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Educational Abstract

Topics: General Radiology

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Hypertrophic Intracranial Pachymeningitis: Importance of Contrast Enhanced MRI

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Learning Objectives:

Hypertrophic pachymeningitis is an uncommon condition, resulting in non-specific neurological symptoms. Here, we report a case of idiopathic hypertrophic intracranial pahcymeningitis which is interesting due to its subtle findings on plain MRI but shows marked enhancement after gadolinium administration. Clinicians and radiologists should be vigilant to avoid delay in diagnosis.

Background:

Hypertrophic pachymeningitis is a rare disorder with progressive local or diffuse thickening of dura mater. Depending on its location, it can be divided into intracranial, spinal or rarely, craniospinal. Chronic headache and cranial nerve palsy are the common presentations in patients with hypertrophic intracranial pachymeningitis. Gadolinium-enhanced MRI is the modality of choice in diagnosing this condition. Corticosteroid therapy and immunomodulating agents are the mainstay of treatment. However complete remission is rare.

Findings:

In our patient, non-contrast MRI study might appear normal at first glance. Following gadolinium administration, there was an uniform enhancement of pachymeninges of tentorium suggestive of hypertrophic intracranial pachymeningitis. Dura thickening and effacement of the adjacent left ambient cistern and cerebral sulci also became more apparent. Our patient was treated as idiopathic hypertrophic intracranial pachymeningitis as no cause was found despite extensive investigations.

Conclusion:

Hypertrophic intracranial pachymeningitis is a rare condition. Many patients with hypertrophic pachymeningitis presented with nonspecific symptoms such as a headache and cranial nerve palsy. The diagnosis can be missed in non-contrast MRI as the findings might not be obvious. Hence gadolinium administration is encouraged in this group of patients. Both clinician and radiologist should remain more vigilant to avoid missing the diagnosis.