

SINUS PERICRANII: A CASE REPORT

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ABSTRACT

Sinus pericranii is a vascular anomaly. An MRI case of sinus pericranii at the scalp is presented here. The pathogenesis is briefly discussed followed by review of literature.

Key words: Sinus pericranii, Dural sinus.

Introduction

Sinus pericranii is a rare vascular anomaly which is defined as a group of abnormal communications between the extracranial and intracranial venous systems, usually involving the superior sagittal sinus or sometimes the transverse sinus.

Sinus pericranii generally presents in the paediatric age group as a small circumscribed swelling over the scalp. Usually, it is considered to be a congenital anomaly. However, some cases have been attributed to trauma or to an unusual stress or strain.

Case Report

A 20 year old female presented with a swelling over the right parietal scalp for last 4 to 5 years. The swelling slowly increased in size over the period. On examination the swelling measures 3x3 cm, soft, globular, non-pulsatile, non-tender, fluctuant and reducible on pressure. Skin over the swelling is normal. It becomes tense on Valsalva manoeuvre. She described mild pressure sensation over the swelling. She had no history of head trauma. Family history and medication history was non-conclusive. Her neurological examination revealed no abnormality. MRI of the brain with contrast showed a prominent

extracranial scalp vein in direct communication, through a calvarial defect, with a dural vein at the right parietal cortex. MR angiography showed normal anterior and posterior circulation, without any evidence of aneurysm, A-V malformation or high grade stenosis (not shown) (Fig. 1-3).

Radiological findings were consistent with sinus pericranii.

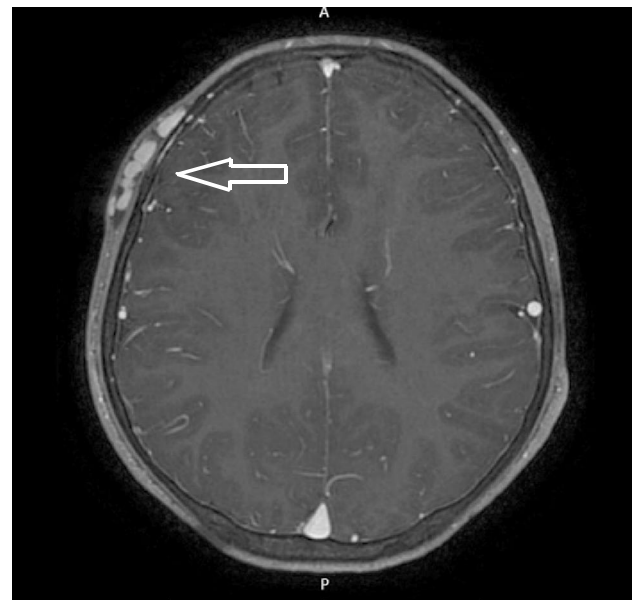


Figure 1: Axial post-contrast T1-weighted MRI (3T) image showing dilated venous channels (arrow in the picture) in right fronto-parietal region

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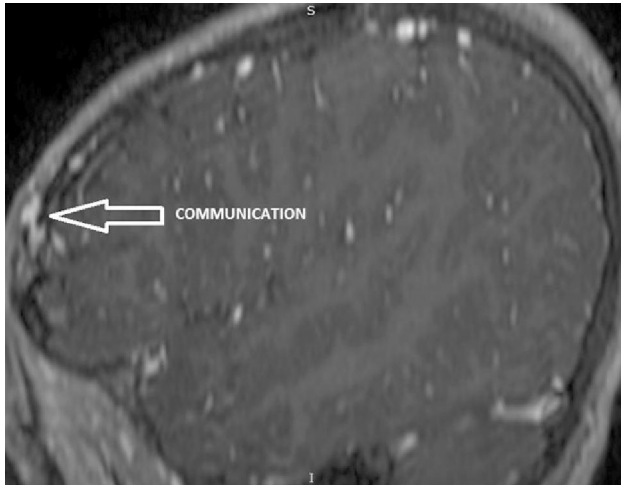


Figure 2: Para-sagittal post-contrast T1-weighted MRI image showing communication between extracranial and intracranial venous channel through a calvarial defect.

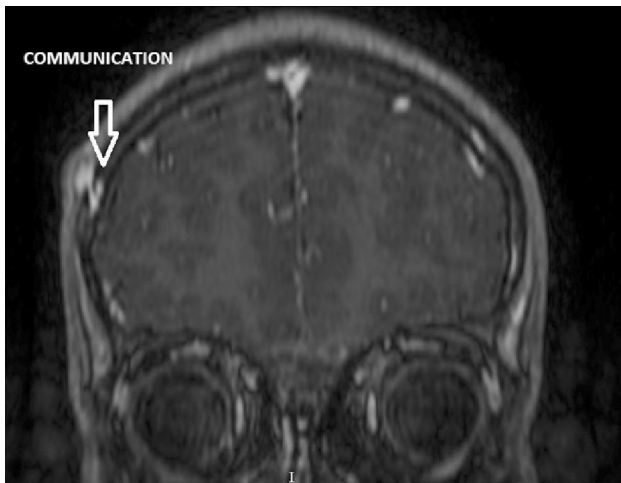


Figure 3: Coronal post-contrast T1-weighted MRI image showing dilated extracranial venous channels in right fronto-parietal region with a trans-calvarial communication with dural vein.

non-specific chronic headache in children or young adults with normal physical or laboratory findings.

References

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Discussion

First described in 1850 by Stromeyer,¹ sinus pericranii is a congenital or acquired disorder characterized by extracranial vascular lesions with anatomical connection to an intracranial dural sinus.² Patients are usually asymptomatic, or presents with non-specific symptoms like headache, nausea, vertigo or pressure sensation over the scalp. Treatment is mainly for cosmetic purposes.³ Complications like haemorrhage, infection or emboli occur rarely. Although a rare entity, sinus pericranii should be considered as a cause of