Lateral sinus pericranii

Case report

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A case of lateral sinus pericranii in a 49-year-old woman is presented. These extraordinarily rare lesions should be considered in the differential diagnosis of epicranial tumors. The lack of filling on external carotid artery angiograms may lead to the error of dismissing the possibility of a vascularized lesion.

KEY WORDS • sinus pericranii • venous angioma • epicranial tumor • skull tumor

The first description of a sinus pericranii seems to be by Hecker in 1845, who reported a “varix spurius circumscriptus venae diploicae frontalis.” In 1850, Stromeyer described these lesions as skull cysts with circulating blood, and proposed the term “sinus pericranii.” Although other names, like “osteovascular fistula,” have been suggested for these infrequent lesions, the term “sinus pericranii” has been generally accepted. This term defines a collection of non-muscular venous blood vessels or a venous hemangioma adhering tightly to the outer surface of the skull bone and communicating directly with an intracranial venous sinus by way of many diploic veins of various sizes.

Sinus pericranii is usually located in the midline, lying along the superior sagittal sinus, mainly in the frontal region, and is found less frequently in the parietal and occipital regions. A lateral location is very unusual. Ohta, et al., in their review of the literature until 1975, found only three cases in which sinus pericranii was located in the temporal region.

In this report, we describe a patient with a very large sinus pericranii, situated laterally, and communicating with the sphenoparietal sinus.

Case Report

This 49-year-old woman was admitted in July, 1981, for evaluation of headaches since early youth. Examination revealed a capillary angioma over the left external ear and oropharynx. Several areas of bone defect were palpated in the left temporal region, and skull x-ray films showed multiple osteolytic lesions at this level. When the patient bowed her head to the left, a soft fluctuant swelling slowly appeared over the left parietotemporal region, and became prominent after jugular compression (Fig. 1). There were no murmurs on auscultation. Computerized tomography was normal, except for the osteolytic lesions already mentioned. Technetium pertechnetate gamma-encephalography was unrevealing, and selective angiographic studies of both internal and external left carotid arteries were also normal.

FIG. 1. Picture of the patient showing the lesion protruding on jugular compression.
FIG. 2. Radiographs after contrast injection at two different sites of the epicranial lesion. The left sphenoparietal sinus is clearly seen in the lower photographs.

A venous angioma was suspected, in spite of the negative angiography, and venous blood was aspirated from the lesion. Injection of contrast medium into the lesion revealed venous channels, communicating with epicranial and diploic veins, and draining via both external and internal jugular veins (Fig. 2). The left sphenoparietal sinus was seen in some of the radiographs.

The patient refused surgery, and there has been no change in her headaches or in the size of the lesion on examination 1 year later.

Discussion

This case of sinus pericranii, communicating with the sphenoparietal sinus, is unusual because of its lateral location in the parietotemporal region. Although surgical and pathological confirmation of the lesion is lacking, the radiological features are sufficiently clear and consistent with all the criteria described previously by different authors\(^3,^4\) to allow a diagnosis of sinus pericranii. Cutaneous angiomas on the external ear and oropharynx suggested a congenital malformation in this patient.

Sinus pericranii in a lateral location should be considered in the differential diagnosis of skull and epicranial tumors, such as leptomeningeal cysts, lateral meningoencephaloceles, cavernomas, lipomas, and dermoid and epidermoid cysts. The lack of filling on external carotid artery angiography could lead to a misdiagnosis of an avascular lesion, which may result in profuse venous bleeding at surgery. Direct injection of contrast medium into the lesion will give the diagnosis of sinus pericranii.

References


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