Although the suicide rate was high among men who had reported using narcotics more than 50 times, this variable was not a significant predictor in the Cox analysis, probably because few conscripts reported such heavy use. Yet the highest suicide rate (30/1000) was found among men who reported intravenous drug use. Similarly, alcohol use was associated with a high risk of suicide only among heavy drinkers—that is, those who drank spirits several times a week (table I).

In several recent articles the possibility of predicting suicide in patients with psychiatric illness has been discussed.²²⁻²⁴ Pokorny concluded from a prospective study of 4800 such patients that the low sensitivity and specificity of risk factors and the low base rate of suicide made it impossible to predict suicide in individual cases.²² Motto *et al* took a more optimistic view and developed a clinical instrument to estimate the risk of suicide based on a follow up of 2753 patients with psychiatric disease, although they pointed out its limitations.²³ Prediction of suicide in individual cases is even less feasible in an unselected population of conscripts as the base rate of suicide is much lower than that among patients with psychiatric illness.²⁴⁻²⁵ Thus our findings cannot be used to create an instrument to screen men at conscription.

Preventing suicide in individual cases is most effective in settings in which the associated risk factors are frequent. Thus people at risk tend to be seen by the social services, in treatment programmes for substance abuse, and in delinquency units. Knowledge of the predictors of suicide within these units may facilitate identification of those at risk and intervention. Future research should focus on markers of antisocial traits conducive to suicide in young men.

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Fluconazole in the treatment of candidal prosthetic valve endocarditis

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We report the first use of fluconazole in the treatment of prosthetic valve endocarditis due to *Candida parapsilosis*.

Case report

A 37 year old woman presented with a six week history of anorexia with nausea, weight loss, fever, sweats, and rigors. Sixteen weeks earlier, because of failure of a xenograft inserted eight years previously, she had undergone mitral valve re-replacement with a Starr-Edwards valve. Culture of the excised valve yielded a growth of *Staphylococcus albus*, which was considered to be a contaminant, from fluid medium only. Convalescence was complicated by a serous discharge from the wound in the groin through which cardiac bypass had been established. The exudate was not cultured.

On examination she was feverish (38.5°C) and sweating but not in cardiac failure. There were no other features of endocarditis. Haemoglobin concentration was 114 g/l, white cell count $6.7 \times 10^9/l$,

and erythrocyte sedimentation rate 35 mm in the first hour. Serum creatinine and liver function values were normal and repeated echocardiograms were non-contributory. Five separate blood cultures yielded *C parapsilosis*. Further surgery was judged to be unacceptably hazardous and she was treated with a total of 2.05 g amphotericin B. Six blood cultures over the next two months grew no pathogens.

Six months later the patient was readmitted with a four day history of myalgia, headache, and fever and had developed a mitral regurgitant murmur. *C parapsilosis* was isolated from five of six blood cultures. Treatment with flucytosine and amphotericin B was begun but replacement of the infected valve was again considered to be unacceptably hazardous. Investigations failed to identify any other focus of fungal infection, and because of deteriorating renal function alternative antifungal treatment was sought.

Oral treatment with 200 mg fluconazole daily was instituted and the prothrombin time closely monitored because of concomitant treatment with nicoumalone. Five days later, however, she suffered an intracranial haemorrhage (prothrombin time 170 s; control 15 s). A computed tomogram showed a 4 cm space occupying lesion with a density of blood in the upper left parietal region, and histological examination and culture of the surgically evacuated clot failed to detect the presence of fungi. Owing to deteriorating renal function the fluconazole was reduced to 100 mg/day and she continued with this dose, though her renal function subsequently improved (figure). Twelve sets of blood

Indicators of renal function during management of relapsed episode of prosthetic valve endocarditis

samples cultured at intervals over the next year grew no pathogens.

Comment

Reviews of candidal endocarditis have noted the high mortality from the condition.^{1,2} Survival without surgical intervention is almost unknown and most authorities recommend early replacement of the infected prosthesis. The mainstay of antifungal treatment is amphotericin B, which penetrates poorly into fungal vegetations.³ Prolonged use of this nephrotoxic drug compounds the problems of possible glomerulonephritis and the use of potent diuretics.

The decision to use fluconazole was based on

available evidence that, though the drug is fungistatic and appears to offer no advantage over some other oral agents containing azole in vitro,⁴ it is reportedly more active than ketoconazole in vivo.⁵ Treatment of the infection in our patient was complicated by cerebral haemorrhage. As there was no evidence of a mycotic aneurysm the cerebral haemorrhage may have resulted from interaction between the anticoagulant and fluconazole, as nicoumalone is metabolised by cytochrome P-450 enzymes, which may be inhibited by fluconazole.

The duration of fluconazole treatment was a matter of conjecture. We did not think that serological studies would help in that respect and, though there was no evidence of drug toxicity and renal and liver function values remained normal, we thought it prudent to continue with a maintenance dose for at least the foreseeable future and possibly for life.

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Thromboses and thromboemboli in patients with lymphoma during cytotoxic chemotherapy

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Deep venous thromboses cause appreciable morbidity and are potentially fatal. Sixty per cent of deaths due to pulmonary emboli occur in patients in whom such a diagnosis was not suspected.¹ Most patients will survive if treated with anticoagulant drugs, and the long term prognosis is good, with an overall rate of recurrence of emboli of about 10%, which is lower if a reversible precipitating cause is present.¹

We report on two patients with pulmonary emboli and three others with deep venous thromboses that developed during cytotoxic chemotherapy for malignant lymphomas.

Patients, methods, and results

We examined the records of 49 consecutive patients in whom malignant lymphoma had been recently diagnosed. Five patients with stage 1 non-Hodgkin's

lymphoma were treated by radiotherapy alone. Combination chemotherapies for 12 patients with Hodgkin's lymphoma and six with non-Hodgkin's lymphoma were vinblastine 6 mg/m² intravenously on days 1 and 8 and procarbazine 150 mg, chlorambucil 6 mg/m², and prednisolone 40 mg all given orally each day for 14 days. Cycles were repeated every 28 days. In a subgroup of patients this combination of chemotherapy was alternated with doxorubicin 25 mg/m², bleomycin 10 mg/m², dacarbazine 375 mg/m², and vincristine 2 mg given intravenously on days 1 and 15. Seventeen patients with high grade non-Hodgkin's lymphoma were given cyclophosphamide 750 mg/m², doxorubicin 40 mg/m², vincristine 2 mg, and bleomycin 10 mg intravenously on day 1; prednisolone 40 mg orally on days 1-5; and methotrexate 200 mg/m² intravenously on day 15 with folic acid on day 16. Cycles were repeated every 21 days. Nine patients with intermediate or low grade non-Hodgkin's lymphoma were given chlorambucil 10 mg and prednisolone 40 mg orally each day for 10 days with vincristine 2 mg intravenously on day 1. Cycles were repeated every 21 days.

The five patients who developed thromboses or thromboemboli did so after starting combination chemotherapy, to which they all responded. The table shows their clinical details. The thromboses and thromboemboli developed quickly (median 4 weeks, range 2-15 weeks) and resolved rapidly with intra-

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Characteristics of patients with deep venous thromboses or pulmonary emboli

Case No	Age (years)	Sex	Lymphoma type	Vascular events	Site of lymphoma	Chemotherapy
1	59	M	Non-Hodgkin's	Multiple pulmonary emboli	Mediastinum	Chlorambucil, prednisolone, vincristine
2	54	F	Non-Hodgkin's	Multiple pulmonary emboli	Lung, peri-renal	Vinblastine, procarbazine, chlorambucil, prednisolone
3	52	M	Non-Hodgkin's	Leg deep vein thrombosis	Mediastinum	Cyclophosphamide, doxorubicin, vincristine, bleomycin, prednisolone, methotrexate, folic acid
4	38	F	Hodgkin's	Axillary vein thrombosis	Mediastinum, spleen, liver	Vinblastine, procarbazine, chlorambucil, prednisolone
5	26	F	Hodgkin's	Axillary vein thrombosis	Lung	Vinblastine, procarbazine, chlorambucil, prednisolone