



Images in clinical medicine



Pneumosinus dilatans associated with meningioma

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Pneumosinus dilatans associated with meningioma

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Image in medicine

A 54-year-old man presented to the emergency department after having fallen from a height. The physical examination was unremarkable. The computed tomographic (CT) brain scan (A, B) showed no signs of trauma, instead, revealed a right frontal solid space-occupying lesion with cystic and calcified areas. Magnetic resonance imaging (MRI) was performed (C) and showed a voluminous dural-based mass, with well-defined borders, a strong and homogeneous contrast-enhancing on T1-WI. The calcified and cystic areas were osteosclerotic reactions and extensive hyperpneumatization of the adjacent ethmoid sinus. Meningioma with associated complex pneumosinus dilatans (PSD), with new sinus cell formation, was the suggested diagnosis. Although it is rare, PSD can occur associated to

meningiomas and the theory behind it is obstruction of the sinus ostium causing expansion through a “ball-valve” effect. Effective treatment can avoid pneumocephalus formation. The patient

underwent surgical resection, and the histologic and intraoperative observation confirmed the diagnosis.

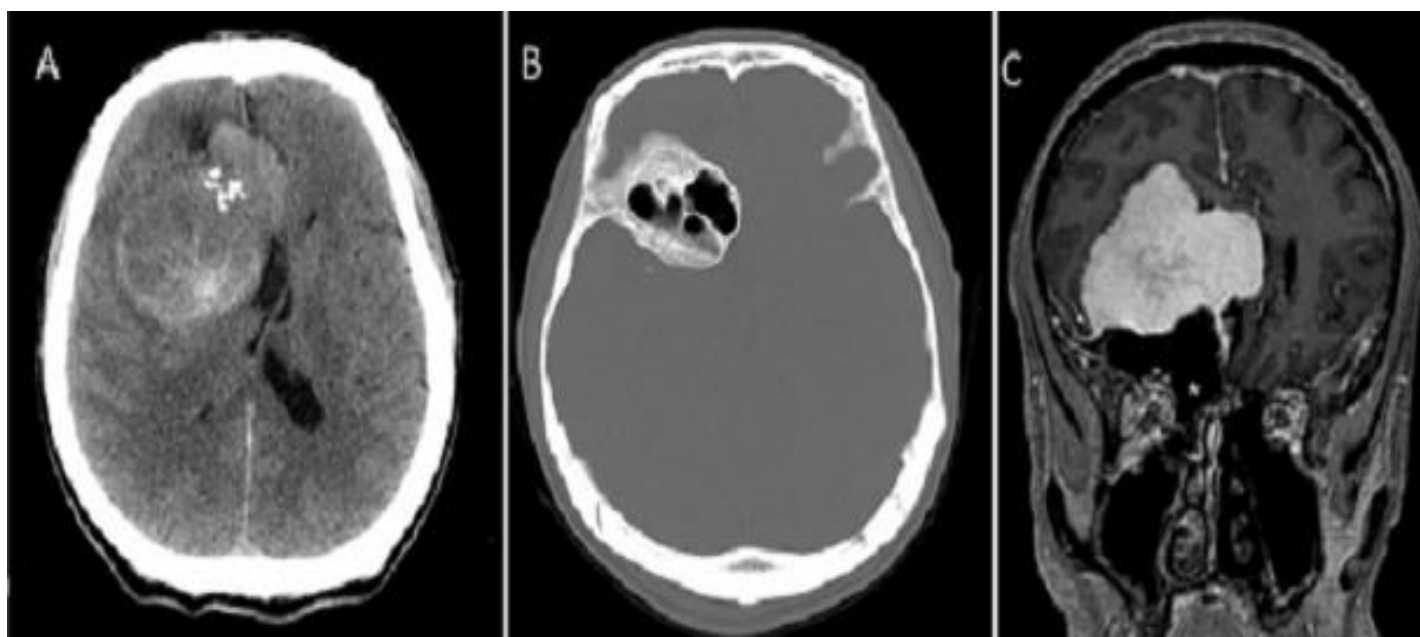


Figure 1: computed tomographic (CT) brain scan; (A, B) revealed a right frontal solid space-occupying lesion with cystic and calcified areas; magnetic resonance imaging (MRI); C) showed a voluminous dural-based mass, with well-defined borders, a strong and homogeneous contrast-enhancing on T1-WI