Renal thrombotic microangiopathy induced by interferon-α

Sir,
Badid et al. recently reported two cases of renal thrombotic microangiopathy occurring during the treatment of chronic myeloid leukaemia (CML) [1]. As discussed by the authors, interferon-α probably played a causative role in precipitating the thrombotic microangiopathy. However, the role of the underlying disease should not be overlooked. Some interaction between interferon-α and CML appears critical in the pathogenesis of this syndrome. Chronic myeloid leukaemia itself is very rarely associated with the development of haemolytic uraemic syndrome (HUS). Although interferon-α is known to cause a variety of renal lesions, the syndrome of HUS associated with its use is largely confined to CML patients. Interferons are widely used to treat other diseases such as hepatitis C and multiple myeloma but, to my know-
lodge, the literature shows only three reports of HUS in such situations: one in a patient with hairy cell leukaemia [2 and two in patients with hepatitis C [3,4]. In contrast, many more cases have been reported in patients with CML. The reason why CML itself predisposes to this form of HUS is unknown.

One mechanism, mentioned by Badid et al., by which interferon-α may be nephrotoxic in this context, is through induction of pathogenic anti-phospholipid antibodies. Induction of autoantibodies, sometimes with overt autoimmune disease, is a well-described complication of interferon-α. We recently reported a case of renal thrombotic microangiopathy occurring during interferon-α treatment of CML [5]. The patient had functional (prolonged activated partial thromboplastin time) and serological (anti-cardiolipin IgG positive) evidence of anti-phospholipid antibody. Interestingly, one of the cases described by Badid et al. also had a prolonged activated partial thromboplastin time.

I suggest that screening for anti-phospholipid antibodies should be performed in patients receiving interferon-α who develop features of HUS, particularly in the setting of CML. Although firm evidence is lacking, patients who are positive for such antibodies may benefit from anticoagulation, in addition to cessation of interferon-α therapy.

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