

Porencephalic Cyst on Brain Interictal 18F-FDG – PET/CT Scan

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History

A 22-year-old male with right hemispheric medical refractory epilepsy was referred for interictal 18F-FDG – PET/CT possible evaluation for surgery intervention.

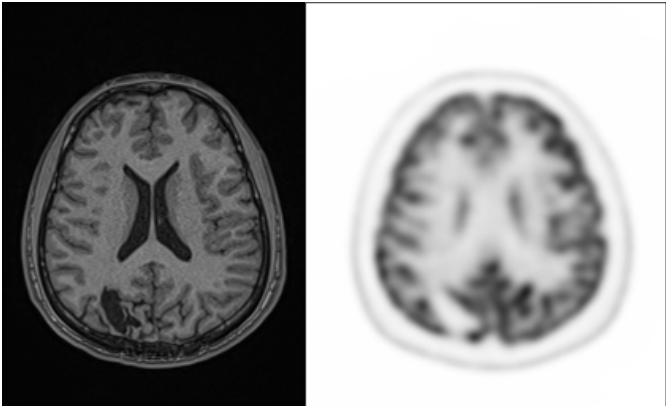
Diagnosis

- Pre surgery evaluation tests were acquired including :
- EEG: right occipital epileptiform discharges earlier
 - CT brain: right occipital lesion with calcification.
 - MRI brain: right parieto-occipital cysts suggestive of porencephalic gliosis (**Fig. 1**)
 - The interictal 18F-FDG reveals hypometabolism at the site of the lesion seen in the MRI with accurate delineation of the lesion , which communicates directly with the ventricular system (**Fig. 2**)

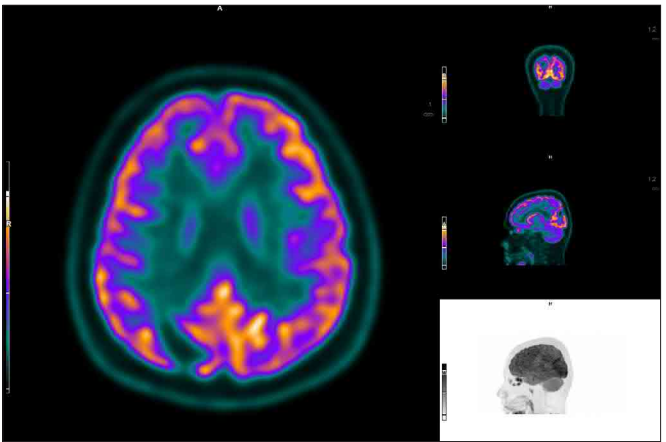
Comments

18F-FDG is the most commonly used PET tracer in the evaluation of patients with epileps. This reflects the glucose metabolism related to the synaptic and neuronal activity of the brain tissue. Interictal 18F-FDG PET typically shows hypometabolism in the epileptogenic region. We report this case in which 18F-FDG PET-CT images reveal a hypometabolic area which communicates with the ventricles , therefore supporting the diagnosis of adult porencephalic cyst seen in the MRI.

The adult porencephalic cystic is a rare congenital disorder that results in cystic degeneration. Clinical features are variable as the cysts vary in size and location. Patients may be asymptomatic or may present with epilepsy, focal neurological deficits or mental retardation. Seizures may be partial or generalized. Treatment may include physical therapy and anti-epileptic drugs for seizure disorders. Surgery is advised in the patients with anti-epileptic drug resistant epilepsy.



1 Fig. 1



2 Fig. 2

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