Using CD4 lymphocyte count to predict survival with HIV infection

EDITOR,—Andrew N Phillips and colleagues used the CD4 lymphocyte count to predict long term survival after HIV infection in men with haemophilia,[1] but the biological variables that influence the CD4 count limit the applicability of their results to other risk groups—for example, homosexual men.

I studied 25 HIV positive patients who had been followed up for more than six years in my clinic. Eleven were homosexual men, of whom three died of AIDS and three others developed AIDS during the follow up; one patient had a low CD4 lymphocyte count (100×10^6/l, but the four others remained asymptomatic with counts of over 300×10^6/l. Nine patients had been injecting drug users: two of these died in the sixth and seventh years after diagnosis while the rest remained asymptomatic with CD4 lymphocyte counts of over 300×10^6/l during the six years of follow up. The five other patients were either haemophilic or thought to have been infected through blood transfusion. One of these died after 10 years and one had a CD4 lymphocyte count of 50×10^6/l, but the three others were asymptomatic with counts of over 500×10^6/l.

A linear decline in the CD4 lymphocyte count is not seen in all homosexual men who are HIV positive. After an initial drop in the count at the time of seroconversion there is either a gradual downward slope or, after a variable period, a much steeper slope with flattening of the curve when it drops below 50×10^6/l. The repeated antigenic stimulation of CD4 cells infected with HIV and of coinfections—for example, with herpes simplex virus, hepatitis B virus, or cytomegalovirus—may account for the wide variation in survival in homosexual men. The use of antiretroviral agents and prophylactic treatment of opportunistic infection will further alter the natural course of events.

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1 Phillips AN, Sabin CA, Elford J, Bofill M, Janassy G, Lee CA. Use of CD4 lymphocyte count to predict long term survival free of AIDS after HIV infection. *BMJ* 1994;**309**:309-13. (30 July.)

Knowledge about tests for HIV antibodies among pregnant women

EDITOR,—Angus Nicoll and colleagues highlight the increasing prevalence of HIV infection in pregnant women in London.[1] We recently investigated patients' understanding of antenatal testing for antibodies to HIV at an inner London obstetric unit. Anonymous self completion questionnaires were issued to 238 women attending the antenatal clinic over three months; 16 women refused to complete them, giving a response rate of 93·3%. All the women had previously seen a doctor and a midwife during the pregnancy. Anonymous, unlinked tests for HIV antibodies were being carried out in the clinic at the time. This was referred to in information sent to the patients before they attended the clinic but was not specifically discussed at the booking visit.

Named HIV testing was discussed with 18 of the women. Fourteen were tested, and all were negative for HIV antibodies. Of the remaining 204 women, 84 believed that they had had a named test at their first antenatal visit; 64 said that they had not been tested, and 56 were unsure. Of the 84 who believed that they had had a named test, 76 believed that the result had been negative and eight did not know their result, of whom four added the comment that it was anonymous.

One hundred and eighty six patients thought that HIV infection should have been discussed. When asked whom they would like to speak to about the test for HIV antibodies 34 chose their general practitioner, 24 a midwife, 13 a specialist HIV counsellor, and nine a hospital doctor; 106 had no particular preference. One hundred and fifty five women thought that HIV testing should be compulsory.

Our study highlights the widely held misconception regarding antenatal testing for HIV antibodies. Although in our unit named testing for HIV antibodies was not discussed with 92% of the patients antenatally, only one third were certain that they had not been told the result of the test. Furthermore, 90% of those who believed they had had a named test thought that their result had been negative. The anguish caused by such a misunderstanding has been commented on previously.[2] Ninety three per cent of the patients did not think it necessary to discuss the issues with a specific HIV counsellor. We support this view that antenatal carers would be the appropriate people to discuss testing for HIV antibodies and believe that the introduction of specific counsellors would further "mystify" such testing.

We believe that the universal offer of testing for HIV antibodies, with informed consent, to all pregnant women would avoid misunderstanding. Additionally, the counselling before the test would provide a unique opportunity to promote sexual health and education about HIV infection to sexually active women.

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1 Nicoll A, McGarrigle C, Heptonstall J, Parry J, Mahoney A, Nicholas S, *et al.* Prevalence of HIV infection in pregnant women in London and elsewhere in England. *BMJ* 1994;**309**: 376-7. (6 August.)
2 Kahtan S. Anonymous testing misleads patients. *BMJ* 1993;**306**: 1479. (29 May.)

Protection afforded by cycle helmets

EDITOR,—The foreword to British Standard 6863, amended 1991, for cyclists' helmets reads in part: "The requirements of this Standard are intended for helmets that give protection in the kind of accident in which the rider falls onto the ground without other vehicles being involved."[1] This implies that helmets are of little value when the cyclist collides with a motor vehicle. This view has been echoed by others. C Maimaris and colleagues found that, although the risk of a moderate, severe, or fatal head injury was increased threefold when cyclists were involved in accidents with a motor vehicle, helmets significantly reduced the risk of such injuries, as they did in other kinds of accidents.[2]

Our study of 1710 cyclists who had been injured showed that wearing a helmet that met the Australian standard reduced the risk of head injury by more than 39%.[3] Of 495 cyclists who had been struck by a moving motor vehicle, only 250 had sustained a blow to the head or helmet. Wearing a helmet reduced the frequency of head injury in those who sustained a blow to the head or helmet from 71·4% (137/192) to 50·0% (29/58) (P=0·003) (previously unpublished data). The relative risk was reduced to 0·70 (95% confidence interval 0·53 to 0·92), and head severity scores on the abbreviated injury scale were lower (P=0·06).

The number of cyclists who sustained injuries in motor vehicle accidents during the first two years after helmet wearing became compulsory in Victoria on 1 July 1990 has been compared with the number before that date.[4] Admissions to hospital, and deaths, of cyclists with head injuries were 48% fewer in the first year and 70% fewer in the second year after the legislation came into force. Casualties with injuries other than to the head fell by 21% and 28% respectively.

These observations show that wearing a helmet substantially reduces the risk of head injury, including serious head injury, in cyclists in accidents involving motor vehicles.

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1 British Standards Institution. *British standard specifications for pedal cycle helmets.* London: BSI, 1989. (BS 6863.)
2 Maimaris C, Summers CL, Browning C, Palmer CR. Injury patterns in cyclists attending an accident and emergency department: a comparison of helmet wearers and non-wearers. *BMJ* 1994;**308**:1537-40. (11 June.)
3 McDermott FT, Lane JC, Brazenor GA, Debney EA. The effectiveness of bicyclist helmets: a study of 1710 casualties. *J Trauma* 1993;34:835-45.
4 Cameron MH, Vulcan AP, Finch CF, Newstead SW. Mandatory bicycle helmet use following a decade of voluntary promotion in Victoria, Australia—an evaluation. *Accid Anal Prev* 1994;**26**: 325-37.

Screening for cystic fibrosis

Should begin with cascade screening

EDITOR,—We wish to respond to Theresa Marteau's commentary on our screening programme for carriers of the cystic fibrosis gene.[1] The programme, aimed at families and their partners, wishes to increase reproductive options, with most of the women not being pregnant at the time of screening. The increased options are mentioned several times in our paper.

The Cystic Fibrosis Research Trust's guidelines for bids for funding for carrier screening projects in 1989 began by saying that the main object of screening was to increase reproductive options. They continued, however, by saying that, given the nature of cystic fibrosis, screening programmes would also have as an aim a reduction in the birth of those affected by the disorder. Any genetic screening programme for what is perceived as a serious condition should be regarded as an aid to decisions about termination of pregnancy. This does not imply that there is not free choice over whether to partake in the screening or that every carrier couple detected will opt for prenatal tests and termination of pregnancy. Nevertheless, it is legitimate to monitor what couples do with the information, and behaviour in pregnancy is the easiest variable to measure; we and others therefore report the results of our screening in this way. Decisions are made after full counselling; we have no vested interest in couples who are found to be carriers opting to end affected pregnancies.

The success that we claim is based not only on detected carrier couples, as Marteau suggests, but also on the high uptake of screening by relatives, most of whom are reassured to learn their negative results.

In suggesting that the screening should be