

Macrocytosis: Can It Predict Mortality on Hemodialysis Patients?

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Abstract

Introduction

Anemia is a common consequence of end stage renal disease. It's typically normocytic and normochromic. But macrocytosis is not rare in hemodialysis patients. However, it's significance and association to mortality is still unknown. Methods: We conducted a single –centre prospective cohort study of 70 stable chronic hemodialysis patients followed for 24 months. Macrocytosis was defined as a mean corpuscular volume(MCV)>97 fl. Patients was divided into 2 groups:with macrocytosis(G1) and without macrocytosis(G2). Three measurements of MCV were repeated monthly for three months to avoid laboratory error associated with single measurements. Follow up began from the date of last blood work and patients were prospectively followed for 2 years. Results: We collected 70 patients undergoing chronic hemodialysis since 3 months at least with anemia. Among them,29 (40%) have macrocytic anemia. We divided our population into 2 groups:group1 (G1 :29 patients) included patients with macrocytic anemia and group2 (G2 :41 patients) without macrocytosis. It was noted that the G1 was older than the G2 with a mean age respectively of 54 and 48 years with a significant difference ($p < 0.05$). Similarly, the association with neoplasia was more frequent in G1 with a significant difference ($p \frac{1}{4} 0.01$). The mean Hb was 9.8 g / dl and 9.6 g/dl

respectively in G1 and G2 with a significant difference. Hypoalbuminemia(102 fl was associated with a higher Charlson-Age comorbidity index(CACI) ($p \frac{1}{4} 0.01$) and higher mortality($p \frac{1}{4} 0.025$). Among G1 patients,9% (3) have B12 vitamin deficiency and 11% (4) have folate

deficiency, both have a combined deficiency in B12 and B9 vitamin. However, the cause of macrocytosis remains unexplained in the others. Conclusions: Macrocytosis may be associated with mortality in stable chronic hemodialysis patients. Future studies will need to be conducted to confirm this findings.

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Biography

Dr..Shrikant L. Kulkarni completed his M.S.(General Surgery) in 1975 from B.J.Medical College Pune,Maharashtra India. The bachelor's degree M.B.B.S. completed from Miraj Medical College. Since 1971 he has worked at several government hospitals like the Wanless Hospital Miraj, Sangli General Hospital Sangli, Sassoon Hospital Pune and multispecialty hospitals like Ruby Hall Clinic, Pune and Jahangir Nursing Home, Pune. For the last 35 plus years he has been working at his own hospital at Chinchwad, Pune Maharashtra India.

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