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Sellar abscess associated with tuberculous osteomyelitis of the skull: MR findings.

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Sellar Abscess Associated with Tuberculous Osteomyelitis of the Skull: MR Findings

Tuberculosis of the skull usually causes a fluctuant swelling or sinus over the destroyed bony segment. An extensive area of destruction occurs first.

Case Report

A 3-year-old boy had had a soft-tissue swelling in the left temporal region for 6 months. The swelling was gradually increasing in size and had been associated with progressive diminution of vision for 4 months. Physical examination revealed perception of light only in the right eye and complete loss of vision in the left eye. The temporal swelling was cystic, nontender, and associated with formation of a sinus. Skull radiographs showed multiple osteolytic lesions in the left temporal bone. CT scans showed complete destruction of both tables of the left temporal bone and osteolysis of posterior ethmoid and sphenoid bone. In addition, a sellar hypointense, irregular mass was seen. MR showed an area of complete destruction of the left temporal bone with communication between extradural space and subcutaneous collection. The extradural collection extended along the left temporal lobe. It showed low-intensity central signal and a peripheral rim isointense with brain parenchyma on T1-weighted images and mixed high- and low-intensity signals on T2-weighted images (Fig. 1). In addition, a large intrasellar mass with suprasellar extension was seen; it was isointense on T1-weighted images and of mixed intensity on T2-weighted images.

Surgical exploration of the left temporal area showed extradural, thick pus with granulation tissue. The results of a bone biopsy from its osteolytic edge and the extradural granulation tissue were consistent with tuberculous osteomyelitis and caseous tuberculous granulation tissue. The child was put on specific antituberculous chemotherapy and showed marked clinical improvement. Repeat MR after 2½ months of specific treatment showed a reduction in the size of the extradural collection and the sellar lesion.

Discussion

Skull tuberculosis is seen more commonly in the frontal and parietal bones than in the occipital and temporal bones; the ratio is 5:1 [1]. In the absence of evidence of direct inoculation as a result of trauma, infection of the skull occurs via the bloodstream. Clinically, it usually results in a soft-tissue swelling in relation to the bony lesion, but where the continuity is established between extradural space and the soft-tissue swelling, the swelling becomes less prominent [1]. Our patient had involvement of temporal and sphenoid bones with

communication between the subcutaneous abscess and the extradural space and an intrasellar, organized mass with suprasellar extension.

Sellar and suprasellar abscesses occur after sphenoid sinusitis [2]. Meningitis and cavernous thrombophlebitis may be considered a cause or consequence of pituitary abscess. With bacterial abscesses, the organisms implicated are *Staphylococcus*, *Streptococcus*, *Escherichia coli*, *Corynebacterium*, and diphtheroids [3]. Cases of mycotic abscess with *Aspergillus* infection also have been reported [4]. To the best of our knowledge, a tuberculous intrasellar abscess has not been reported before. The source of infection in our patient was the sphenoid sinus.

The MR appearance of tuberculous abscess has recently been described in cases of caries spine, with special emphasis on demonstrating its extent [5]. We have described the MR appearance of intracranial tuberculoma and have found that it is quite characteristic [6]. The tuberculous abscess also contained granulation tissue that had the same features as seen in the cases of tuberculoma. We observed low-intensity areas in the extradural abscess and sellar lesion on T2-weighted images that were isointense with brain parenchyma on T1-weighted images. The tuberculous abscess contained granulation tissue that had a short T2, comparable with that seen in granulation tissue of intracranial tuberculoma. The heterogeneity in the abscess was due to the granulation tissue and apparently is characteristic of intracranial tuberculous abscess.

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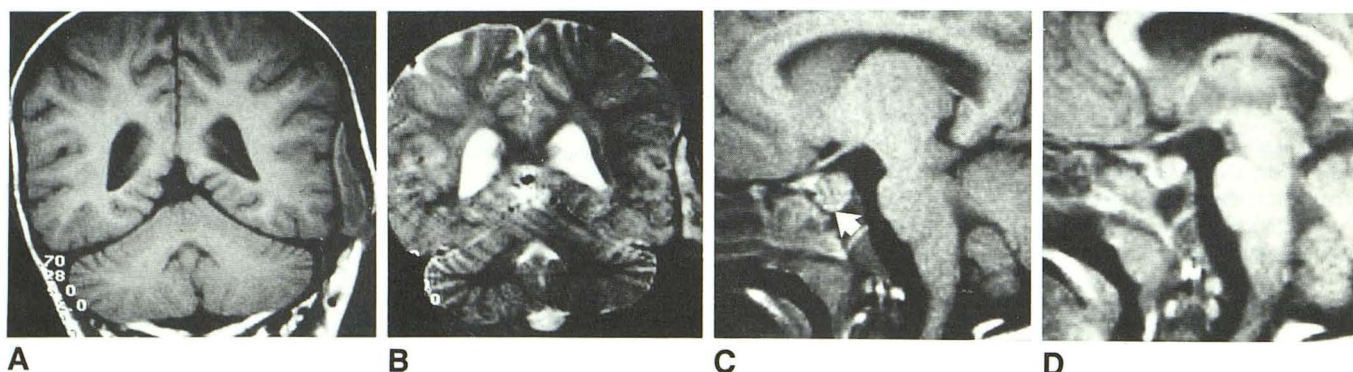


Fig. 1.—Sellar abscess associated with tuberculous osteomyelitis of skull. A and B, Coronal MR images, SE 700/28 (A) and 3200/112 (B), show left-sided temporal extradural collection communicating with subcutaneous space. Note low-intensity signal surrounded by bright signal on T2-weighted image. C, Sagittal MR image (SE 700/28) clearly shows intrasellar lesion (arrow) with some suprasellar extension. D, Sagittal MR image (SE 700/28) shows diminution in size of lesion after 2½ months of specific therapy.