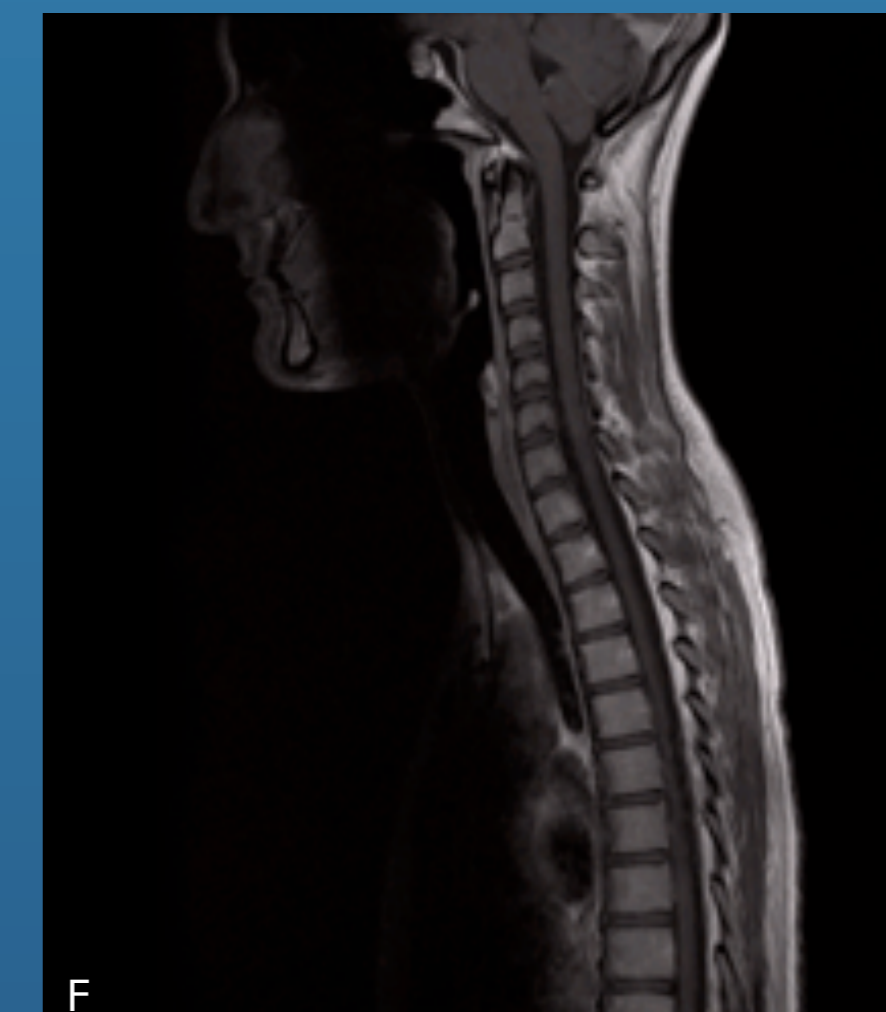
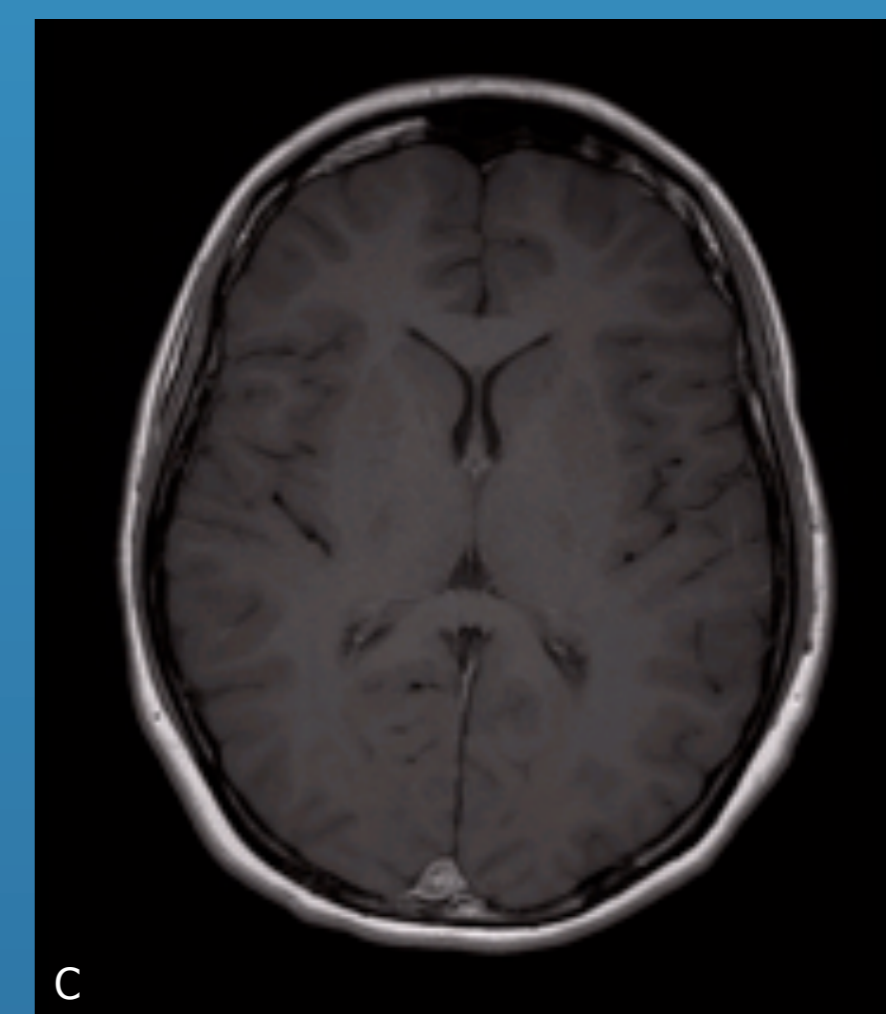
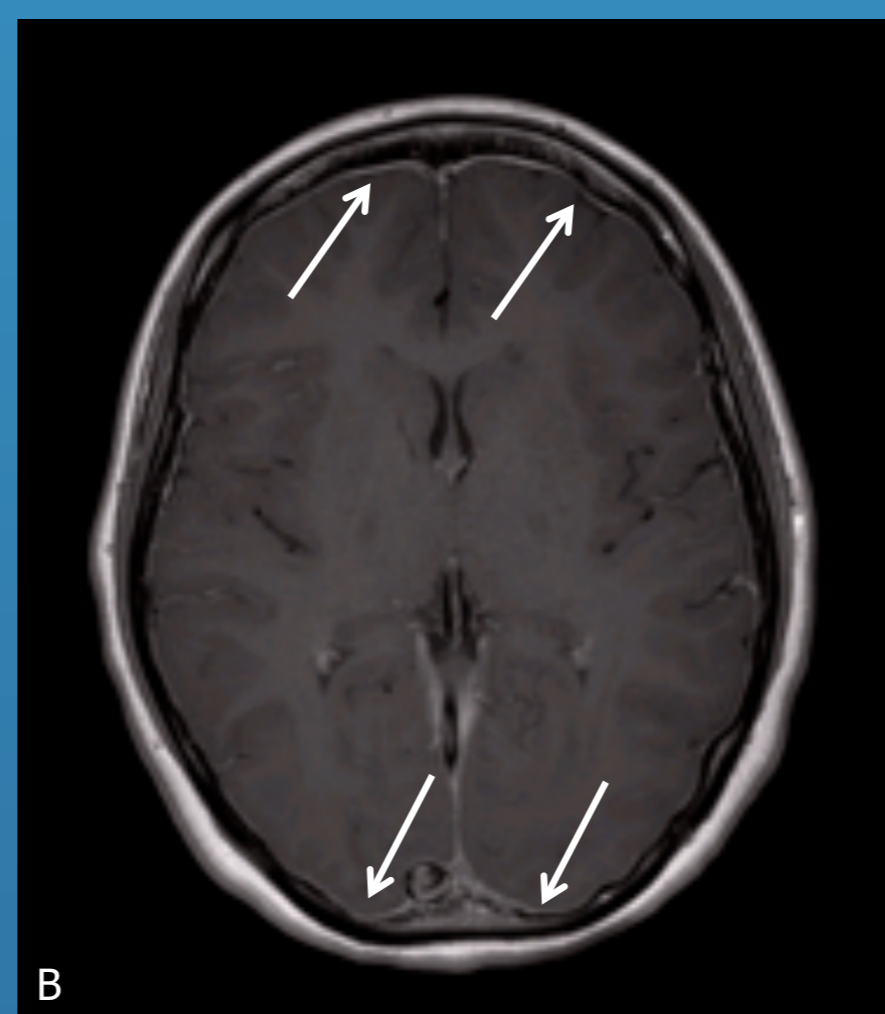
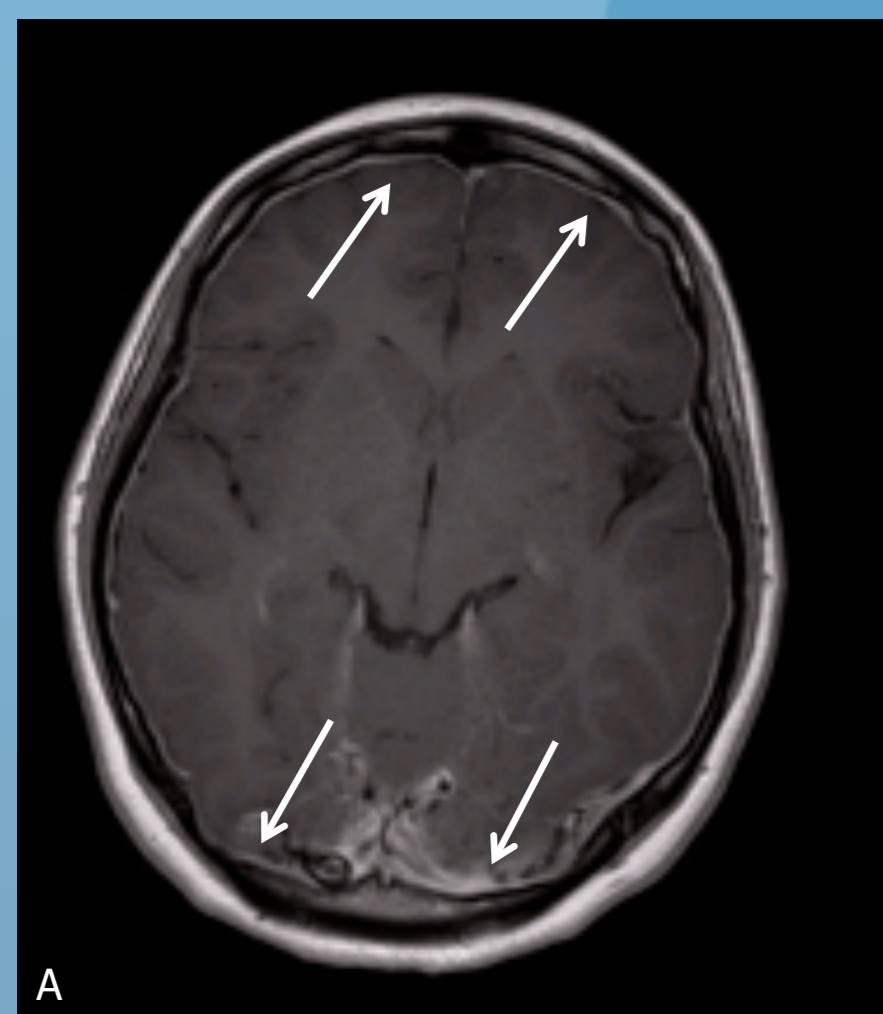


“Benign chronic pachymeningitis” post-lumbar puncture: an underestimated condition?

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Case Report: a 18-years-old woman affected by relapsing-remitting multiple sclerosis (RR MS) presented prolonged orthostatic headache after lumbar puncture (LP), with Quincke needle, done for MS diagnosis. Two months later orthostatic headache was still severe. Brain MRI showed a diffuse pachymeningeal enhancement (DPE). After another month the headache disappeared, but a new brain magnetic resonance images (MRI) at 12 months confirmed the DPE like a chronic pachymeningitis (CP) with cerebellar tonsillar descent, crowding of the posterior fossa, obliteration of the basilar cistern and engorgement of the cervical epidural venous plexus.

Discussion: Post-dural puncture headache (PDPH) is a frequent complication of LP whether performed for diagnostic purposes or accidentally during epidural anesthesia. Among diagnosed patients, 39% experience at least 1 week of disability. About 90% of the headaches start within the first 72 hours of LP. Rarely, the headache develops between 5 and 14 days after the procedure. The frequency of PDPH varies with characteristics of individual patient, the type of needle and technique used. Our patient presented three nonmodifiable risk factor: age, sex and low body mass index (BMI). Over the age of 60, PDPH is rare. Risk is highest in 20 to 30-year-olds. Women have almost twice the risk of developing a PDPH. History of pre-existent chronic headaches is also a predisposing factor to PDPH. Therefore different studies found significantly lower BMI in patients who developed PDPH. Intracranial hypotension presents a typical DPE similar to that present in chronic pachymeningitis. CP are a dural inflammation persisting for at least 1 month. The differential diagnosis can be divided into 3 categories: infectious, inflammatory, and neoplastic.



Conclusions: 24% of CP remains undiagnosed, but in our knowledge, however, the pachymeningitis is not described as a consequence of intracranial hypotension. Our patient presented orthostatic headache for three months, then in our opinion there was no correlation between headache and neuroradiological pattern, probably because it establishes a balance between vasodilation and sensitivity of pain-sensitive structures. It is possible that the incidence of a CP post-LP is underestimated and more persistent because patients who develop orthostatic headache post-LP when become asymptomatic no longer perform neuroradiological examinations, while in our case, the patient performed brain MRI as a control for MS.