PostScript

LETTERS

Declining trends in syphilis prevalence among antenatal women in northern India: a 10-year analysis from a tertiary healthcare centre

Syphilis is a disease that has been around for a long time and that continues to challenge clinicians, including obstetricians.[1] Maternal syphilis has a severe impact on pregnancy outcome, primarily as spontaneous abortion, still birth and congenital syphilis.[2] Screening of asymptomatic antenatal women is recommended to prevent perinatal complications.[3] In developing countries such as India, screening for syphilis during pregnancy is carried out by Veneral Disease Research Laboratory (VDRL) tests. We undertook this retrospective study to analyse trends in syphilis prevalence among antenatal women in a tertiary care hospital of north India.

Laboratory log books of antenatal syphilis testing from 1996–2005 were reviewed. A total of 40 511 serum samples were obtained from pregnant women attending (during the period January 1996 to December 2005) the antenatal clinic of Nehru Hospital, which is attached to the Postgraduate Institute of Medical Education and Research, Chandigarh, north India. All samples were subjected to VDRL testing, which was carried out using standard methods, and quantitative VDRL testing was performed for positive samples.[4] Thus, a positive VDRL was considered to indicate syphilis. Treponema pallidum particulate agglutination (TPPA; Fujibero, Japan) testing was done on some positive VDRL sera due to the unavailability of kits at certain times and the inability of some women to afford the cost of the test. Age for antenatal women was recorded.

Of 40 511 samples obtained during the 10-year period, 738 (1.82%) samples were VDRL reactive. Overall, syphilis prevalence among pregnant women decreased significantly ($p < 0.01$) from 3% in 1996 to 0.84% in 2005, with the highest decrease occurring in 1997 (from 3% to 2.48%) and in 2004 (from 1.4 to 1%) (table 1). Chi square testing was used to study the trends over time. TPPA could be performed only on 252 of 738 VDRL-reactive sera. Thus, almost 50% of the reactive VDRL sera were also TPPA positive. If this figure is assessed for other VDRL-reactive sera not subjected to TPPA testing, a total of 371 TPPA-reactive sera may be obtained, giving a VDRL and TPPA reactivity of 0.9%. The mean age of women with a positive VDRL test was 26.5 years. The majority of women were screened between 15 and 22 weeks of gestation.

The overall VDRL positivity of 1.8% in the present study is comparable to another study carried out in Nigeria in which a prevalence of 1.3% has been reported.[5] However, a limited number of studies carried out in India have shown prevalence ranging from 2.5% to 3.4%.[6 7] A decline in seroreactivity for syphilis has also been reported in developing countries such as Nigeria,[5] in which a decline from 3.9% to 1.3% was seen in 6 years. The downward trend in the prevalence of syphilis among pregnant women in northern India could be due to greater awareness and better education of women about the features and complications of syphilis—by both doctors and nursing staff during antenatal visits. Moreover, in India the management of sexually transmitted infections is now being monitored, which could be one of the factors for the decline. The decline could also be due to the over-the-counter availability of antibiotics in India, which has led to their more widespread use.

Although the prevalence rate of syphilis was low in 2005, continued screening of pregnant women should be carried out as this will reduce the adverse effects of undiagnosed and untreated syphilis. Furthermore, we recommend the treatment of all women who are VDRL reactive, irrespective of TPPA status, as reagents of TPPA are not always available in developing countries (partly due to cost). Moreover, testing of both husbands and wives is of utmost importance in the diagnosis, treatment and prevention of syphilis in newborns.

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Table 1 Syphilis prevalence among pregnant women in north India (1996–2005)

Year	VDRL test	No. of reactive sera	%	TPPA test	Reactive sera	%
1996	4000	120	3	66	35	53
1997	4028	100	2.48	34	20	58.82
1998	4100	95	2.31	15	10	66.66
1999	4214	82	1.94	21	6	28.57
2000	4079	71	1.74	17	5	29.41
2001	3800	66	1.73	19	10	53.63
2002	4300	71	1.65	30	20	66.66
2003	4154	60	1.44	28	10	35.71
2004	4029	41	1.01	10	6	60
2005	3807	32	0.84	12	5	41.66
Total	40511	738	1.82	252	127	50.39

TPPA, Treponema pallidum particulate agglutination; VDRL, Veneral Disease Research Laboratory.

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Sexual behaviour and knowledge about HIV/AIDS and sexually transmitted infections among health sciences students from Chile

The aim of AIDS educational campaigns is to reduce the spread of HIV infection by changing attitudes and practices related to high-risk behaviours. However, before such programmes can be implemented, certain assessments should be conducted. These include assessments of the existing knowledge, attitudes and sexual practices of specific risk groups.[1] Among those groups assessed should be professionals and volunteers who are engaged in managing patients with AIDS. For these reasons, we evaluated the knowledge and practice about HIV/AIDS and sexually transmitted infections (STIs) in health sciences students from Chile.

We adapted, modified and then validated the World Health Organization's standardised survey inventories assessing AIDS-related knowledge, attitudes, beliefs and practices for adolescents.[2 3] A 23-question survey, conducted among students from the schools of medicine and attention to mental retardation (AMR; known as Parvularia in Spanish, studied during first and fifth years) at the Antofagasta University (northern Chile) was used to evaluate knowledge and practice about HIV/AIDS and STIs. This evaluation was performed during 2005. The total registered number of students for both careers was obtained, then using this as the universe population, with a confidence level of 99.99%, we calculated the probabilistic sample to survey. The required survey sample size was calculated using Epi Info V.6.0. Statistical analysis with SPSS V.10.0 involved use of the χ^2 test, Student's t test and Fisher's test using 95% CIs (significant at $p<0.05$).

From a total population of 5100 students (59.8% medicine, 40.2% AMR), 30.2% were surveyed (95% CI 26.3 to 34.4%; 55.2%

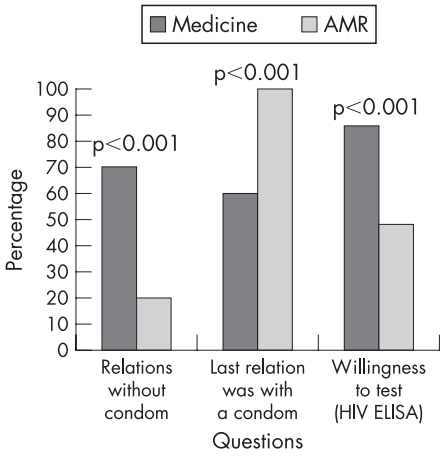

Figure 1 Results of selected questions and differences between medicine and AMR students groups (Antofagasta University, Antofagasta, Chile, 2005). AMR, attention to mental retardation.

medicine, 44.8% AMR). After this initial selection none of the students refused to participate in the survey. Mean (SD) age was 20.5 (2.7) years (range 15–29 years; no significant differences were observed between medicine and AMR groups, p>0.05). About 44.2% of the students had been sexually active in their life (23.4% only once; no significant differences were observed between medicine and AMR groups, p>0.05). Nearly all were heterosexual (99%; no significant differences were observed between medicine and AMR groups, p>0.05). About two-thirds (66.1%) did not use condoms for sexual intercourse (70.2% medicine, 20% AMR; p<0.001), but about half (52%) reported using a condom at the last episode of sexual intercourse (60% medicine, 100% AMR; p<0.001; fig 1). From this group, 61.3% reported having had unsafe sex after alcohol or drug misuse (75.4% medicine, 40% AMR; p<0.001). About 1 in 40 (2.6%) described a previous STI (no significant differences were observed between medicine and AMR groups, p>0.05). Concerning testing for HIV infection, only 0.6% had taken an HIV-ELISA test once, but 73.9% stated that they were willing to do so (85.9% medicine, 48.2% AMR; p<0.001; fig 1). However, 94.8% considered it important to try to prevent becoming infected with the HIV/AIDS virus.

In Chile, the first HIV case was notified in 1984. Up to December 2003, >6060 cases of AIDS and 6514 people with HIV have been reported. The burden of mortality has risen to 3860 deaths in the 13 regions of the country.[4] The 18–49-year-old group accounts for 85% of cases in Chile, and is the main age group infected in the second region of the country (Antofagasta) where this study was carried out.[4]

Today, studies taking into account the epidemiology of HIV/AIDS should be tailored to survey those populations at risk and those people who manage infected individuals. Many studies have demonstrated the importance of such epidemiological research.[5–8] Current results, although limited with respect to other factors related to behaviour for the prevention of the HIV (that should be expanded in further studies), based on the observed risky behaviour in this evaluated young population (which represented a significant sample of health sciences students from a Chilean university), indicated the importance to educate and provide more instruction on different aspects of HIV/AIDS and STIs, particularly about prevention, and reproductive and sexual education. We concluded that sexual and related behaviour among the health sciences students surveyed in Chile is risky for HIV/AIDS and STIs, and that knowledge about these diseases is limited, compromising an appropriate practice of self-prevention. Further studies in this setting are expected.

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Impact on gonorrhoea case reports through concomitant/dual testing in a chlamydia screening population in Liverpool

A recent Commentary in this journal[1] encourages wider implementation of nucleic-acid amplification tests (NAATs) to detect gonorrhoea (GC). We have used GC NAATs (APTIMA Combo2; Gen-Probe Inc., San Diego, California, USA) since 2003, with high uptake, in a Liverpool chlamydia screening population and with referral of GC-positive patients to our local genitourinary medicine (GUM) clinic for management.[2] We have now observed a doubling of female cases of GC and a reversal of the downward trend for male GC as reported through KC60, the national indicator of GC activity that is based on central reporting but essentially only of cases seen at GUM clinics. For female patients (fig 1A), compared to a 4-year average baseline (2000–2003) of 101 cases/year, KC60 reports showed an extra 51 cases in 2004 and an extra 99 cases in 2005. These extra numbers reflect closely the 45 cases in 2004 and the 107 cases in 2005 detected by concomitant screening for GC in the community chlamydia screening programme. For male patients (fig 1B), the upturn in KC60 reports can be matched to the total of cases detected directly by community screening plus by contact tracing of female community cases (assumed 50% success).

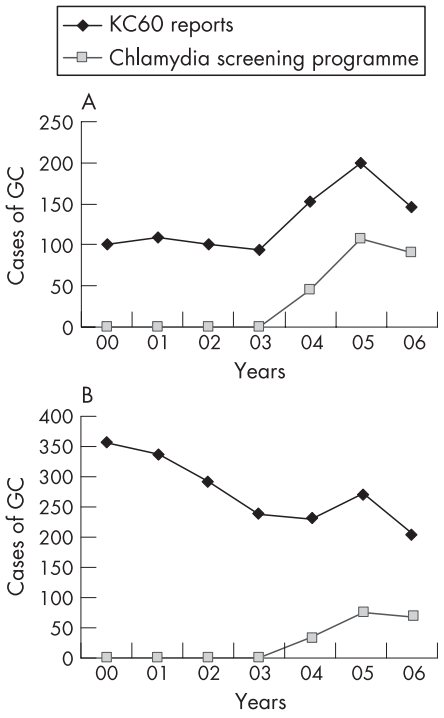

Figure 1 Comparison of GC cases from KC60 returns and GC cases found during chlamydia screening of (A) female patients and (B) ale patients (direct testing plus assumed 50% contact tracing of female patients).

This significant local impact on detection of GC cases suggests that concomitant/dual testing in the community can benefit the wider provision of services for sexual health. Empirical evidence gained from screening in Liverpool has been recognised by the Cheshire and Merseyside Sexual Health Network; the development of a care pathway for asymptomatic low-risk individuals recommends concomitant screening for chlamydia and gonorrhoea using APTIMA.[3] This facilitates prompt, easy access to more comprehensive screening for sexually transmitted infections at a wide range of venues, and may also promote opportunities for increased participation in the National Chlamydia Screening Programme.

In addition, with regard to data collection, KC60 data is an important tool in assessing progress towards the Department of Health target for a 25% reduction in cases of GC diagnosed at GUM clinics.[4] Consideration of changes to KC60 reporting may be needed to prevent increased use of GC NAATs and/or dual