

Herpes Simplex Virus-type 2 Seropositivity in a Danish Adult Population Denying Previous Episodes of Genital Herpes

Sir,
Knowledge of the seroepidemiology of herpes simplex virus (HSV) infections is an important factor for estimating the risk of contracting genital herpes. Previous studies have shown that HSV-2 seropositivity correlates with past sexual activity and, as such, serves as a serological marker of sexual behaviour (1, 2). There has been a decline in HSV-2 seroprevalence in Denmark among blood donors and pregnant women, with 36% positive in 1978, 30% in 1986 and 10% in 1993 (3, 4).

We have estimated the HSV seroprevalence among 143 adult Danish volunteers who participated in a clinical trial evaluating a prophylactic HSV vaccine. None of the patients had previously had symptoms or signs suggesting the presence of genital herpes. The mean age of the males and females was 33 years (range 18–86 years) and 36 years (range 19–70 years), respectively. Prior to inclusion the HSV-2 and HSV-1 serostatus of the patients was determined by specific serological assays using purified type specific glycoprotein gG1 and gG2.

As shown in Table I, antibodies towards HSV-2 occurred significantly more often in women than in men (26% vs. 15%, *p*<0.05), which can be explained by a higher transmission efficacy from men to women compared with that from women to men (5). The HSV-2 seroprevalence in adults in USA reaches 25.6% in females and 17.8% in males, figures comparable to those observed in the present study. However, it is worth noticing that in our study population a high proportion of both men and women have had asymptomatic primary HSV-2 infection.

It may be argued that one reason for offering to participate in a prophylactic HSV-2 vaccine trial may be an increased risk of exposure to HSV from a known sexual contact with recurrent genital herpes. For this reason the actual study population may be a somewhat selected group, not reflecting

a random sample of the adult Danish population, which could increase the risk of overestimating the prevalence of HSV-2 infection. On the other hand, the exclusion of people with previous known genital HSV infection may counteract this imbalance. Although none of the people with serological evidence of HSV-2 infection had clinical evidence of genital herpes, several studies have demonstrated that most seropositive people shed HSV-2 detectable by culture or PCR technique, some asymptomatic, others with minimal symptoms and signs not usually associated with herpes (6, 7). Therefore, the data presented clearly indicate that genital HSV-2 infection is still a significant sexually transmitted disease in Denmark.

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Table I. *I. Herpes simplex virus (HSV) sero-prevalence in 94 men and 49 women enrolled into a prophylactic HSV-2 vaccine study*

	Men (%)	Women (%)
HSV-1 negative, HSV-2 negative	28	29
HSV-1 positive, HSV-2 negative	57	45
HSV-1 negative, HSV-2 positive	11	14
HSV-1 positive, HSV-2 positive	4	12
Total	100	100