found to be sensitive to spectinomycin except this isolate.

This centre is also collecting and analysing data from focal point laboratories in India under GASP (Chennai, Delhi, Hyderabad, Kolkata) and 100% isolates were reported to be sensitive to spectinomycin in India.

Detection of a spectinomycin resistant isolate is a cause for concern as there are reports of resistance from other countries—as high as 11.1% from China.[4] Spectinomycin is the best alternative for patients allergic to cephalosporins.

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References

1 **Centres for Disease Control**. Sexually transmitted diseases treatment guidelines 2002. *MMWR* 2002;**51**(No RR-6):1–78.
2 **Bala M**, Ray K, Kumari S. Alarming increase in ciprofloxacin and penicillin resistant Neisseria gonorrhoeae isolates in New Delhi, India. *Sex Transm Dis* 2003;**30**:523–5.
3 **World Health Organization**. *Laboratory diagnosis of gonorrhoea*. WHO Regional Publication, South East Asia series No 33. Geneva: WHO.
4 **Li GM**, Chen Q, Wang SC. Resistance of Neisseria gonorrhoeae epidemic strains to antibiotics: report of resistant isolates and surveillance in Zhanjiang, China: 1998 to 1999. *Sex Transm Dis* 2000;**27**:115–18.

Are all genital *Chlamydia trachomatis* infections pathogenic?

The relation between non-gonococcal urethritis (NGU) and *Chlamydia trachomatis* infection continues to arouse interest.[1] The recent study by Haddow *et al* confirms the findings we published earlier[2]—that is, that 34–37% of men who are chlamydia positive do not show NGU on microscopy. However, they found that 20% of men with NGU had chlamydia. In our study this was 66%, perhaps reflecting the higher prevalence of chlamydia in our department—that is, 13% compared with 8%. Our rate for chlamydia negative, non-NGU was 78% and for NGU 22%, results we have confirmed in data collected between December 2002 and December 2003.

In our study we speculate that not all serovars are pathogenic with some not causing inflammation. We too feel that of the 22% of men who had non-chlamydia NGU it is highly likely that the organism is *Mycoplasma genitalium*.

We are disappointed our earlier study was not cited by Haddow *et al*, particularly as the senior author had had sight of our original manuscript.

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References

1 **Haddow LJ**, Bunn A, Copas AJ, *et al*. Polymorph count for predicting non-gonococcal urethral infection: a model using Chlamydia trachomatis diagnosed by ligase chain reaction. *Sex Transm Infect* 2004;**80**:198–200.
2 **Butler C**, Dewsnap C, Evangelou G. Are all genital Chlamydia trachomatis infections pathogenic? A study in men. *Sex Transm Infect* 2003;**79**:349.

High HIV risk profile among female commercial sex workers in Vinnitsa, Ukraine

In many countries significantly higher rates of HIV infection have been documented among sex workers compared to most other population groups.[1] We have analysed HIV risk behaviour among the female commercial sex workers in Vinnitsa, Ukraine, because this issue is still unstudied in the country.

The study protocol was approved by the ethics committee of Vinnitsa Pirogov Medical University. Data collection was carried out in May to July, 2003 using a cross sectional design with a self reported questionnaire method and was linked to the programme ''Network of mobile and information support for female sex workers'' operated by the non-government organisation (NGO) ''Stalist.'' This programme provides informational support, medical service, and condoms for female sex workers in Vinnitsa region. Trained outreach workers of NGO ''Stalist'' performed recruitment of subjects on the major roads of the city. Oral informed consent in all cases was obtained.

Altogether, 58 sex workers were involved into the study. The age of the participating women ranged from 15 to 34 years, with a mean age of 23.1 years. Around 25 (44.8%) respondents provided financial support from others (parents, children, husband, etc). Even though nine (15.5%) women had said that they were married, only four (6.9%) were living with their husbands, and 46 (79.3%) did not have a husband or a regular sexual partner. In spite of the fact that 46 (79.3%) female sex workers believe that they are not at risk, our results show a high HIV risk profile in this group (table 1).

It is well known that use of injecting drugs is a powerful factor for HIV transmission, and our findings highlight considerable prevalence of injecting drug use among sex workers in Vinnitsa. High rates of sharing injecting paraphernalia were registered as well, which, in our opinion, is the consequence of being ''injection dependent.'' In Canada it was identified that needing help injecting was a strong risk factor for syringe sharing,[2] and it is troubling that this risk factor has now been identified as a predictor of HIV seroconversion.[3]

Our data showed that permanent use of condoms was low, in spite of the fact that most of the respondents accepted that having sex without condoms increases the risk of HIV. Being on the margin of society, the ability of commercial sex workers to negotiate safer working conditions is limited. Their financial position can make them vulnerable to customers willing to pay more

Table 1 HIV risk profile among female commercial sex workers (n = 58)

Variable	No	%	95% CI*
Injecting drug use at least once	41	71	57.3 to 81.9
Regular injecting drug use	34	59	44.9 to 71.4
Injecting drug practice†			
Borrow used syringes	8	24	10.7 to 41.2
Lend used syringes	3	9	1.9 to 23.7
Require assistance injecting	13	38	22.2 to 56.4
Inject drugs in a group	11	32	17.4 to 50.5
Number of clients per average day			
One or two	8	14	6.1 to 25.4
Three or four	21	36	24.0 to 49.9
Five and more	29	50	36.6 to 63.4
Condom use during the last sexual contact	38	66	51.9 to 77.5
Condom use during the past month			
Always	29	50	36.6 to 63.4
More than in the half of cases (>50%)	16	28	16.7 to 40.9
In the half of cases (50%)	8	14	6.1 to 25.4
Less than in the half of cases (<50%)	5	9	2.9 to 19.0
Reasons for occasionally not using condoms during sex trade			
Client refusal	32	55	41.5 to 68.3
Higher payment	23	40	27.0 to 53.4
Permanent client	24	41	28.6 to 55.1
Use of psychoactive substances before a sexual contact during the past month			
Always	12	21	11.2 to 33.4
More than in the half of cases (>50%)	16	28	16.7 to 40.9
In the half of cases (50%)	24	41	28.6 to 55.1
Less than in the half of cases (<50%)	4	7	1.9 to 16.7
Never	2	3	0.4 to 11.9

*Confidential interval.
†Among regular injecting drug users.