Ovarian carcinoma presenting as pyrexia of unknown origin

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Summary: A patient with a poorly differentiated clear cell adenocarcinoma of the ovary presenting as pyrexia of unknown origin is reported. Following resection of the tumour, her pyrexia resolved completely.

Introduction

In a recent review, neoplastic disease accounted for over 30% of pyrexias of unknown origin (PUO) (Larson *et al.*, 1982). We report here a patient with ovarian carcinoma presenting as PUO. A search of the world literature over the past twenty years revealed only one such previously reported case (Maestu *et al.*, 1979).

Case report

A fifty-one year old woman with longstanding rheumatic aortic valve disease presented in May 1983 with a two month history of general malaise, loss of weight, dry cough and night sweats. More recently she had noticed some low back pain. On examination she had signs of mixed aortic valve disease but no stigmata of infective endocarditis.

Investigations

Haemoglobin 11.0 g/dl, white cell count $13.9 \times 10^9/l$ (87% neutrophils) and ESR 60 mm/h. Her chest X-ray showed cardiomegaly but was otherwise normal, and initial blood cultures were sterile. During the next week she had an intermittent pyrexia, but several further blood cultures were sterile and an echocardiograph revealed no evidence of vegetations on her heart valves. A presumptive diagnosis of infective endocarditis was made. As the patient gave a history of penicillin sensitivity she was treated with gentamicin and cephazolin.

The patient remained pyrexial and her back pain

worsened. Four weeks after admission her haemoglobin was 9.9 g/dl, white cell count $22.9 \times 10^9/l$ (87% neutrophils) and ESR 123 mm/h. Serological tests for various infective agents were negative.

A gynaecological opinion was sought; vaginal examination revealed fullness and tenderness in the left fornix and an ultrasound scan showed a mass lying posteriorly to the bladder. At laparoscopy the patient was found to have a left ovarian mass with malignant cells present in peritoneal washings. Subsequently she had a hysterectomy, bilateral salpingo-oophorectomy and omentectomy. The tumour, which was 8 cm in diameter, was a poorly differentiated clear cell adenocarcinoma of the left ovary. This had penetrated the capsule but there was no macroscopic evidence of spread to other structures, including the liver. Following resection of the tumour her pyrexia resolved completely within 48 h, and she has remained afebrile since.

Discussion

This case illustrates the difficulties encountered in diagnosis when a pyrexial illness presents in a patient with known cardiac valve disease. A clinical diagnosis of infective endocarditis may have to be made and appropriate antibiotic treatment instituted in the absence of the isolation of any micro-organisms from blood culture; indeed it has been suggested that up to 20% of cases of infective endocarditis may have repeatedly negative blood cultures, the usual cause being recent treatment with antibiotics (Oakley, 1980).

In the recent series of Larson *et al.* (1982) malignant disease rather than infection was found to be the commonest disease category causing PUO. Neoplasms involving the reticuloendothelial system, including lymphomas and leukaemias, accounted for two-thirds of cases. The other one-third were patients

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with solid tumours, usually of intra-abdominal origin, particularly renal and hepatic carcinomas.

We report here a patient with a poorly differentiated clear cell adenocarcinoma of the ovary presenting as PUO. We have only been able to trace one similar reported case (Maestu *et al.*, 1979); in that patient the histological diagnosis was of ovarian cystadenocarcinoma and, as in our patient, the pyrexia resolved completely within 48 h of removal of the tumour.

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