Letters

Interpretation of the Mwanza and Rakai STI trials

Editor – In addition to discussing sexual behaviour aspects of the Mwanza and Rakai trials of interventions against sexually transmitted infection (STIs), Christopher Hudson also raises a number of points relating to STI control in developing countries that warrant further discussion. Hudson states that low prevalences of infection with HIV and herpes simplex virus (HSV), as in Mwanza, may mark the early stages of an HIV epidemic, and that high prevalences of these two viruses indicate a mature epidemic (*1*). However, data from the Mwanza study population show that the prevalence of HSV-2 antibodies, adjusted for age and sex, is high and very similar to the mature HIV epidemics in Rakai and Masaka referred to by Hudson (*2*). Also Hudson states that there was no association between HIV and HSV in an earlier study in Durban whereas, in fact, HSV was identified as a significant risk factor for HIV early on in the epidemic, particularly in young women (*3*).

Hudson suggests that the Rakai trial should in some way be termed the gold standard. However, there are still some points about the Rakai trial that remain uncertain. Firstly, there must be some doubt about whether or not subjects actually took the mass treatment. Antibiotic levels were not tested in either blood or urine. Although medication was administered through direct observation, the question remains whether tablets could have been "pocketed" by study subjects either to be used later on if they became symptomatic or sold as a source of revenue. The cost of 1 g of azithromycin alone at the time of the trial would have been in the region of US$ 10, more than the weekly wage for the majority of the trial participants. Many of those in the trial would have been in stable monogamous relationships at very low risk of STI and HIV and would see little point in taking unnecessary medication and risking possible side-effects.

Secondly, as Michel Alary points out in the accompanying commentary (*4*), mobile high-risk individuals may have been missed in Rakai. Coverage of the study was less than 80%, and one is reminded of the 80/20 rule that states that 20% of the population contributes at least 80% of the net transmission potential of infectious agents (*5*). If the subjects in the trial did not include these 20% high-risk core group transmitters it would not be surprising that the trial had little effect on STIs and HIV. Furthermore, the treatments took one month per cluster to complete which would have allowed plenty of time for new infections or reinfection from an untreated contact.

Hudson also states that more basic studies should have been done looking at the efficacy of single dose ciprofloxacin and azithromycin in curing chronic gonorrhoea. Differentiation of gonorrhoea into acute and chronic stages is not usually recognized by current STI textbooks and WHO STI treatment algorithms. Chronic gonorrhoea is, however, a common diagnosis in countries of the former Soviet Union and Mongolia where non-specific urethritis/chlamydia has not always been recognized (*6*). Azithromycin is accepted as an effective treatment for chlamydia.

The point that Hudson raises about behaviour change as a factor in reducing STI prevalence in Mwanza is an important one. While the Mwanza study reported on numbers of sexual partners, it may be that other sexual behaviours not recorded in Mwanza — such as continuing to have sex despite the presence of genital lesions or other symptoms — might be relevant in driving large-scale heterosexual HIV epidemics (*7*).

What the Mwanza and Rakai studies have shown is that improving STI control for HIV prevention is not straightforward and requires different approaches in different populations. Any search for a "magic bullet" is likely to be a lengthy one and should be viewed with scepticism. Perhaps a return to the basic principles of STI control, involving comprehensive case management to be implemented wherever STI treatments are dispensed, might be a more appropriate overall STI control strategy and one that could be adapted to local conditions. ■

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Interpretation of the Mwanza and Rakai STD trials

Editor – There has been considerable discussion of the contrasting results of the Mwanza and Rakai trials of interventions against sexually transmitted diseases (STDs). The Mwanza trial showed that improved STD treatment services as recommended by WHO led to a 38% reduction in HIV incidence (*1*), while in the Rakai trial mass treatment for STDs failed to reduce HIV infection (*2*). Several thoughtful reviews have discussed these findings, and in June last year scientists from the two trials combined forces to present their views (*3*). A number of explanations have been put forward: STDs may play a less important role in HIV spread in mature HIV epidemics; incurable STDs,