# Subdural Empyema in Disseminated Histoplasmosis

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A 34-year-old man presented with two episodes of generalized tonic–clonic seizures and fever for 1 day. Two months back, he was admitted with high grade fever, productive cough, cervical lymphadenopathy, left lower lobe consolidation, and multiple skin abscesses. The pus from the abscess was drained and the abscess wall histopathology revealed intracellular oval shaped fungal organisms with narrow-based budding morphologically consistent with histoplasmosis. He was diagnosed to have disseminated histoplasmosis and workup for an underlying immunodeficient state revealed chronic granulomatous disease (positive dihydrorhodamine test). His Glasgow coma scale score was 5/15 and had no focal neurological deficits. He had neutrophilic leukocytosis with high erythrocyte sedimentation rate and C-reactive protein. Magnetic resonance imaging of brain showed an extra-axial lesion 5.3 cm × 1.7 cm × 3.0 cm in the right frontal region which was hypointense on T2, isointense on T1 and iso to hyperintense on fluid attenuation inversion recovery sequences with contrast enhancement [Figure 1a]. The lesion was extending to the adjacent frontal bone eroding the inner table. Intraoperatively, the subdural collection was purulent eroding the dura and adjacent frontal bone [Figure 1b]. Histopathology showed intracellular fungal organisms morphologically consistent with histoplasmosis [Figure 1 c and d]. He became afebrile and did not have further seizure following the procedure. Histoplasmosis of the central nervous system is rare.[1] There are no specific recommendations for treatment in central nervous system histoplasmosis (chronic meningitis, focal parenchymal lesions of the brain or spinal cord, stroke due to infected emboli, and diffuse encephalitis) from prospective comparative trials. Expert opinion favors an initial course of liposomal amphotericin B, followed by at least 1 year of itraconazole.[2] Our patient was diagnosed to have disseminated histoplasmosis 2 months back and received a course of liposomal amphotericin B (4 mg/kg for 2 weeks) followed by itraconazole (200 mg twice daily). After 6 weeks of itraconazole therapy, he developed subdural empyema which was drained and the itraconazole dosage was increased (200 mg thrice daily). In patients who fail to respond to itraconazole or fluconazole treatment, a trial using the newer triazoles (voriconazole and posaconazole) may be useful.[3] Our patient received itraconazole only for a very short period to say the drug was ineffective. When followed up after 3 months he was asymptomatic. Subdural empyema usually has a bacterial etiology (*Staphylococcus aureus*, *Streptococcus milleri*, *Fusobacterium necrophorum*, *Bacteroides fragilis,* and *Propionibacterium acnes*). Dimorphic fungi should be considered as an etiological agent for subdural empyema in immunosuppressed individuals. Subdural empyema complicating histoplasmosis was not previously reported. We describe a patient with subdural empyema complicating

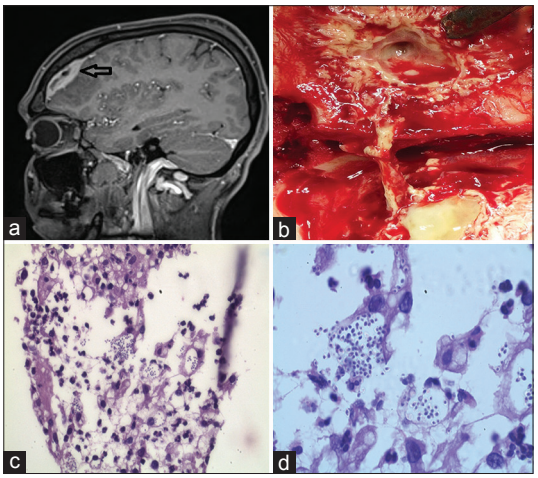


**Figure 1:** Postgadolinium T1-weighted magnetic resonance imaging sequence of brain showing a contrast enhanced extra-axial lesion in the right frontal region (upper panel [a], arrow). Intraoperative purulent subdural collection eroding adjacent frontal bone (upper panel [b]). Histopathology showing intracellular fungal organisms consistent with histoplasmosis (lower Panel [c]-H and E ×40 and [d] H and E ×100)

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histoplasmosis to make the readers aware of such unusual complications and the therapeutic implications.

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## Conflicts of interest

There are no conflicts of interest.

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