PRCA in a patient treated with epoetin beta

Sir,

In patients treated with recombinant human erythropoietin for anaemia of chronic renal failure, pure red-cell aplasia

Fig 1. Time course of haemoglobin values and epoetin dose in a patient with anti-erythropoietin antibody induced PRCA.
(PRCA) caused by neutralizing anti-erythropoietin antibodies has been observed increasingly over the last few years. In the majority of reported cases, PRCA occurred in association with the use of epoetin alfa distributed in Europe and only a single case has been published of a patient treated with epoetin beta only [1].

We observed another case of a 68-year-old male developing PRCA under treatment with epoetin beta. The patient has been on dialysis since 1999 because of chronic obstructive nephropathy. Subcutaneous application of epoetin beta was started in 1999 with a good initial response. Two years later, severe anaemia developed despite increased doses of subcutaneously applied epoetin beta (Figure 1). Regular red blood cell transfusions became necessary. No evidence was found for chronic bleeding or for any vitamin deficiency or viral infection. Bone marrow aspirate confirmed the diagnosis of PRCA; other cell lines were not affected. Anti-erythropoietin antibodies were detected in several serum samples using ELISA and immunoprecipitation (J. Gross and N. Casadevall, personal communication). Epoetin was discontinued and the patient recovered partially with a reduced need for transfusions.

This case confirms that epoetin-associated PRCA can principally occur under subcutaneous application of different epoetin preparations, although the frequency of this complication appears to vary considerably with different products.


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