Polycythaemia vera: An Exceptional Cause of Erythrocytosis in Chronic Renal Failure

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Dear Sir,

It is well known that renal alterations with deterioration of renal function are accompanied by a normo-chromic, normocytic anaemia due to reduced erythro-poietin synthesis by the kidney [1]. Erythrocytosis may appear in different renal diseases such as tumours, renal cysts, stenosis of the renal artery, acquired cystic kidney disease in patients undergoing haemodialysis or after transplantectomy [2].

The case of a 67-year-old patient suffering from mes-angiocapillary glomerulonephritis is reported; this patient had been treated by dialysis since 1977, and had no previous history of smoking, chronic bronchitis, heart disease, liver disease, or neurological or endocrinological disorders. He had had intense pruritus for several months with no biological signs of renal osteodystrophy. The patient consulted due to sudden thrombosis of the internal arteriovenous fistula. Analysis revealed the following data: Hct 50.2% (1 year previously it had been 35%), Hgb 16.1 g/l, platelet count 711,000/ml, white blood cell count 15,600 with a differential of segmented neutrophils 73%, lymphocytes 15%, monocytes 6% eosinophils 6%, urea 27 mmol/l, creatinine 1,115 µmol/l, Ca 2.4 mmol/l, P 1.6 mmol/l alkaline phosphatase 76 U/l, total bilirubin 12 µmol/l, SGOT 14 U/l, SGPT 8 U/l, O₂ saturation 94%, hepatitis B virus markers negative, vitamin B12 1,628 (□ = 240–800) pg/ml, plasma folic acid 8.3 (n = 3–12) ng/ml, erythrocyte folic acid 324 (n = 175–575) ng/ml, leucocyte alkaline phosphatase 73 (n = 20–40), ferritin 185 (n = 20–200) ng/ml, erythropoietin by radioimmunoassay 7 (n = 7–32) µu/ml, red cell volume 2,084 ml (45.2 ml/kg) (n = 2,157 ml; 40.7 ml/kg).

X-ray of the skull, neck and thorax were normal. Computerized axial tomography of the abdomen revealed small kidneys with cortical cysts and small renal stones as well as an aortic atheroma.

The erythrocytosis in this case fulfills the requirements of the Polycythaemia Vera Study Group [3] for the diagnosis of polycythaemia vera. It is well known that this disease produces erythrocytosis by mechanisms other than via erythropoietin, as has been confirmed in the case reported. We would also like to emphasize that pruritus is a common finding in uraemia [4], but other disorders, such as blood dyscrasias, give rise to the same signs. It has been confirmed that the higher the haematocrit in uraemic patients, the greater the incidence of thrombosis in the vascular accesses used for dialysis [5]. Finally, we would like to indicate that erythrocytosis, although rare in uraemia, should not only be associated with acquired cystic kidney disease in

dialysis, but other aetiologies, even though exceptional, should be ruled out, as in the case of Polycythaemia Vera.

References

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