

FDG PET Imaging Of Hypothalamic Langerhans Cell Histiocytosis

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Citation

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Abstract

A case of intense FDG uptake in the hypothalamus secondary to Langerhans cell histiocytosis involving the hypothalamus is presented.

CASE REPORT

A 24-year woman with Langerhans cell histiocytosis (LCH) had a positron emission tomography (PET) scan (Fig. 1) demonstrating intense F18-fluorodeoxyglucose (FDG) uptake in the hypothalamus. A contrast-enhancing hypothalamic mass was demonstrated by magnetic resonance imaging (MRI) (Fig. 2), corresponding exactly to the area of intense FDG uptake. This mass had been stable for two years and was thought to represent LCH involving the hypothalamus. LCH can show significant gadolinium enhancement on MRI (1, 2) and the hypothalamus is the most common area of brain involvement in LCH (3). The appearance of LCH on FDG PET has not been previously described in any area of the body. This case illustrates that LCH involving the brain can demonstrate intense FDG uptake, potentially mimicking high-grade gliomas. Correlation with patient history and knowledge of the pattern of LCH involvement in the brain is necessary to avoid misdiagnosis.

Figure 1

Figure 1: Coronal image from a PET scan performed with 11.0 mCi (407 MBq) of FDG demonstrates intense FDG uptake in the hypothalamus (arrow).

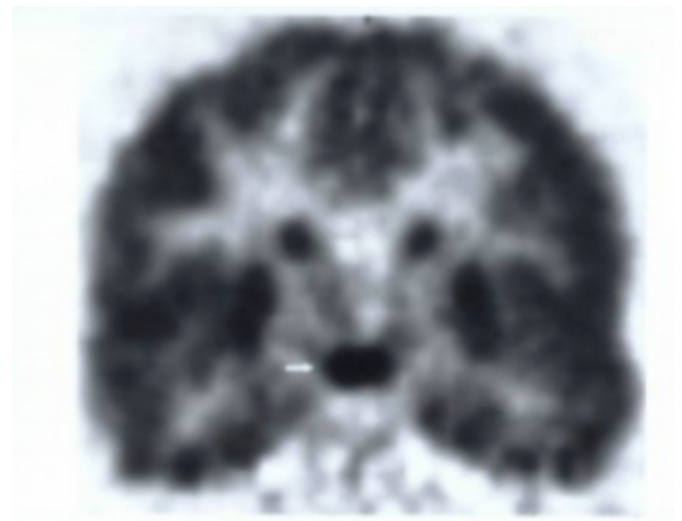
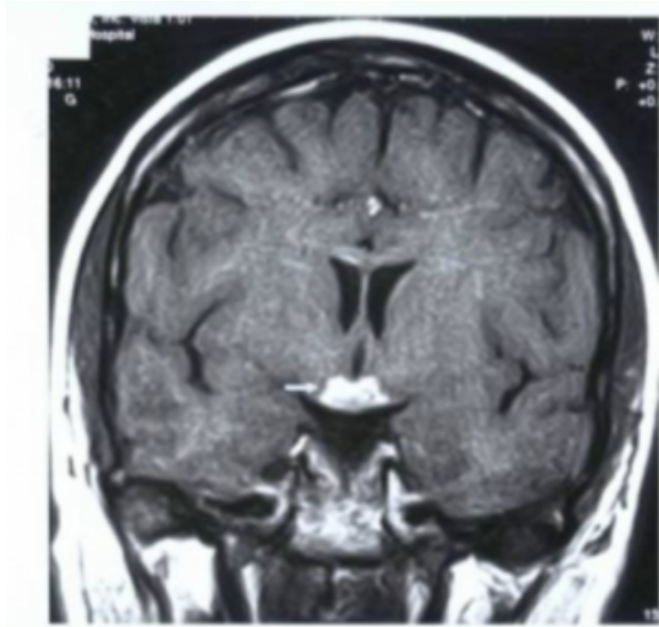


Figure 2

Figure 2: Coronal T1-weighted (TR 537, TE 20) gadolinium-enhanced MRI demonstrates focal hypothalamic enhancement (arrow), corresponding to the area of increased FDG uptake.



References

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