a history of a sore throat, fever, and malaise. He had had two recent episodes of a sore throat treated with antibiotics. Examination showed oral candidiasis, enlarged asymmetrical cervical and axillary lymph nodes, a soft systolic murmur, and hepatosplenomegaly. Laboratory investigations showed anaemia (haemoglobin concentration 71 g/l), a platelet count of $128 \times 10^9/l$, a prolonged international normalised ratio, hypoalbuminaemia, and renal failure. The result of an HIV antibody test was positive. The CD4 cell count was $100 \times 10^6/l$. Throat swabs for bacterial pathogens yielded negative results, and serial antistreptolysin O titres were not raised. An electrocardiogram was normal and echocardiography showed a dilated left ventricle. Staining of cerebrospinal fluid for acid fast bacilli yielded a positive result, and empirical antituberculous treatment was started. He initially responded, with appreciable improvement in clinical, haematological, and biochemical variables.

Over the next five months he was admitted on three occasions with fever, arthralgia, progressive dyspnoea, and hypersplenism. On his final admission he had clinical signs of congestive cardiac failure, with cardiomegaly and pulmonary oedema evident on chest radiography. Repeat echocardiography showed a dilated hypokinetic left ventricle with a normal mitral valve. Despite conventional treatment for heart failure he developed progressive biventricular failure and died. At postmortem examination the gross findings included pronounced left ventricular dilatation, a normal mitral valve, pulmonary oedema, enlarged peripheral and retroperitoneal lymph nodes, and hepatosplenomegaly. Cardiac sections showed Aschoff's bodies in the myocardium and subendocardium.

This patient died of left ventricular failure secondary to rheumatic myocarditis. Patients with HIV infection are often unable to mount an appropriate serological response.³ The absence of appreciable valve abnormalities agrees with a previous report of rheumatic heart disease in HIV infection.² Rheumatic heart disease should be considered in HIV positive patients from endemic areas who have evidence of heart disease. Clinical and laboratory features may be modified by immunodeficiency associated with HIV.

PETER KELLEHER
Registrar, department of clinical immunology

JOHN SWEENEY
Senior registrar in genitourinary medicine

Royal Hospitals NHS Trust,
London EC1A 7BE

JANE ANDERSON
Senior lecturer in HIV medicine
Medical College of St Bartholomew's Hospital,
London EC1A 7BE

- Currie PF, Jacob AJ, Foreman AR, Elton RA, Brett RP, Boon NA. Heart muscle disease related to HIV infection: prognostic implications. *BMJ* 1994;309:1605-7. (17 December.)
- DiCarlo FJ, Anderson DW, Viramami R, Burns W, Macher M, Rotiguez J. Rheumatic heart disease in a patient with the acquired immunodeficiency syndrome. *Hum Pathol* 1989;20: 917-20.
- Lane HC, Depper JM, Greene WC, Whalen G, Waldmann TA, Fauci AS. Qualitative analysis of immune function in patients with the acquired immunodeficiency syndrome: evidence for a selective defect in soluble antigen recognition. *N Engl J Med* 1985;313:79-85.

Supplementation with folic acid

EDITOR,—In 1992 the Department of Health recommended that all women should take folic acid supplements around the time of conception to reduce the incidence of neural tube defects.¹ We undertook a survey of antenatal patients and those trying to conceive who attended our surgery in May and June 1994 to determine whether this advice was being followed. Of the 109 pregnant women surveyed, only 20 had taken supplements in accordance with the recommendations. In a further five cases the pregnancies were unplanned;

thus the women could not have followed the recommendations fully, but they had started supplementation as soon as they thought that they were pregnant.

Women who had stayed on in education beyond age 16 were more likely to have taken supplements than those who had not stayed on (15/41 v 10/68, $P < 0.02$). Women who conceived in 1994 were more likely to have taken supplements than those who conceived in 1993, though the difference was not significant (15/48 v 10/61, $P < 0.5$). Eight women were identified who were trying to conceive. Six of them were not taking supplementation, of whom three were receiving treatment for infertility. The women surveyed were asked whether they had heard of the recommendations about folic acid. Seventy two were aware of them, and 44 of the 72 had learnt about supplementation from sources within our practice.

We found that 18% of the women had followed the department's advice; this figure is higher than that in three studies in hospital antenatal clinics in 1983, in which only 2.4% (15/613), 3% (14/507), and 5% (20/411) had done so.^{2,4} We are disappointed with the low take up by our patients but believe that it would have been even lower but for a poster campaign we ran.

If all cereals and breads were fortified with adequate amounts of folic acid this would obviate the need to take tablets and solve the problem in the case of unplanned pregnancies. At the moment Britain's largest suppliers of cereals fortify their products with either 50 or 100 µg of folic acid per serving (an eighth or a quarter of the recommended level), but other manufacturers have much lower amounts in their cereals (personal communications). Fortification of bread also varies. We believe that the Department of Health should start a new campaign directed at both health care workers and the public to promote supplementation with folic acid. If this proves to be ineffective, fortification of cereals and bread should be made compulsory.

DAVID METSON
General practitioner

M G KREMER
General practitioner

M TOBIN
General practitioner

Great Hollands Health Centre,
Bracknell,
Berkshire RG12 8WY

G S KASSIANOS
General practitioner

CHRISIE BROOMFIELD
Midwife

JOYCE CRUISE
Midwife

- Department of Health. *Folic acid and the prevention of neural tube defects. Report from an expert advisory group.* London: DoH, 1992.
- Sutcliffe M, Schorah CJ, Perry A, Wild J. Prevention of neural tube defects. *Lancet* 1993;342:1174.
- Smith RB, Davies N, Davies J. Prevention of neural tube defects. *Lancet* 1994;343:123.
- Clarke NAC, Fisk NM. Minimal compliance with the Department of Health recommendation for routine folate prophylaxis to prevent fetal neural tube defects. *Br J Obstet Gynaecol* 1994;101:709-10.

Antibiotics carried in general practitioners' emergency bags

EDITOR,—S W S Menzies' highlights an important result in our survey that we were unable to elaborate because of restriction of space²; half of the general practitioners (1329 (50.4%)) still carried co-trimoxazole, and 694 (26.3%) carried ciprofloxacin. There are currently few indications for the first line use of co-trimoxazole (treatment and prophylaxis of *Pneumocystis carinii* pneumonia being one); even more disturbing is the increase in ciprofloxacin, which must have even fewer roles in the community.

We recommend that, in addition to parenteral benzylpenicillin, the following oral antibiotics should be kept in the emergency bag: amoxycillin for respiratory infections, trimethoprim for urinary tract infections, flucloxacillin for cellulitis

and acute skin infections, and erythromycin succinate for people with sensitivity to penicillin and for suspected atypical pneumonia. Cephalixin or co-amoxiclav might be carried for use as a second line drug for urinary tract infection, particularly in older people in nursing homes.

The antibiotics carried would obviously depend on patterns of resistance in the area where the general practitioner works. Family health services authorities or even the Royal College of General Practitioners should consider whether a central and national policy on emergency drugs carried by general practitioners might improve practice.

We did ask about chloramphenicol in our questionnaire (general practitioners were asked to tick whether the drugs that they carried were oral, parenteral, or topical), and none carried parenteral chloramphenicol. We accept that chloramphenicol can be used as an alternative in cases of known allergy to penicillin, as noted by Annette Wood and Sarah O'Brien¹ and Vivien Hollyoak and Alice Gunn,¹ particularly in the primary care setting; we recommend, however, as most authorities in Europe and North America do, a third generation cephalosporin such as cefotaxime or ceftriaxone.³ Third generation cephalosporins have the advantages of high activity against all common major meningeal pathogens except *Listeria monocytogenes*; a lack of resistance currently; excellent penetration into the cerebrospinal fluid; and ease of use, being single agents that can be given three times daily (cefotaxime) or once or twice daily (ceftriaxone).

M J COLBRIDGE
Registrar
E L C ONG
Consultant physician

Infectious Diseases Unit,
University of Newcastle Medical School,
Newcastle General Hospital,
Newcastle upon Tyne NE4 6BE

G BAILY
Senior registrar
E M DUNBAR
Consultant physician

Department of Infectious Diseases & Tropical Medicine,
North Manchester General Hospital (Monsall Unit),
Manchester M8 6RB

- Antibiotics carried in general practitioners' emergency bags [letters]. *BMJ* 1995;310:736-7. (18 March.)
- Colbridge MJ, Baily GG, Dunbar EM, Ong ELC. Antibiotics carried in general practitioners' emergency bags: four years on. *BMJ* 1995;310:29-30. (7 January.)
- Pelton H, Anttila M, Renkonen O-V. Randomised comparison of chloramphenicol, ampicillin, cefotaxime and ceftriaxone for childhood bacterial meningitis. *Lancet* 1989;i:1281-7.

Units of measurement of central venous pressure

EDITOR,—While reading the Grand Round on nocardia pericarditis I was stopped in mid-sentence by the use of kilopascals as units of central venous pressure.¹ Central venous pressure is measured in a mixture of units according to circumstance. Thus when it is estimated at the bedside as centimetres above the clavicle the unit of measure is centimetres of blood; when a simple manometer is used the unit is centimetres of water or, more accurately, centimetres of isotonic saline solution; and when a pressure transducer is used the unit is millimetres of mercury. The conversion is 1 cm blood = 1 cm H₂O ≈ 1 cm isotonic saline ≈ 0.74 mm Hg. Most clinicians use these different units in an (incorrect) interchangeable mish-mash. This, however, seldom matters as the differences are modest compared with variations in central venous pressure among patients. Furthermore, especially in an intensive care environment, central venous pressure is most commonly used as a component of sequential evaluations of haemodynamic status, when what matters most is the trend rather than the absolute value.

Kilopascals are the SI unit of pressure, but it is