

## Images in...

## Paraneoplastic syndromes associated to Hodgkin's lymphoma

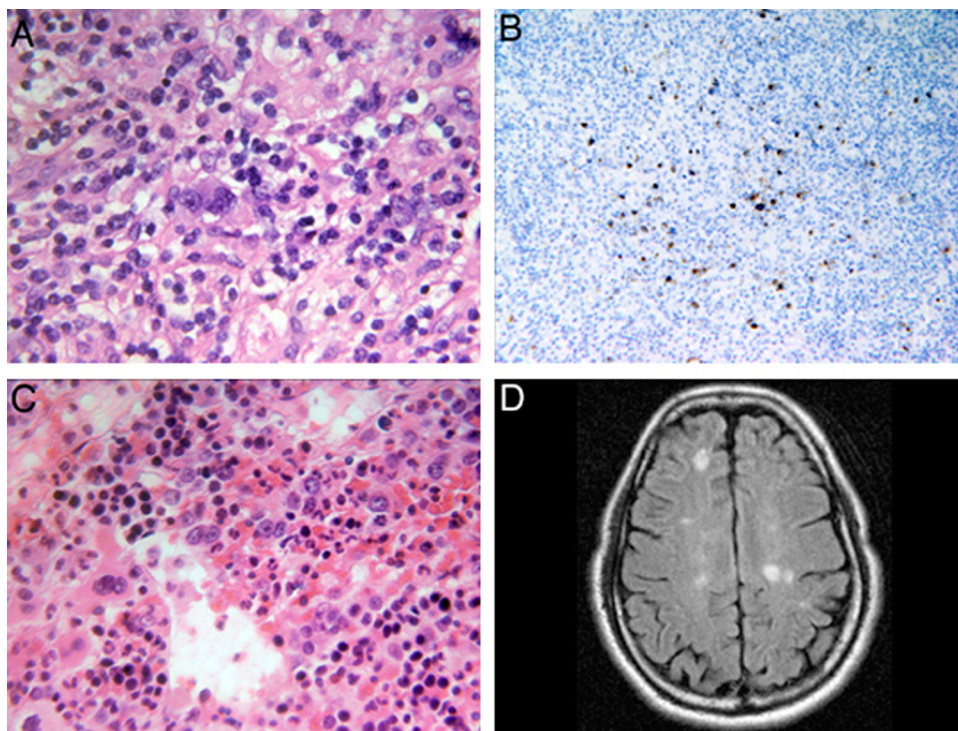
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## DESCRIPTION

A 35-year-old male with no prior medical history presented to the emergency department with fever, fatigue, mental status changes and gait disturbances over 2 months. Laboratory testing revealed pancytopenia with negative infectious investigation. CT scan of the chest and abdomen revealed splenomegaly with multiple intrathoracic and intraabdominal enlarged lymph nodes with the largest being a 5.8 cm periportal nodal mass. An excisional lymph node biopsy was positive for nodular sclerosis Hodgkin's lymphoma (HL) with Reed-Sternberg cells (figure 1A) and CD30 positivity (figure 1B). An atypical lymphoid infiltrate compatible with classical HL was found on bone marrow biopsy (figure 1C) confirming stage IV-B of disease. MRI of the brain revealed multiple periventricular, subcortical, pons and cerebellum T2/fluid attenuated inversion recovery hyperintensities suspicious for demyelinating disease (figure 1D). Cerebrospinal fluid studies were negative for

presence of malignant cells and oligoclonal banding. A pretreatment resting radionuclide ventriculogram (RVG) showed global hypokinesia with left ventricular ejection fraction estimated to be 35% and there was no valvular disease per echocardiography. Further investigation did not reveal an obvious aetiology for the dilated cardiomyopathy.<sup>1</sup> Anthracycline-based therapy was deemed too cardiotoxic, therefore he was treated with modified (bleomycin, etoposide, doxorubicin, cyclophosphamide, vincristine, procarbazine and prednisone) without doxorubicin, achieving complete resolution of the presenting symptoms. Two months later, subsequent RVG scan revealed improvement in his ejection fraction to 46%. Follow-up MRI of the brain showed persistent demyelinating lesions with complete clinical resolution of his neurological symptoms.<sup>2 3</sup> He remained asymptomatic and achieved complete remission per positron emission tomography scan after completion of eight cycles of chemotherapy.



**Figure 1** Excisional lymph node biopsy was positive for nodular sclerosis Hodgkin's lymphoma (HL) with Reed-Sternberg cells (A) and CD30 positivity (B). An atypical lymphoid infiltrate compatible with classical HL was found on bone marrow biopsy (C) confirming stage IV-B of disease. MRI of the brain revealed multiple periventricular, subcortical, pons and cerebellum T2/fluid attenuated inversion recovery hyperintensities suspicious for demyelinating disease (D).

**Competing interests** None.

**Patient consent** Not obtained.

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