extremely sensitive to this concentration, formal measurement of the minimum inhibitory concentration and minimum bactericidal concentration was not performed. Streptomycin was stopped. Twenty-four hours after the start of this regimen the rigors had stopped and the temperature returned to normal. Intravenous penicillin was continued for two weeks and she was discharged home taking oral penicillin 1 g four times a day for a further six weeks. One month after discharge she was well, without any changes in the cardiovascular examination or echocardiographic findings.

Comment

While the dangers of endocarditis in susceptible patients undergoing oral or genitourinary manipulation are well recognised,6,7 scant attention has been given to bacteremia that may follow compression of affected foci such as boils or epithelial damage of many other kinds.8 In Western society electrolysis is a common method of depilation and no consideration is given to any possible serious complications. This report emphasises that the damaged heart valve is at risk from any procedure that may produce bacteremia. Susceptible patients should be alerted to this possible hazard of electrolysis and consideration should be given to appropriate prophylaxis.

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Oral or parenteral iron treatment in chronic ulcerative colitis?

Iron-deficiency anaemia is a common complication of ulcerative colitis, but studies of iron absorption in this disease1,2 have yielded conflicting results and hence differing guidelines on the best route for iron replacement. The aims of our study were therefore to establish whether iron-deficient patients with chronic colitis have an enhanced absorption of inorganic iron comparable with that found in other iron-deficient patients, and to assess the haematological response to, and the acceptability of, oral iron treatment in patients with colitis.

Subjects, methods, and results

We studied three groups of subjects: seven normal male volunteers, 10 iron-deficient controls without inflammatory bowel disease, and 13 iron-deficient patients with chronic active ulcerative colitis. Iron deficiency was diagnosed on the basis of hypochromic microcyanic anaemia with low transferrin saturation, low serum ferritin concentration, and reduced or absent bone-marrow iron stores.

The absorption of inorganic iron-59 (59Fe) was determined in all subjects using a whole-body counter and expressed as the percentage of 59Fe given by mouth retained at 10-14 days. The normal volunteers retained 12.3 ± 9.3 % (mean ± 1 SD), the iron-deficient controls 66.7 ± 30.9 %, and the iron-deficient patients with colitis 66.0 ± 26.5 %. There was no significant difference in the mean absorption of iron between the two groups of patients, while both groups absorbed significantly more than the controls (p < 0.001; Student’s unpaired t test).

Ten of the 13 patients with colitis were subsequently treated with oral iron supplements for up to eight months. Of the remaining three, one, the only inpatient in the study, underwent elective proctocolectomy, one defaulted from follow-up, and one was only mildly iron deficient. Of the 10 treated patients, eight responded completely, their mean haemoglobin concentration rising from 10.4 to 13.4 g/dl and mean corpuscular volume from 73 to 83

fl. One patient had no response despite enhanced absorption of 59Fe, but he had persistent active disease with bloody diarrhoea. The remaining patient showed a partial response, her haemoglobin concentration rising from 9.5 to 9.9 g/dl, until after a hysterectomy for coexistent menorrhagia.

Seven patients tolerated oral iron preparations without ill effects. Two patients withdrew from the study because of intolerable minor iron tablets, and a further patient stopped ferrous gluconate after six weeks because of nausea but subsequently took slow-release ferrous sulphate without symptoms.

Comment

Beal et al.1 measured the absorption of 59Fe in five iron-deficient patients with colitis including four inpatients: in three absorption was above the normal range. Subsequently Ormrod,2 measuring 59Fe concentrations in blood after oral administration of 59Fe ascorbate, showed impairment of iron absorption in 11 patients with colitis who were sufficiently ill to require intravenous treatment. He therefore proposed that iron should be replaced parenterally in such patients, although in practice they usually receive transfusions. In a third study of iron absorption in inflammatory bowel diseases Bartels et al.3 using external whole-body counting, found normal or increased absorption of inorganic iron in nine iron-deficient patients with ulcerative colitis. Paradoxically their patients responded poorly to oral iron treatment, and these authors also recommended parenteral iron replacement.

The present study shows that iron-deficient patients with active colitis who are not acutely ill absorb inorganic iron as avidly as other iron-deficient subjects.Thus rejection should be as effective by mouth as parenterally and without any of the hazards and discomfort associated with intravenous or intramuscular administration. The good response to treatment in eight of our 10 patients with colitis confirms this and shows unimpaired use of iron by these patients. Moreover, they generally tolerated iron tablets well: side effects could as easily have been due to the colitis itself as to iron treatment.

We conclude that iron-deficiency anaemia in outpatients with chronic ulcerative colitis should be treated with oral iron, which is well absorbed, acceptable, safe, and effective.

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Liver and spleen candidiasis: imaging and verification by fine-needle aspiration biopsy

Patients receiving immunosuppressive agents are at risk of infection, and with improved treatment of leukaemia and lymphoma and widespread use of organ transplantation more such patients are being seen. Diagnosing disseminated fungal invasion is difficult before death, but aspiration biopsy with microscopy and culture may be successful.1 2 We report candidiasis of liver and spleen that occurred in a patient with acute leukaemia. The final diagnosis was established by sonographically controlled fine-needle aspiration biopsy of a liver lesion.

1 2