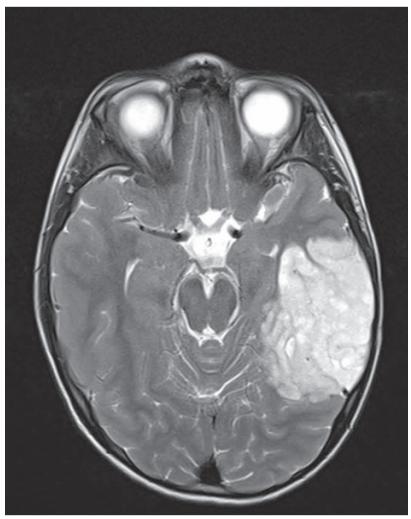
SPOT DIAGNOSIS (IMAGE GALLERY)



STARING EPISODES IN A 10-YEAR OLD BOY

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A 10-year old previously healthy boy presented with multiple, daily, brief staring episodes with some humming noise and inability to carry out the things what he was doing, each lasting for about less than a minute, for the last few months. He recovers abruptly after the events and cannot anticipate and recollect these episodes. He has had no falls, stiffening of the body or any funny feeling in his stomach or taste sensation with these events. He denies any headache. There is no recent change in his behaviour or school performance. He has normal neurological examination including ophthalmological examination. The MRI brain is shown here in Figure 1.

What is the diagnosis?

Dysembryoplastic neuroepithelial tumor (DNET). This MRI brain is showing a large lobular lesion of high signal intensity on water weighted imaging which occupies in the cortical region of the posterior left temporal lobe and anterior left parietal lobe measuring at least 66 x 46mm in short axis and around 73 x 32mm in the left parasagittal plane, characteristic of DNET. There is no edema seen also with minimal peripheral enhancement post-Gadolinium. In this image no mass effect and other brain parenchymal abnormality identified. No histopathological assessment is necessary for the diagnostic confirmation.

DNET is a benign developmental tumour present since birth. (1) Complex partial seizure is generally the commonest presentation of DNET followed by absence seizures; however, this mostly depends of the site of the lesion. Nearly, 1.2% of all neuroepithelial tumors diagnosed in patients younger than 20 years is due to DNET. It is essentially a radiological diagnosis. It requires surgical correction as optimal dosage of multiple anti-epileptic drugs fails to stop increasing frequency of ongoing seizures. Histopathological finding includes intra-cortical lesion with uniform oligodendroglioma-like cells in a mucin rich background, however, the hallmark being specific glioneuronal elements with intervening floating neurons. The post-operative seizure control often depends on the presence of coexisting cortical dysplasia which was not reported in this MRI. Prior to the surgery an fMRI, neuropsychological assessment, visual field analysis and language assessment would be extremely useful to assess the post-operative quality of language, vision and functional memory preservation. Simple DNET is extremely rare to be progress to malignancy; however, complex DNET may have underlying histologic variability and consists of glial nodules and cysts. Serial MRI scan over time may identify any progression if surgery is delayed. (2-4)

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