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Anaemia in diabetic foot patients – a forgotten complication

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Background and aims: Anaemia is often unrecognized complication of diabetes and has a number of adverse consequences. Contributors to its development include absolute iron deficiency and erythropoietin insufficiency. Presence of anaemia in patients with diabetic foot ulcers may also delay healing. However, it is often not looked for. We have noted that almost 50% of the diabetic foot patients have reduced haemoglobin levels. Thus the aim of this study was to evaluate the haematological profile and markers of iron deficiency in diabetic foot patients. **Materials and methods:** We studied 41 consecutive diabetic foot patients (32 with foot ulcer and 9 with intact feet) presenting with anaemia. We measured full blood count, serum ferritin, vitamin B12, folate and erythropoietin levels. Anaemia was defined as reduced haemoglobin level less than 13 g/dl in males and less than 11.5 g/dl in females. **Results:** The majority of patients had a normochromic anaemia (78%) and the remainder were hypochromic (22%). Also, in 80.5% of the patients, the anaemia was normocytic, in 12.2% was macrocytic and in 7.3% was microcytic. Fourteen patients had chronic kidney disease (CKD) stage 2 (glomerular filtration rate (GFR)-60-89ml/min), 23 had CKD stage 3 (GFR - 30-59 ml/min), 1 had CKD stage 4 (GFR -15-29 ml/min) and 3 had CKD stage 5 (GFR<15 ml/min). Absolute iron deficiency (serum ferritin levels below 100 µg/L) was detected in 22 patients (53.7 %) of whom 17 had a foot ulcer. Median serum erythropoietin levels were 17.1 IU/L [10.6-24.4], (median [25^{th}-75^{th} percentile]), reference range 5-25 IU/L. Median serum B12 levels were 411 ng/L [306-552] , reference range (180-1100 ng/L) and median folate levels were 10.4 µg/L [7.8-16.3], reference range 3-13 µg/L. **Conclusion:** Iron deficiency is a frequent finding in diabetic foot patients with chronic kidney disease. Every patient attending the foot clinic should have a blood count and ferritin levels checked in order to detect possible anaemia for appropriate management.