mortality strongly. Nevertheless, our findings are reassuring to the extent that the possible absolute risk carried by passive smoking is probably small.

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Brucellosis with mesangial IgA nephropathy: successful treatment with doxycycline and rifampicin

We report on a patient with acute brucellosis and mesangial IgA nephropathy. Clinical and biochemical evidence of the glomerulonephritis disappeared after treatment of the infection but the histological lesion persisted.

Case report

A 20 year old Saudi Arabian man with a history of fever for 12 weeks, weight loss of about 10 kg, and painless haematuria for three weeks was referred to us for investigation. His fever reached up to 40°C, and he had macroscopic haematuria and proteinuria, but there were no other abnormalities. Investigations showed haemoglobin 12·7 g/dl, white blood count $6{\cdot}5 \times 10^9$/l (48% neutrophils, 40% lymphocytes), blood urea 8·2 mmol/l (49 mg/100 ml), serum creatinine 167 μmol/l (1·9 mg/100 ml), serum albumin 38 g/l, serum IgA 8·35 g/l (normal 1·5-4·7 g/l). Examination of his urine over 24 hours showed that protein varied from 0·6 g to 2·8 g, and creatinine clearance averaged 61 ml/min. The following investigations were normal: liver function tests, estimations of blood lipids, blood films for malarial parasites, urine cultures, virological screen, tests for antinuclear antibodies, complement profile, serum IgG and IgM estimations, chest radiograph, and intravenous urogram. Cystoscopy was normal. A needle renal biopsy showed a focal and segmental proliferative glomerulonephritis with widespread mesangial changes in all 15 glomeruli; interstitial inflammation was minimal. Immunofluorescence microscopy showed heavy mesangial deposits of IgA without deposition of IgG or IgM. Mesangial IgA nephropathy was diagnosed.

After 10 days a fastidious Gram negative coccobacillus was isolated from blood cultures taken on admission and identified as *Brucella melitensis* type 3. Serological tests for brucellosis showed complement fixation titre > 1/1256, IgA and IgM (enzyme linked immunosorbent antibody test) titres > 1/640; agglutination titre >1/1280. The organism was resistant to sulphamethoxazole and trimethoprim but sensitive to rifampicin and doxycycline (minimal inhibitory concentration 1 mg/l and 0·03 mg/l respectively). A bactericidal synergy was shown between doxycycline and rifampicin. The patient regularly drank milk from camels, goats, and cows.

He was treated with oral doxycycline 200 mg and rifampicin 450 mg daily. The fever abated after five days, and after nine days the serum creatinine had fallen to 88 μmol/l (0·1 mg/100 ml) and the blood urea to 4·3 mmol/l (25·9 mg/100 ml).

After three months' treatment he had no symptoms or fever, and had gained 10 kg. Serum creatinine and blood urea values were normal; there was no proteinuria, and creatinine clearance was 111 ml/min. A second renal biopsy showed that the previous mild interstitial inflammation had resolved, but the glomerular mesangial abnormalities persisted and IgA deposits could still be shown.

Two months after the first admission the technician who had subcultured the blood cultures from this patient developed clinical infection with *Brucella melitensis* type 3. His infection also responded to rifampicin and doxycycline.

Comment

Interstitial nephritis[1] and acute exudative glomerulonephritis[2 3] are recognised renal complications of brucellosis but the association with IgA nephropathy has not previously been recorded. Most accounts of renal disease in this infection were written before immunofluorescence was used in the examination of renal biopsy specimens, without which IgA nephropathy cannot be diagnosed. In our patient the successful treatment of brucellosis was accompanied by the disappearance of haematuria and proteinuria and a return to normal of creatinine clearance and serum IgA concentration. A causal relation between brucellosis and IgA nephropathy is thereby suggested, yet mesangial deposition of IgA persisted.

Brucellosis is usually treated with tetracycline and streptomycin or with co-trimoxazole. The organism isolated from our patient was resistant to co-trimoxazole, while the nephropathy made tetracycline undesirable. Bactericidal synergy was shown between rifampicin and doxycycline. This combination, with the advantage of once daily oral medication, proved successful in the patient and the laboratory technician.

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AIDS in a patient with Crohn's disease

Acquired immune deficiency syndrome (AIDS) mainly occurs in specific risk groups.[1 2] We have seen a heterosexual man who belonged to none of the risk groups for acquired immune deficiency syndrome (AIDS) but developed a defect of cellular immunity three years before the recognition of the current epidemic increase[2] and was subsequently found to have Crohn's disease.

Case report

A white heterosexual native of Lancashire who had never left the country or entertained people at risk presented in 1976 aged 37 with recurrent oesophageal candidiasis. In 1977 he developed lower abdominal pain, weight loss, and diarrhoea. After a barium enema Crohn's disease of the ascending colon was diagnosed at laparotomy and confirmed histologically. He underwent repeated operations for the complications of the condition between 1977 and 1980, during which he had a right hemicolectomy, but less than 30 cm of terminal ileum were removed. During this period he received seven units of whole blood. He did not receive steroids or immunosuppressant drugs during this period or subsequently.