to aflatoxin B_1; one consequence of this might be suppression of cell mediated immunity.

Aflatoxins were detected more commonly in urine from users in The Netherlands than from those in Merseyside. Aflatoxin B_1, the most toxic aflatoxin, was detected in eight specimens from The Netherlands but only one from Merseyside; the most common aflatoxin detected in the specimens from Merseyside was aflatoxin M_1, a less toxic derivative of B_1. These variations may be due to differences in the quantity or quality, or both, of heroin or to a difference in the timing of the urine collection after the last heroin injection. Another possibility is that heroin addicts in The Netherlands have greater dietary exposure to aflatoxins than their counterparts in Merseyside. Control urine specimens were not available from The Netherlands.

Because of the recognised susceptibility of drug addicts to infections like hepatitis and HIV infections and the immunosuppressive effects of aflatoxins in animals[1] our results indicate the need for further study of exposure to aflatoxins in heroin addicts.

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1 Pier AC, McLoughlin ME. Mycotoxic suppression of immunity. In: Lacey J, ed. *Trichothecenes and other mycotoxins*. Chichester: John Wiley, 1985:507-21.
2 Coulter JBS, Hendrickse RG, Lamplugh SM, *et al*. Aflatoxins and Kwashiorkor: clinical studies in Sudanese children. *Trans R Soc Trop Med Hyg* 1986;**80**:945-51.
3 Lamplugh SM, Hendrickse RG, Apeagyei F, Mwanmut DD. Aflatoxins in breast milk, neonatal cord blood, and serum of pregnant women. *Br Med J* 1988;**296**:968.
4 Stubblefield RD, Shotwell OL. Determination of aflatoxins in animal tissues. *J Assoc Off Anal Chem* 1981;**64**:964-8.
5 Haladay CE, Lansden J. Rapid screening method for aflatoxins in a number of products. *Journal of Agricultural and Food Chemistry* 1975;**23**:1134-6.

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Is abdominal aortic aneurysm familial?

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Abdominal aortic aneurysm is largely a disease of men and is rare before the age of 50. Only a small proportion of aneurysms are diagnosed during life; most are not fatal, and death from ruptured aneurysm may not be detected unless necropsy is performed. In addition, abdominal aortic aneurysm is not familiar to the public, and people who have the disease are more likely to be aware of affected relatives than those who do not. For these reasons the prevalence of abdominal aortic aneurysm in first degree relatives has not been established.

Patients, methods, and results

The probands were 108 patients (102 men, six women) admitted to hospital with a primary diagnosis of abdominal aortic aneurysm. We asked them about all first degree relatives except their children. Ages and remembered causes of death of first degree relatives who had died and names and addresses of parents and siblings still alive were recorded. All brothers aged 50-79 and sisters aged 55-79 thought likely to attend were invited to this hospital for ultrasound scanning of the abdominal aorta.

Five fathers and one mother were unknown. One father and four mothers were still alive but aged over 80. Of 301 siblings, 136 were known to be dead (77 men and 59 women). Thus 179 fathers or brothers were dead, of whom six (3%) were thought to have died from a ruptured abdominal aortic aneurysm. Two (1%) of the 162 mothers or sisters who had died were believed to have had a ruptured abdominal aortic aneurysm.

Altogether 143 siblings were within the age ranges defining eligibility for ultrasound scanning. We could not scan 56 because they lived overseas, their addresses were unknown, or they were too ill to travel. Thus we invited for examination 87 siblings living in England or Wales; 31 attended. One man declined the invitation because he was soon to have an abdominal aortic aneurysm resected in his local hospital. We detected abdominal aortic aneurysms in four of the 16 men who attended but none in the 15 women. Thus of 17 brothers examined by ultrasound, five (29%), who were related to four probands, had an abdominal aortic aneurysm.

Comment

The occurrence of abdominal aortic aneurysm in members of the same family has been reported,[1,2] and the incidence has been estimated at three[3] and eight times[4] the incidence in the control population. Ruptured abdominal aortic aneurysm causes 0·8% of deaths of men and 0·2% of deaths of women each year in England and Wales. In our study the incidence of death from ruptured aneurysms in male first degree relatives was 3% and therefore about four times that expected. This result, and the findings of both previous studies,[3,4] relied on the accuracy of certification of cause of death and the relatives' understanding and subsequent memory of it.

In no previous study have siblings of patients with abdominal aortic aneurysm been examined with a reliable screening test for the disease. Screening unselected men aged 65-74 yields a prevalence of abdominal aortic aneurysm of 5·4%.[5] The prevalence in men over 50 is not known but is probably less than 2%. This compares with the 29% found on ultrasonography in brothers of patients with abdominal aortic aneurysm. Our results support the hypothesis that abdominal aortic aneurysm is a familial disease.

1 Clifton MA. Familial abdominal aortic aneurysms. *Br J Surg* 1977;**64**:765-6.
2 Tilson MD, Seashore MR. Fifty families with abdominal aortic aneurysms in two or more first order relatives. *Am J Surg* 1984;**147**:551-3.
3 Norrgard O, Rais O, Angquist KA. Familial occurrence of abdominal aortic aneurysms. *Surgery* 1984;**95**:650-6.
4 Johansen K, Koepsell T. Familial tendency for abdominal aortic aneurysms. *JAMA* 1986;**256**:1934-6.
5 Collin J, Araujo L, Walton J, Lindsell D. Oxford screening programme for abdominal aortic aneurysm in men aged 65 to 74 years. *Lancet* 1988;ii:613-5.

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