Steroid responsive metastatic epidural nerve root infiltration with chronic lymphocytic leukaemia

A 60-year-old man with B-cell chronic lymphocytic leukaemia, diagnosed 3 years earlier (CD5, CD20 and CD23 positive, CD3 and CD10 negative; clonal B-cells forming 86% of total peripheral blood count, positive CD5, CD19, CD20, CD22, CD23 and weakly positive CD79b: CLL score 4/5) presented acutely with severe radicular pain in the right arm and sensorimotor signs in a C6–C7 distribution. There had been a recent increase in the lymphocyte doubling time with no blasts seen on the peripheral blood film. He was otherwise well with no evidence of systemic disease or a second

Figure 1. (A) Axial MRI section at C6-C7 spinal level showing epidural infiltration. (B) Sagittal slices at C6-C7 spinal level showing epidural infiltration. (C and D) Images taken 2 weeks post-steroid therapy showing near-complete resolution.
primary, radiologically. White cell count was 90.6 x 10^9/l with neutrophils 6.9 x 10^9/l, lymphocytes 81.2 x 10^9/l, monocytes 2.0 x 10^9/l, eosinophils 0.4 x 10^9/l, basophils 0.4 x 10^9/l. Haemoglobin was 12.3 g/dl, platelet count 105 x 10^9/l and lactate dehydrogenase was normal. B12, folate, ESR, CRP and ANA were normal. ANCA’s were negative. Protein electrophoresis showed decreased immunoglobulins: IgG (3.2 g/l), IgM (<0.1 g/l), IgA (0.2 g/l) and no paraprotein. CSF was acellular with normal protein (0.39 g/l) and glucose (3.9 mmol/l). An enhancing epidural mass was noted in the C6–C7 epidural area on MRI (Figure 1A). Within two weeks of treatment with high-dose oral steroids (dexamethasone 8 mg bd), the mass disappeared (Figure 1B) with resolution of symptoms.

Chronic lymphocytic leukaemia is only very rarely reported to involve the leptomeninges and central nervous system\(^1,2,3\) in the absence of high-grade transformation. To our knowledge this is the first report of a clear and dramatic steroid response for epidural spinal involvement in chronic lymphocytic leukaemia.

Photograph and text from: S. Agarwal, C.M. Gabriel, Department of Neurology; V.L. Campbell and S. Marks, Department of Haematology, St. Mary’s Hospital, Imperial College NHS Trust, Paddington, London W2 1NY, UK. Email: smriti.agarwal@mac.com

Conflict of interest: None declared.

References