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- No letter should be more than 400 words.
- For letters on scientific subjects we normally reserve our correspondence columns for those relating to issues discussed recently (within six weeks) in the *BMJ*.
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- Because we receive many more letters than we can publish we may shorten those we do print, particularly when we receive several on the same subject.

Heroin addicts, AIDS, and aflatoxins

SIR,—Dr S M Lamplugh and others (2 April, p 968) show that in Africa many children are continuously or intermittently exposed to aflatoxins, and this is supported by other studies.^{1,2} Aflatoxins have oncogenic and immunosuppressive effects that may influence the pattern of infection with the human immunodeficiency virus (HIV), which seems to be more prevalent and aggressive in African children than would be predicted from experience elsewhere.

In Britain HIV infection in heroin addicts is a cause for concern. Heroin arrives here by circuitous and clandestine routes after storage and packaging in various unconventional ways. We considered it likely that heroin on sale in the United Kingdom would be naturally contaminated before the dealers added their various contaminants. We contacted the Merseyside drug squad to obtain samples of heroin for analysis to determine whether it showed evidence of contamination with aflatoxin.

Eleven samples were supplied to us and analysed under police surveillance (at our request) in our laboratories.

The first six were contaminated heavily by undetermined substances and required complicated extraction procedures before they could be analysed for their aflatoxin content. Two of these samples were positive for aflatoxin B₁ and contained 507 and 1346 pg/g of heroin respectively. Because of the clean up procedures needed we are confident that the amount of aflatoxin recovered was an underestimate of the true content of the samples. The second batch of five samples was purer and required less preparation before analysis. One of these samples contained 9616 pg of aflatoxin B₁ in each gram.

Intravenous heroin users are probably intermittently injecting aflatoxin B₁ into their systemic circulation. An important difference between this kind of exposure and that from food contamination is that after absorption from the gut some or all of the aflatoxin is detoxified by the liver. Intravenous heroin users thus risk direct systemic exposure to aflatoxin B₁. One consequence of this is suppression of cell mediated immunity.

In view of the unusual epidemiology and aggressive behaviour of HIV infection in children in Africa, who are highly exposed to aflatoxins, and the serious problem of HIV infection in drug abusers in Britain, we think that the interaction of HIV infection and aflatoxin exposure demands urgent further investigation. We have delayed reporting these results pending analysis of urine

samples from heroin addicts to detect aflatoxin excretion. Unfortunately, almost a year after our first approaches to colleagues working with drug addicts we are still awaiting specimens. We would be pleased to examine urine for aflatoxin content from any drug users currently injecting heroin.

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 β Blockers, lipids, and coronary atherosclerosis

SIR,—We fully agree with Dr Robin J Northcote (12 March, p 731) that, though there is convincing evidence that β blockers alter the plasma lipoprotein profile,^{1,3} it would not be advisable to abandon their use in patients with hypertension or coronary artery disease. There is compelling evidence from several studies⁴⁻⁶ that β blockers administered long term after myocardial infarction reduce both mortality (by 26-39%) and the incidence of non-fatal infarction, the favourable effect persisting at least for three years. In the β blocker heart attack trial propranolol decreased the incidence of sudden death by 13% in patients without heart failure and by 47% in patients who

had prior heart failure by improving ischaemia and preventing reinfarction.⁷

We estimated serum total cholesterol, triglyceride, lipoprotein cholesterol subfractions (high density (HDL), low density, and very low density), apo A, apo B, and ratios obtained from these variables in 56 patients with coronary artery disease. Based on their smoking habit and intake of propranolol (120 to 240 mg daily for over four weeks) the patients were subgrouped as follows: (a) non-smokers not taking propranolol (n=10); (b) smokers taking propranolol (n=12); and (c) non-smokers taking propranolol (n=10). Significantly lower values ($p<0.01$) of HDL cholesterol,

apo A, and HDL:total cholesterol ratio were observed in smokers taking propranolol than in non-smokers not taking propranolol. No significant difference was observed, however, in these variables between non-smokers taking propranolol and non-smokers not taking propranolol. All other variables were not significantly changed among smokers and non-smokers. These findings suggest that smoking may be the more significant factor responsible for a decrease in HDL concentrations.

Of the HDL fractions, the two most thoroughly studied ones are HDL 2 and HDL 3, of which HDL 2 is primarily cardioprotective. Concentrations of HDL 2 are higher in women than in men and are increased by oestrogen or physical exercise.⁸ Alcohol is known to increase the levels of both HDL 2 and HDL 3.⁹ Though both β blockers and smoking are associated with low HDL values, the effects on HDL fractions (2 and 3) and apo A are not clear. Hypercholesterolaemia may be controlled by drugs, exercise, and dietary regulation. High fibre diets lower serum cholesterol and triglyceride values by about 20%, theoretically reducing the risk for coronary artery disease by 40%.¹⁰

Prevention of atherosclerosis and coronary artery disease by modifying the alterable risk factors (cessation of smoking, dietary modification, and exercise) would in itself nullify the change in lipid fractions. Therefore, in view of the beneficial effects of β blockers, until we have irrevocable evidence of a detrimental change in lipoprotein and apoprotein fractions it would be prudent to continue their use.

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Surgical aspects of drug smuggling

SIR,—The article by Mr M J R Lancashire and others (9 April, p 1035) prompts us to discuss a recent case.

A 37 year old man presented to the accident and emergency department complaining of rectal pain associated with "60 candles" which had been inserted into his rectum. A hard irregular mass impacted in the rectum was found on examination. A radiograph showed numerous foreign bodies,

not all of which were in the rectum. The impacted material was broken up and removed under a general anaesthetic. It consisted of packages of cannabis wrapped in transparent film and embedded in a waxy substance. The police were informed of the presence of suspected drugs. They were told all the known particulars given by the patient, who had in the mean time taken his own discharge.

In this case the patient was not referred by the police or Customs and Excise officers. What is the duty of the doctor in such cases? If it becomes known that doctors are likely to report such patients to the police this will discourage smugglers from attending hospital and may result in death due to absorption of the drug. On the other hand, doctors (like other citizens) have a responsibility to try to suppress traffic in drugs. How should one balance a doctor's duty to his patient against his responsibility to society as a whole?

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Urinary catheters

SIR,—Dr P W Belfield (19 March, p 836) has highlighted two complications of catheter drainage: bypassing and expulsion. To prevent bypassing he recommends avoiding large catheters and large balloons, with which I agree, but later, when referring to catheter rejection, he advocates larger balloon volumes. It is reasonable in women to use 12-16 French gauge urethral catheters and not to proceed beyond that because this will cause urethral dilatation. Similarly, 5-7 ml is sufficient volume for a balloon.

To counteract both bypassing and catheter rejection I would suggest greater use of antispasmodic drugs: most of them are anticholinergic, and they include probanthine, terodiline, and oxybutynin hydrochloride (which still awaits a product licence in the United Kingdom but is effective and well tried in the United States). These can be given singly or in combination and the dose should be administered to the limits of side effects. If they fail consideration should be given to an indwelling suprapubic catheter, which many women prefer because it offers less impedance to sexual intercourse. If effective it can be combined with urethral closure. A 14-16 gauge French catheter is used, and once the track has undergone epithelialisation (about six weeks) the catheter can easily be changed by a suitably trained nurse or a continence nurse adviser.

Mention should be made of chronic retention of urine or chronic residual urine, which women of all ages can be taught provided they are motivated and have manual dexterity. This technique has greatly enhanced the care of some patients with neuro-pathic bladder and has restored self esteem and independence, which are important to anyone with urinary incontinence.

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SIR,—We disagree with Dr P W Belfield's comments on the lack of good trials of bladder washouts. Several studies have investigated the value of either antiseptic or antibiotic solutions in both drainage bags and bladder irrigation systems. These have consistently failed to show

any major benefit in preventing bacteriuria and have resulted in colonisation and infection with resistant organisms.¹ Cationic antiseptics such as chlorhexidine have been used extensively as bladder irrigants but without any conclusive evidence of their efficacy.²

Chlorhexidine may not be inhibited or inactivated only by urine itself; up to half of all catheter specimens of urine may contain organisms resistant to this antiseptic.³ A recent trial compared the effect on the bacterial flora of urine in patients with long term catheters of chlorhexidine and normal saline instilled over three weeks; urinary bacterial counts did not fall with either solution.⁴ Other in vitro and in vivo studies have highlighted the inefficacy of bladder irrigation⁵ and this is a procedure which should be abandoned.

We were also concerned that the problems of catheter associated infections were understated by Dr Belfield. Data from several hospitals and from multicentre collaborative studies have shown that nosocomial urinary tract infections account for 35-45% of all hospital acquired infections and that 80% of these are related to indwelling urinary catheters.⁶ Even more important is the high rate of associated bacteraemia. Up to 15% of cases of hospital acquired bacteraemia may result from a catheterised urinary tract and they carry a mortality of 12.5%.⁷ Prevention and control of catheter associated urinary tract infections, particularly in patients undergoing long term catheterisation, are not easily achieved. These individuals will commonly show consistent bacteriuria but most are asymptomatic; unfortunately there are no simple methods of detecting which patients will develop overt infection. Removing the catheter whenever possible, maintaining a closed drainage system under a continuous downward gravity flow, and using full aseptic precautions during any catheter manipulation are all important in reducing infection. Most investigators do not recommend vigorous attempts to rid the urine of bacteria in asymptomatic patients undergoing long term catheterisation. Antibiotics given to such patients fail to reduce the incidence of bacteriuria or the duration of bacteriuric episodes but will predispose to the selection of more resistant organisms.⁸

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SIR,—Dr P W Belfield (19 March, p 836) implies that latex catheters are not suitable for long term catheterisation. We find that these cheaper catheters are preferable, however, particularly in long