

SHORT REPORTS

Coincident cytomegalovirus infection and toxoplasmosis in an uncompromised host

Simultaneous infection by the obligate intracellular parasite *Toxoplasma gondii* and by cytomegalovirus has been described in stillborn infants with congenitally acquired disease^{1,2} and occurs with an unexpected frequency in patients with disseminated neoplasia.^{3,4} Under normal circumstances it is uncommon for either agent to cause overt disease, and coincident infection with *T. gondii* and cytomegalovirus does not appear to have been described in an otherwise healthy adult. I present a case of atypical mononucleosis accompanied by serological evidence of infection with both agents.

Case report

A 71-year-old Welsh hill farmer was admitted three weeks after the onset of chills, lassitude, anorexia, occasional vomiting, and episodes of irrational behaviour. Apart from fever of 38°C there were no abnormal physical signs. Haemoglobin concentration was 13.8 g/dl with normal blood variables. Serum sodium and potassium concentrations were low at 131 mmol(mEq)/l and 3.32 mmol(mEq)/l respectively; urea concentration was 9.4 mmol/l (56.4 mg/100 ml) and aspartate transaminase activity 46 IU/l (normal 10-35 IU/l). Serum proteins and bilirubin concentrations and alkaline phosphatase activity were normal, and urine analysis and chest radiography showed no abnormalities. He remained feverish and became confused, enfeebled, and incontinent of urine. Further tests indicated inappropriate secretion of antidiuretic hormone and he became increasingly withdrawn. Ten days after admission he had fine inspiratory crepitations in both upper zones, absent knee and ankle reflexes, and extensor plantar responses and had lost 5 kg in weight. Lumbar puncture showed normal cerebrospinal fluid. Erythrocyte sedimentation rate was 62 mm in the first hour; white cell count was $15.5 \times 10^9/l$ with 57% polymorphs and 40% lymphocytes, and atypical lymphocytes and myelocytes were seen on the film. A Paul-Bunnell test result was negative, and a sternal marrow aspirate suggested a myelomonocytic leukaemia. Results of liver function tests showed a further rise in aspartate transaminase activity to 56 IU/l, a bilirubin concentration of 16 $\mu\text{mol/l}$ (0.93 mg/100 ml) (normal 1-15 $\mu\text{mol/l}$; 0.05-0.87 mg/100 ml), and an alkaline phosphatase activity of 16.2 KAU (normal 4-13 KAU). An ultrasound scan of the liver was normal, a liver biopsy specimen showed a mild non-specific hepatitis, and an iliac trephine biopsy specimen no evidence of malignancy.

The cytomegalovirus complement fixation test showed a 64-fold rise in antibody titre from 1/16 to 1/1024, and the titre of cytomegalovirus IgM rose from <1/4 to 1/128. This was accompanied by an eightfold rise of antibody in the toxoplasma dye test from 1/128 to 1/1024, and the titre of toxoplasma IgM rose from <1/4 to 1/32. A search for other infections gave negative results.

The fever remitted two weeks after admission, but he remained unwell and was given a 10-day course of co-trimoxazole followed by 1 g sulphadiazine four times daily on confirmation of the diagnosis of toxoplasmosis. He began to improve after two weeks of treatment. Several months later he returned to his farming activities, and he remained well 12 months after discharge.

Comment

The nature of the infections in this patient, suggested by the atypical mononucleosis and a negative Paul-Bunnell test, were confirmed by finding a 64-fold rise in the serum complement fixation titre to cytomegalovirus, an eightfold rise in antibody in the toxoplasma dye test, and appreciable rises in the IgM titres to both cytomegalovirus and *T. gondii*. Toxoplasmosis and cytomegalovirus infection may be impossible to distinguish clinically, and the high incidence of sub-clinical infections caused by these pathogens suggests that concurrent infections occur more often than has hitherto been recognised. Although unproved by controlled clinical trials in man, a combination of pyrimethamine and sulphonamides seems to be effective in the treatment of toxoplasmosis, especially in immunocompromised patients in whom the diagnosis is established promptly.^{4,5} Thus it is important to remember that concurrent infections may occur, as in the present case, and that a proved viral infection does not exclude the possibility of an associated treatable infection with *T. gondii*.

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Management of patients after mastectomy

Cochrane *et al*¹ questioned the value of routine follow-up at hospital clinics for patients who had undergone resection of the large bowel for malignant disease. They suggested that the time spent in following up these cases might be more usefully spent in educating the patient about symptoms that might arise after the operation.

The management of patients with other malignant disease is also worthy of review. This study attempts to show that patients who have had a mastectomy are more likely to present with the symptoms of recurrence to their general practitioner than to have the recurrence detected at the hospital follow-up clinic.

Method and results

All patients who had had a mastectomy for carcinoma of the breast in Hereford County Hospital during 1973-5 were identified from the hospital activity analysis file. Their records were examined and those who had been recorded as developing a recurrence of the carcinoma while still under the supervision of the surgeon were included in the study. Some patients were found to have had recurrent disease but to have been discharged from the clinic either because of their age or because they lived a long way from the hospital. These were not included in the study.

During the three years studied 150 women were recorded as having had a mastectomy. The notes of 124 patients were reviewed; the remaining 26 could not be traced. Fifty-one women were found to have had a recurrence of the carcinoma after mastectomy and while still under the supervision of the surgeon. Of these, 17 (33%) had been found to have the recurrence at routine follow-up, 32 (63%) had presented with the symptoms of the recurrence to their general practitioner, and two (4%) had presented with a pathological fracture.

Comment

The reasons for the routine follow-up of patients who have had a mastectomy for carcinoma of the breast are to detect curable recurrent disease and to provide early palliation of incurable recurrences. The treatment of postoperative complications may also be dealt with, and a prosthesis provided.

In most cases prolonged routine follow-up appears to be of limited value as far as the detection of recurrent disease is concerned, as patients with a recurrence are more likely to present to the general practitioner with symptoms. If this is so, perhaps the management of this problem might be dealt with more appropriately by the general practitioner rather than the surgeon.

There is also some evidence that a few patients delay reporting important symptoms because they are due to attend the hospital for