Let's not let the guard down! – Early indications of syphilis resurgence?

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Sexually transmitted infections (STIs) are an important public health concern. STIs are associated with higher reproductive morbidity and also increase the risk of HIV transmission. STI prevention and control is deemed as one of the important prevention strategy for controlling HIV epidemic. After the national AIDS control program was launched, a sharp decline was observed in the STIs (especially of bacterial origin) as fallout.

However, the situation still remains quite grim. Globally, almost one million new cases of curable sexually transmitted infection are acquired each day.[1] Although the sexually transmitted infection burden in Southeast Asia appears to be relatively lower compared with other regions; the estimates are severely challenged by limited data availability.[1] In India, the population prevalence of STIs such as syphilis, gonorrhea and chlamydia has been reported to be in the range of 0–3.9%.[2] High variability in prevalence was seen across different subregions and subpopulations. Higher prevalence was reported in subpopulations practicing high-risk behavior.

The Indian national program data indicate steadily declining prevalence of syphilis among patients with STIs, pregnant women and high-risk groups.[3] The national HIV program data reveal that the prevalence of syphilis among patients attending designated sexually transmitted infection/reproductive tract infection clinics reduced from 0.5%[4] in 2014–2015 to 0.4%[3] in 2016–2017. The prevalence of syphilis among pregnant women attending antenatal care was 0.23% in 2014–2015.[4] It reduced to 0.15% in 2015–2016, and later increased slightly to 0.16% in 2016–2017.[5]

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In recent years, a trend of bacterial STIs getting replaced by viral STIs has been reported by several studies.[6,7] This was because of expansion of syndromic approach, treatability of bacterial infections with antibiotics and behavioral change. These findings were reflected in individual experiences of practitioners as well. During the last two decades, it was common for a dermatologist or gynecologist not to have seen a case of syphilis in years. Various community-based surveys indicated significantly increased awareness about use of condom/safer sex. Things almost appeared to have changed for good.

At the same time, the most recent global sexually transmitted infection data warn us about the need for constant vigilance. In the last 2 years, alarming rise in sexually transmitted infection prevalence was observed in the United States of America, particularly among men having sex with men.[8] Similar trends have been observed in other developed countries.[9] Unfortunately, it is very difficult to have an accurate and up-to-date understanding of sexually transmitted infection scenario in India because of lack of robust sexually transmitted infection surveillance systems.

At Prayas, which is a nongovernmental organization running a HIV care clinic in Pune, our clinical experience until a couple of years ago was more or less in agreement with the individual experiences as well as programmatic trends observed at state and national level. Ours is a skin, sexually transmitted infection and HIV care clinic. Venereal Disease Research Laboratory (VDRL) testing is done for all HIV seropositive patients and their partners, for patients presenting with signs and symptoms suggestive of sexually transmitted infection and patients seeking counseling for STIs. Since 2010, the clinic saw only a couple of syphilis cases annually. From 2010 to 2016, the annual VDRL positivity rate was

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approximately 0.7% among all patients being tested at our clinic. However, in the recent months, we are seeing a sudden reversal in the situation. From January 2017 to April 2018, in just 16 months, 36 new cases of syphilis presented to the clinic, with VDRL positivity rate rising to approximately 1.3%. The VDRL positive cases were confirmed by treponema pallidum haemagglutination assay (TPHA) and/or repeat VDRL test. Majority of the cases were of secondary syphilis ($n = 28$), seven were primary syphilis and one was of late latent syphilis. Of these, 31 (86%) were males, 21 (58%) were married, 13 (36%) unmarried and 2 (6%) widowed. The median age was 42 years (34–49) and seven (19%) were below 25 years of age. Of the 36 cases, nine were men having sex with men and two reported bisexual behaviors. Around 72% were co-infected with HIV. Our discussions with other practicing dermatologists and STD consultants from Pune and from the state of Maharashtra suggested similar, although not as alarming, findings.

Even though these are localized findings, they definitely raise concerns and argue for need for a larger inquiry. In the last two decades, India has achieved declining trends in HIV prevalence. The HIV prevalence among pregnant women, considered as a proxy for prevalence in general population, continues to be low at 0.29%.[3] It is claimed that new infections have reduced by 32% since 2007.[10] The efforts have also benefited control of sexually transmitted infection epidemic. This is definitely a reassuring finding. However, it is not a time to be complacent about the gains. Many biomedical interventions, including antiretroviral therapy and preexposure prophylaxis, are being either pursued or considered as important programmatic strategies for controlling HIV epidemic. Although beneficial for HIV prevention, they do not provide protection against STIs. There are several speculations about their impact on safe sexual practices. While biomedical interventions are being pushed aggressively, it is important to have continued focus also on behavioral interventions. Also, continuing routine screening of pregnant women for syphilis is crucial, in order to achieve the set national goal of eliminating congenital syphilis.[11] Currently, a substantial gap exists in syphilis testing of pregnant women.[12] Vigilance is needed at clinician level for early diagnosis and proper treatment of symptomatic cases. A high proportion of secondary syphilis among cases presenting at our clinic indicate improper or incomplete treatment of primary syphilis. How much has been contributed by lack of availability of long-acting penicillin is anybody's guess. The series of cases we report are not restricted to only conventional high-risk groups (such as men having sex with men, female sex workers). These findings point toward the need for strengthening sexually transmitted infection surveillance, as well as the need to reach out to at-risk persons dispersed within general population and out of reach of existing targeted interventions. Unmarried youth is one such subgroup, which is growing steadily due to increasing age at marriage. In recent years, norms around premarital sex as well as the same sex behaviors have become more liberal.[13] Sexually active unmarried youth are more likely to engage in high-risk sexual behaviors, compared with their married counterparts.[14] It is vital that programs should address vulnerabilities of this population.

The re-emergence of sexually transmitted infection epidemic can have substantial implications for current HIV and sexually transmitted infection control programs. These fears need to be allayed through rigorous inquiry and rapid response. Our national efforts against sexually transmitted infections and HIV have been commendable so far, and it is certainly not yet the time to let our guards down.

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References

1. Newman L, Rowley J, Vander Hoorn S, Wijesooriya NS, Unemo M, Low N, *et al*. Global estimates of the prevalence and incidence of four curable sexually transmitted infections in 2012 based on systematic review and global reporting. PLoS One 2015;10:e0143304.
2. Haldar P, Morineau G, Das A, Mehendale S. A surveillance model for sexually transmitted infections in India. Indian J Public Health 2015;59:286-94.
3. National AIDS Control Organization, Ministry of Health and Family Welfare, Government of India. Annual Report 2016-17.
4. National AIDS Control Organization, Ministry of Health and Family Welfare, Government of India. Annual Report 2014-15.
5. National AIDS Control Organization, Ministry of Health and Family Welfare, Government of India. Annual Report 2015-16.
6. Dhawan J, Khandpur S. Emerging trends in viral sexually transmitted infections in India. Indian J Dermatol Venereol Leprol 2009;75:561-5.
7. Arakkal GK, Damarla SV, Kasetty HK, Chintagunta SR. Changing trends in sexually transmitted infection (STI) clinic attendees current scenario. Int J Med Sci Public Health 2014;3:1215-18.
8. Centers for Disease Control and Prevention. Reported STDs in the United States 2015 National Data for Chlamydia, Gonorrhea, and Syphilis. Centers for Disease Control and Prevention; October, 2016.
9. Unemo M, Bradshaw CS, Hocking JS, de Vries HJ, Francis SC, Mabey D, *et al*. Sexually transmitted infections: Challenges ahead. Lancet Infect Dis 2017;17:e235-79.
10. National AIDS Control Organization and National Institute of Medical Statistics, ICMR, Ministry of Health and Family Welfare. India HIV Estimations 2015. Technical Report. New Delhi.
11. World Health Organization. The National Strategy and Operational Guidelines Towards Elimination of Congenital Syphilis. World Health Organization, India Office, National AIDS Control Organization, National Health Mission, Ministry of Health and Family Welfare, Government of India; 2015.
12. National AIDS Control Organization, Ministry of Health and Family Welfare, Government of India. In: Country Data Validation. Elimination of Mother-to-Child Transmission of HIV and Syphilis. New Delhi: National AIDS Control Organization, Ministry of Health and Family Welfare, Government of India; 2015-17.
13. Jejeebhoy SJ, Acharya R. Adolescents in Rajasthan 2012: Changing Situation and Needs. New Delhi: Population Council; 2014.
14. International Institute for Population Sciences (IIPS) and ICF. National Family Health Survey (NFHS-4), 2015-16. Mumbai, India: International Institute for Population Sciences; 2017.