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*Case Reports*

# Syphilis - A Case Report

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**SUMMARY**

*Syphilis is an infectious disease. Although its occurrence has sharply declined in developed countries, it is constantly rising in developing countries. It is completely curable disease. Untreated cases may transmit the disease to other persons on sexual exposure. To highlight these aspects we report a case of secondary syphilis.*

## CASE REPORT

A male transporter of 24 years, presented to skin OPD, Shaikh Zayed Hospital in December, 2001 with palmoplantar skin lesions and oral ulceration of one month duration. Patient complained of recurrent small, painless ulcers in different parts of oral cavity. These ulcers healed spontaneously over 8-10 days. A year before he developed multiple small painful genital ulcers, unaccompanied by urethral discharge, urinary complains or constitutional symptoms. The ulcers healed within a week with some medications. He was a known smoker. He was unmarried but had frequent unprotected sexual contact with multiple sexual partners during the last 3 years. Last contact was one month ago. Patient had problems in interpersonal relation and had tendency of deliberate self harm.

On physical examination vital signs were normal. Multiple posterior cervical and submandibular lymph nodes were enlarged. These were 0.5-1cm in size, non-tender, rubbery in consistency and mobile. The overlying skin was normal.

Dermatological examination showed bilateral symmetrically distributed, round to oval, painless, coppery red, scaly maculopapular lesions of 1-2cm on palms and soles (Fig.1). A white non-tender, non- indurated mucous patch of 0.5cm was present at the root of the frenulum of tongue (Fig.2). Multiple self induced linear scar marks of 4-6cm long were present on the chest, abdomen and arms (Fig.3). Systemic review was unremarkable.

Clinically, the mucocutaneous lesions were almost pathognomonic of secondary syphilis. A reactive VDRL (Titre 1:32) and treponema pallidum haemagglutination assay (TPHA) confirmed the diagnosis. He was treated with long acting penicillin. Follow up after 4 weeks showed marked improvement of skin lesions (Fig.4) and complete disappearance of oral mucous patch.

## DISCUSSION

Syphilis is an infectious disease caused by Treponema pallidum, a microaerophilic spirochete that is pathogenic only to human[1]. The disease is mostly transmitted through sexual contact with infected lesions or body fluids. Less common routes of transmission are transplacental, blood transfusion or accidental inoculation.

The primary lesion is round or oval ulcer of 1-2cm in size, with well defined, regular, raised, indurated margins. The ham coloured ulcer base has a smooth surface and may be covered with a grayish slough[2]. Typical primary chancre is seen in 60% of patients. In 15-30% of the patients, the primary lesion may go unnoticed. Untreated the chancre persists from 1 to 6 weeks; it resolves within 1-2 weeks after treatment and heals without scarring.

Secondary syphilis is a systemic infection. Its diagnosis is usually made by the presence of mucocutaneous lesions. Dermatologists have an advantage in diagnosing the disease. The cutaneous lesions develop in 80-95% of the cases[3]. The eruption tends to have a symmetric pattern and becomes polymorphic later. In 95% the lesions are macular, maculopapular, papular or annular. Nodules and pustules are uncommon and

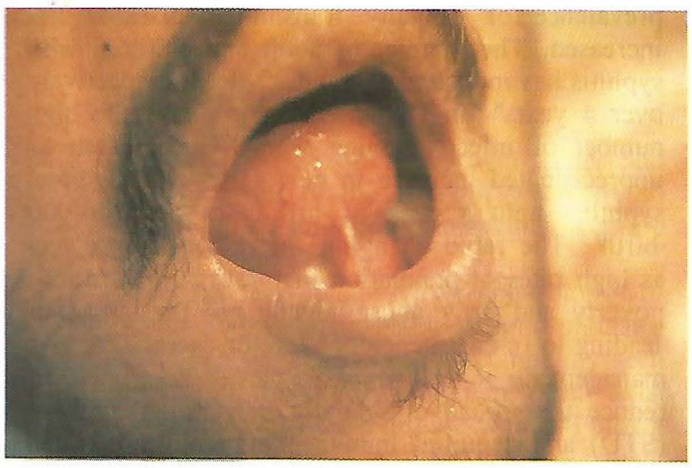

Fig. 1: Round to oval, coppery red scally maculopapular lesions on both hands.

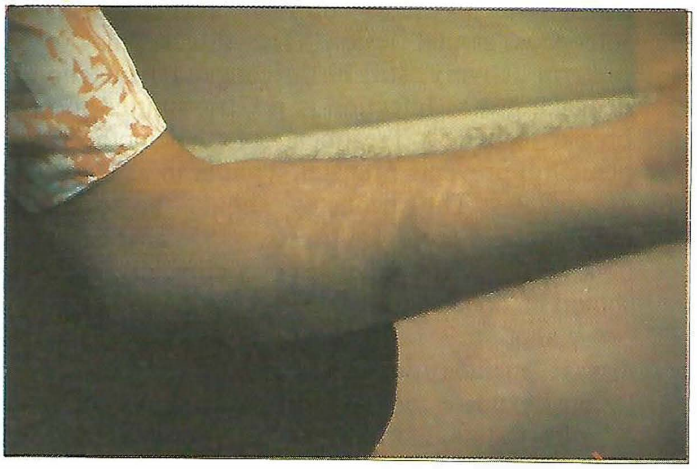

Fig. 3: Self induced linear scar marks on arm.

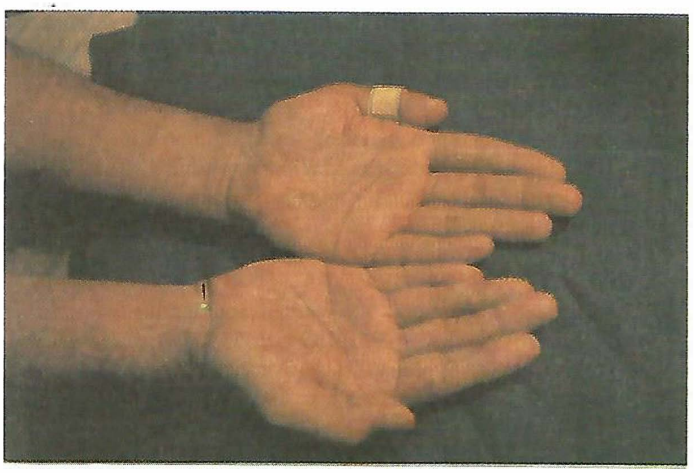

Fig. 2: White non-tender, non-indurated mucous patch at the root of frenulum of tongue.

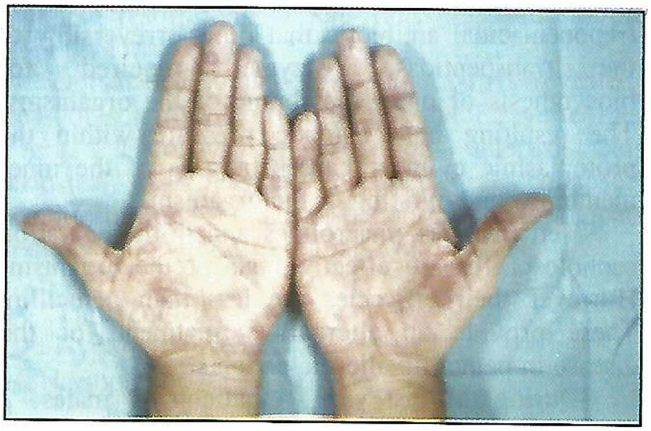

Fig. 4: Marked improvement of skin lesions, 4 weeks after treatment.

vesiculobullous lesions are seen in only congenital syphilis. Eruption is generally symptomless. A triad of such a rash, oral ulcers and lymphadenopathy is almost pathognomonic of secondary syphilis. In any unexplained rash, VDRL should be done. As a rule the lesions heal without scar formation in 2 to 10 weeks with or without treatment. Mucous membrane lesions may manifest as condylomata lata, mucous patches and pharyngitis. Eye, ear, gastrointestinal, neurological, lymphoreticular, musculoskeletal or haematological involvement may also be seen. Patients may infect other people.

Untreated patients of secondary syphilis enter in a latent phase. It is an asymptomatic stage with no clinical finding. The only evidence of this stage is reactive serologic tests (1). This stage may remain for long periods, be interrupted by a relapse of secondary syphilis or progress to the tertiary syphilis.

Tertiary (Late) syphilis is characterized by any symptomatic syphilitic manifestation after the secondary and relapsing stages. Skin lesions seen in late benign stage are: granulomatous nodules,

psoriasiform plaques and gummas. Cardiovascular and nervous systems may also be affected.

In infected pregnant females, infection may be transferred to fetus through contact with an infectious genital lesion. The disease may cause preterm delivery, still birth, congenital infection or neonatal death. Infection is not transmitted through breast feeding[4]. Treatment of the mother with penicillin prevents prenatal syphilis in at least 98% of infants. The neonates should be examined thoroughly. Serological tests, CSF analysis, long bones X-Rays and other tests as clinically indicated should be done.

Laboratory tests for the confirmation of the disease include demonstration of spirochetes in lesional exudates or tissue by darkfield examination or direct immunofluorescence. Serological tests include reactive non-treponemal tests (RPR, VDRL) and treponemal tests (FTA- ABS, Micro-haemoagglutination assay with T.Pallidum antigen-MHA-TP).

Parentral pencillin is the treatment of choice for all stages of syphilis. Penicillin is a treponemacidal antibiotic that binds irreversibly to the transpeptidase enzymes required for biosynthesis of outer membrane of the organisms. The resulting high osmotic pressure within the protoplasmic cylinder causes bulging of the inner membrane and bursting of the organism.

Tetracyclines, macrolides and third-generation cepholosporins are effective against the organism. However their efficacies are less than penicillin. These provide an alternative treatment for the disease in penicillin allergic patients.

During the last year, 4 patients (2 males, 2 females) with syphilis attended skin OPD at Shaikh Zayed Hospital, Lahore. At PNShifa, Karachi during the year 1996-97 seven patients with syphilis were seen[5].

The extent to which available statistics reflect the incidence of syphilis depends on case-finding efforts, variation in notification practices and social factors that may limit, increase, or reduce the interaction between infected individuals and health services[6].

Despite the availability of effective antibiotics and chemotherapeutic agents, the STD have shown an upward trend for the past couple of decades. This view is supported by a study of the rise from 8.7 to 25 cases of early syphilis per 100,000 population in Singapore between 1980 and 1984[7]. With the collapse of the Soviet Union, the prevalence of sexually transmitted diseases has increased. The number of adult and children with syphilis has increased 15- and 20- fold, respectively over 4 years[8]. In United States in 1991, the high number of infected young women resulted in an unprecedented increase in new cases of congenital syphilis, upto a peak of 110 cases per 100,000 birth[9]. The rapid changing social conditions, such as high rates of population increases, urbanization, poverty and drug abuse favour prostitution, thus leading to re-emergence of these diseases. Effective management at primary care level is crucial to reduce the spread of sexually transmitted diseases (STD) and acquired immune deficiency syndrome (AIDS).

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