clearly pointed toward fibrous dysplasia of the clivus and probably of the D8 body too, as this vertebral body had the same radiological (Fig. 4) and scintigraphic appearance; however, because the dorsal lesion could represent an element of

Abbreviations: MRI, Magnetic resonance imaging; CT, Computed tomography; MDP-Tc99m, Technetium Tc 99m methylene diphosphonate; CE, contrast enhancement.

* Corresponding author. Tel.: +39 06 20903057; fax +39 06 20903056.
E-mail address: contrattini@libero.it (F. Contratt).

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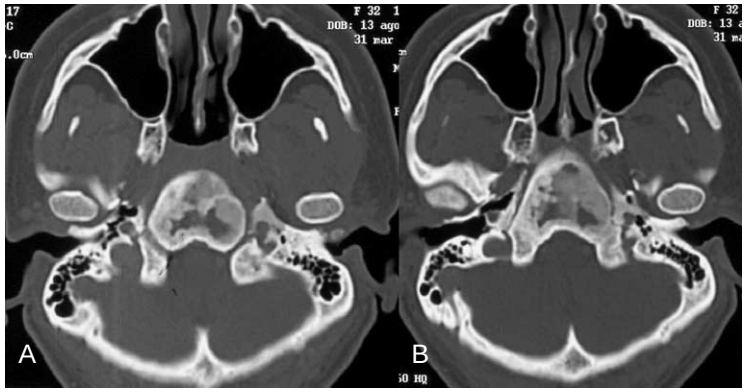

Fig. 1. Axial CT scans showing ground-glass appearance and cystic lesion of the clivus (A) with left condylar involvement (B).

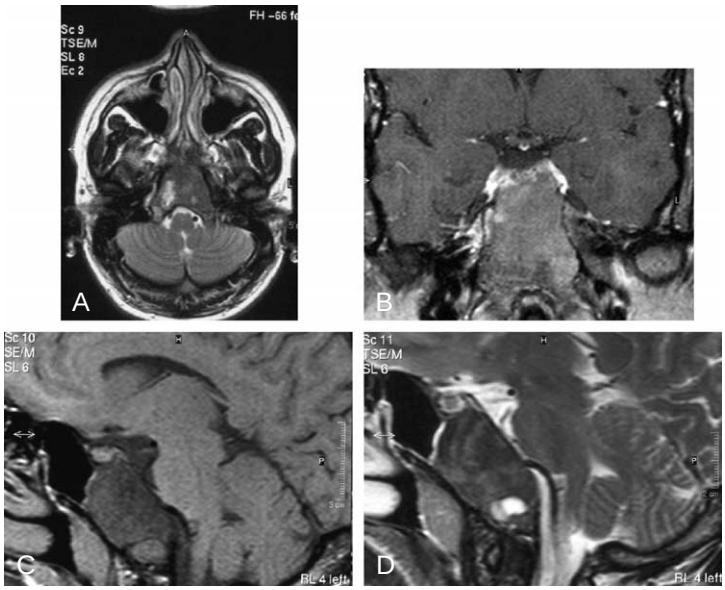

Fig. 2. Cranial axial MRI scan showing a hypointense clival lesion on T2-weighted image (A) and mild enhancement on T1-weighted image with Gadolinium in coronal scan (B). T1 (C) and T2 (D) sagittal scans show the hypointense clival lesion with its cystic component.

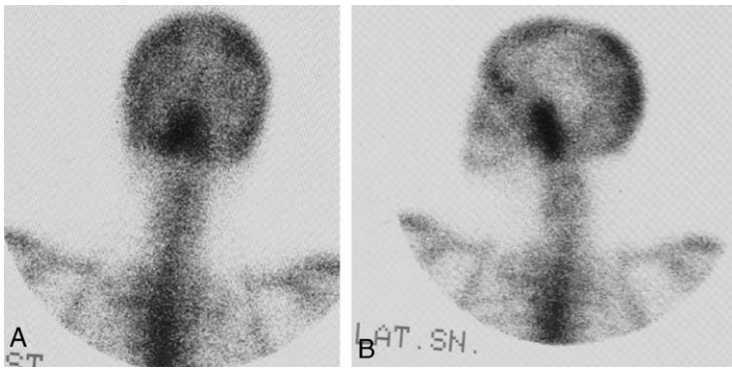

Fig. 3. Radionuclide scintigraphic (MDP-Tc99m) images of the skull and cervicodorsal spine in Antero-Posterior Projection (A) and Latero-Lateral Projection (B) showing increased uptake at the clivus region.