Clinicodemographic profile of syphilis with rising trends at a tertiary care hospital: The tip of the iceberg

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Abstract

Syphilis, a genito-ulcerative disease caused by the organism Treponema pallidum subspecies pallidum, is renowned for its invasiveness and immune - evasiveness if untreated. Historical reports from the 15th century indicate that syphilis was perceived as a dangerous infection, and a source of public alarm via fear of contagion and dread of its manifestations. It has varied and subtle features that makes clinical diagnosis difficult and leads to many infections being unrecognised. The total number of reported cases of syphilis (all stages) increased 13.3% during 2017-2018. WHO estimates that each year 11 million new cases of syphilis occur globally among adults of 15-49 years of age. In our retrospective study, we analysed trends of syphilis in different groups of patients attending our tertiary care centre and reviewed the increase in disease pattern with varied clinical presentations. It is important for the medical practitioners to be vigilant to look out for usual as well as unusual presentation of the great imitator.

Key words: Syphilis, Treponema pallidum, Great imitator

INTRODUCTION

Sexually transmitted infections (STIs) are an important public health problem. Syphilis, caused by the organism Treponema pallidum subspecies pallidum, is associated with significant complications and can facilitate the transmission and acquisition of HIV infection.[1-3] Historical literature suggests that 15%–40% of untreated individuals will develop tertiary syphilis which can manifest as destructive cardiac or neurological conditions, severe skin or visceral lesions (gumma), or bony involvement.[4] In 2000 and 2001, the national rate of reported primary and secondary syphilis cases was 2.1 cases per 100,000 population. Improved diagnostic and therapeutic facilities in India have reduced the overall prevalence of syphilis and other STDs in the last few decades. Unfortunately, many physicians today do not have syphilis on their radar because they have not seen or heard about any cases from their colleagues. This lack of awareness, combined with syphilis’ ability to camouflage itself as different infections, has led to resurgence of syphilis. We, hereby, notify cases of syphilis which were encountered within a short span wherein there was a rising trend of syphilis documented

SYNOPSIS

In this study of 3 months, we encountered...
12 cases of syphilis in our institute in collaboration with the gynecologists. Consent was obtained prior to enrolling in the study. Three patients each presenting with tender hyperpigmented papulosquamous lesions over palms and soles, erythematous maculopapular rash over the trunk, extremities, and copper-colored macules with an annular scale on palms, respectively, had their Venereal Disease Research Laboratory (VDRL) titer >1:8. One of them was found to have raised cerebrospinal fluid (CSF) VDRL titers and HIV positive by ELISA. A 23-year-old unmarried male presented with a firm painless ulcer with a clean base and sharp borders approximately 0.3–3 cm in size with a promiscuous behavior. On further workup, his VDRL was reactive (>1:64) and treponema pallidum hemagglutination assay (TPHA) being positive. A 45-year-old male presented with painful swelling of both eyes for 1 month. He was treated with various antibiotics and antivirals with no relief. Upon ophthalmological evaluation, he was found to have choroidal detachment. He and his wife were reactive on HIV-ELISA,
VDRL (>1:8), and TPHA. CSF VDRL in both patients was nonreactive.

Routine ANC work-up is carried out at our center in which we found five females whose VDRL titers were >1:8 and were TPHA positive. There was no history of promiscuous behavior and their clinical examination revealed no symptoms and signs of syphilis. Patients were evaluated for other STIs and HIV status. Figures 1-6 shows various presentation of syphilis. Table 1 shows the presentation of cases with their demographic data and investigational analysis. Graphs 1-3 depict the Marital status, Occupation wise distribution and VDRL titer respectively. All patients were treated successfully with penicillin, depending on their stage of presentation and HIV status.

**DISCUSSION**

Owing to its varied and subtle presentation that can mimic other infections, syphilis has earned the names of Great Imitator or Great Mimicker. As a result of effective treatment, syphilis incidence sharply declined in the 1950s, followed by modest rebound through the mid-1980s. However, in the late 1980s and early 1990s, syphilis re-emerged mainly association with cocaine and commercial sex workers. In 2015, the CDC released a report warning a 38% increase in reported cases of congenital syphilis between 2012 and 2014. The syphilis sero-prevalence among the pregnant women in India was reported as 0.38% in 2015. Since 2010, the institute saw a couple of cases of syphilis annually. In the past 2 years, alarming rise in STI prevalence was observed in the United States of America, particularly among men having sex with men. Similar trends have been observed in other developed countries. Unfortunately, it is a very difficult to have an accurate and up-to-date understanding of STI scenario in India because of lack of robust STI surveillance systems. Although thought to be on the verge of elimination in India, clinical data indicate toward re-emergence of syphilis as a public health problem. The current clinical presentation of syphilis has changed and has become milder as compared to older days.

In a short span of 3 months, we encountered 12 cases within the duration of 3 months, i.e. September 2017 to November 2017, which is worth notice. VDRL was done, and positive cases were tested for TPHA. All the cases were investigated for other STIs as well as HIV. Out of 12 patients, 3 were coinfect ed with HIV. All patients were treated individually with penicillin depending on their stage of presentation and HIV status. Even though localized findings, they definitely raise concerns and argue for a need of larger inquiry in community. The series of cases which we report is not restricted only to conventional high-risk groups (such as men having sex with men and female sex workers) and
raise a point toward the need for strengthening STI surveillance.

**CONCLUSION**

The re-emergence of STI epidemic can have substantial implications for current HIV and STI control programs. These fears raise a question for it being like just the tip of the iceberg and vigilance for the clinician to screen cases for early detection and appropriate treatment.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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**Table 1: Demographic data of patients**

| Name | Age (years) | Gender | Marital status | Profession | Exposure type | VDRL titer | TPHA | HIV (ELISA) | Type of lesion |
|------|-------------|--------|----------------|------------|---------------|------------|------|-------------|----------------|
| SRM  | 23          | Male   | Unmarried      | Software engineer | CSW          | 1:64       | +   | +           | Primary chancre |
| SAP  | 30          | Male   | Married        | Teacher     | Denies        | 1:16       | +   | -           | PP syphilis    |
| AVB  | 24          | Male   | Unmarried      | Student     | Denies        | 1:32       | +   | -           | PP syphilis    |
| VSK  | 28          | Female | Unmarried      | Unemployed  | CSW           | 1:16       | +   | -           | PP syphilis    |
| VAS  | 45          | Male   | Married        | Driver      | Denies        | 1:64       | +   | +           | Uveitis, scar over genitals |
| MJK  | 40          | Female | Married        | Homemaker   | Monandrous with husband | 1:16 | + | + | No skin lesions |
| GKJ  | 34          | Female | Married        | Homemaker (ANC) | Premarital  | 1:32 | + | - | No skin lesions |
| SAS  | 37          | Female | Married        | Homemaker (ANC) | Monandrous with husband | 1:16 | + | - | No skin lesions |
| SPC  | 27          | Female | Married        | Homemaker (ANC) | Monandrous with husband | 1:16 | + | + | No skin lesions |
| KMC  | 30          | Female | Married        | Homemaker (ANC) | Monandrous with husband | 1:32 | + | - | No skin lesions |
| TSK  | 25          | Female | Married        | Homemaker (ANC) | Monandrous with husband | 1:8  | + | - | No skin lesions |
| RVG  | 35          | Female | Married        | Homemaker   | Extramarital | 1:16 | + | - | No skin lesions |

**ANC=Absolute neutrophil count; CSW=Cerebral salt wasting; VDRL=Venereal Disease Research Laboratory; TPHA=Treponema pallidum hemagglutination assay; PP=Palmoplantar**

**Conflicts of interest**

There are no conflicts of interest.

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