

infants, and investigation, advice and treatment must be provided by specialists. However, this review is a useful summary for general practitioners of these causes and emphasizes the need to be alert to the possibility of deafness in young children.

(G.P.)

Source: Cremers CWRJ, van Rijn PM, Hageman MJ. Prevention of serious hearing impairment in the young child. *J R Soc Med* 1989; 82: 484-487.

### Sudden cardiac death without warning

**H**E dropped dead while playing squash — there wasn't any warning at all! This may sound like an advert for private medical screening but this thoughtful paper points out that the majority of people who drop dead suddenly from myocardial infarction have previously normal electrocardiograms on exercise testing and those with 'silent ischaemia' develop symptoms of angina long before any sudden acute event. Why?

In up to 50% of patients suffering sudden myocardial infarction without preliminary angina, the degree of stenosis

of the coronary arteries may be less than 70%. The acute event is caused by a thrombus building up suddenly on this mild plaque of atheroma. Those with more severe stenosis may have built up collaterals before thrombosis in response to ischaemia and, when they develop a clot, there is less deterioration in left ventricular function.

A prospective study of 900 healthy men was carried out. They were divided into two groups: those with ischaemia on exercise testing and those with normal electrocardiograms. In the ischaemia group 20% of the first coronary events were sudden death or myocardial infarction compared with 73% in the group with normal electrocardiograms. Despite the fact that those with more severe stenosis are more likely to suffer a thrombus, less severe stenoses are more common, so the absolute number of total occlusions in those with mild stenosis is twice that in those with more severe stenosis.

The majority of patients with 'silent ischaemia' develop angina before sudden death or myocardial infarction. Collaterals may explain this, but a hydrodynamic principle which defines an exponential relationship between the severity of

stenoses and resistance to flow may be important. There is a critical point in luminal narrowing when very small increases in stenosis lead to large increases in resistance. So those with severe stenosis and ischaemia will develop angina more quickly with the same percentage change in stenosis than those with mild stenosis.

What this means is that exercise testing may identify some patients who are at risk of catastrophic events, but not the majority. The authors believe that testing is futile since the majority of patients with 'silent ischaemia' will get angina before sudden death; they support prevention of coronary artery disease before plaque formation. So if a stressed executive asks whether an exercise electrocardiogram is a worthwhile screen for sudden coronary events, the answer based on this paper must be no.

(J.A.)

Source: Epstein SE, Qyyumi AA, Bonow RO. Sudden cardiac death without warning. Possible mechanisms and implications for screening asymptomatic populations. *N Engl J Med* 1989; 321: 320-323.

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## INFECTIOUS DISEASES UPDATE: AIDS

### Fifth international conference on AIDS: part 2

As predicted, much of the proceedings at this year's conference in Montreal were dedicated to epidemiological issues, particularly those relating to HIV testing. Widespread approval was given to promoting anonymous unlinked testing (without consent) on blood specimens taken for other clinical reasons. Such studies are relatively inexpensive and uncontaminated by participation bias. Indeed further evidence was presented that voluntary HIV testing can underestimate the prevalence of the virus. It is clear, however, that voluntary testing should not be discarded as it still provides useful epidemiological data which anonymous unlinked testing cannot provide. Of further interest on the question of serological surveys is the recognition of the value of finger-prick testing as an alternative to venepuncture. It was concluded that collection of finger-prick samples and storage and shipping of dried blood on filter paper is simple to perform, cost effective and does not significantly compromise the accuracy of HIV serological tests.

Since the beginning of the AIDS epidemic much research has been con-

ducted in areas which had previously attracted little if any attention. Prostitution is one of these and each year it becomes more apparent that this area of research is rapidly increasing. In addition to the use of street workers and 'shopfront drop-in centres' to enable contact with this group, research teams have now realized the value of mobile facilities (bus outreach) particularly in large cities such as New York and Sydney where prostitute pick-up points are scattered over wide areas. Of value in this high-risk setting might be the female condom barrier which is due to be released to the North American and Scandinavian markets. There is now some evidence that the combined risk of leaks, tears and spillage is less when using the female condom than when using the male equivalent. Such innovative measures highlight the creativity of effort that is currently being channelled into all aspects of AIDS research.

Although research into drug use and homosexual behaviour in relation to seroprevalence continues to be plentiful, there is still little work being done to gather data on sexual lifestyles of populations as a whole. Indeed our continuing dependency on Kinsey's work of the 1940s demonstrates this paucity of knowledge. Meanwhile, a British pilot study has

shown encouraging results and it is hoped that this will lead to a national study of 20 000 individuals throughout the UK.

Some other issues of note included the further recognition of the value of needle/syringe exchange for injecting drug users, the difficulties in achieving satisfactory levels of behavioural change in both high and low risk groups and the appreciation that more attention must be focused on the care of uninfected children of infected women.

Since the conference there has been an announcement by the Wellcome Foundation concerning the use of zidovudine in high risk asymptomatic HIV infected people. An American-based trial has demonstrated that early treatment with zidovudine can slow disease progression without significant side effects in HIV infected persons with fewer than 500 T4 cells who are asymptomatic. This is clearly a major step forward in clinical AIDS research and demonstrates the remarkable speed with which progress is now being made.

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