

The Revival of an Old Assailant with Oral Implications

Preeti Nair, Christopher Vinay Shinde, Rajul Jain, Nisheeth Saawarn

From, the Department of Oral Medicine and Radiology, People's College of Dental Sciences, Bhopal, India.

Correspondence to: Dr. Rajul Jain, Department of Oral Medicine and Radiology, People's College of Dental Sciences, Bhopal, India. Email: rajuljain17@yahoo.co.uk

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ABSTRACT

Syphilis is among the primogenital documented sexually transmitted diseases (STD). In the past decade, its incidence has levitated significantly in the urbanized world. Oral syphilitic lesions, the most common extragenital insignia of infection, pose a diagnostic challenge to dentists, who are frequently the first to observe them. Oral lesions in secondary stage syphilis are particularly common in association with general symptoms and cutaneous eruptions. However, an exclusive oral localization, not associated with general manifestations, is uncommon. We report a case of a 19-year-old male patient with isolated oral ulceration as the sole presentation of secondary syphilis.

Keywords: Secondary syphilis, split papule, STD.

The torment of sexually communicable infections has been inescapable to mankind as humans have revealed in the pleasures of sex. Syphilis first immigrated to Western Europe in the 1490s, probably brought back by Christopher Columbus. It is caused by a corkscrew-shaped spirochete, *Treponema pallidum*, which was discovered in 1905 by Fritz Schaudinn and Erich Hoffmann [1]. It is often called "the great imitator" because many of its signs and symptoms resemble those of other diseases [2].

Syphilis is acquired through sexual intercourse or by vertical transmission. Initially, a painless papule (chancre) appears at the site of inoculation (genitalia or oral mucosa) associated with regional lymphadenopathy. The lesion, which may go unnoticed by the patient, resolves in 2-6 weeks without treatment. Four to eight weeks after the appearance of the chancre, the secondary stage develops [3]. Early stages of secondary syphilis are generally characterised by many small and symmetrically distributed efflorescences; whereas in later stages, lesions increase in

size, but decrease in number and concentrate on a particular body site [4]. The World Health Organization (WHO) estimated that in 2008, 10 million novel cases of syphilis occurred globally. National statistics for 2014-15 reported 7.5 cases per million of primary and secondary syphilis [5]. The above mentioned statistics clearly implies the importance of secondary syphilis as a "must know" area of competence among dentists.

CASE REPORT

A 19-year-old unmarried Indian male reported to the Department of Oral Medicine & Diagnostic Radiology with the chief complaint of multiple painless eruptions on the chin and tongue since 2 months. He gave a history of similar kind of eruptions on his external genitalia. There was history of multiple unprotected sexual contacts with a professional sex worker about 3 months back. General examination revealed bilateral axillary and inguinal lymphadenopathy (2-3 in number) which were firm, mobile and non-tender.

On extraoral examination, well defined, painless, irregular, serpiginous, raised, hypopigmented plaques were present on the chin (figure 1) and right cheek and a single eruption present on the right upper eyelid (figure 2). A nodule with central linear erosion was present at the left corner of mouth (figure 3). The labial mucosa, buccal mucosae, lateral borders of the tongue (figure 4) and soft palate revealed scrapable, white plaques, leaving behind raw, eroded areas which were non tender. A provisional diagnosis of secondary syphilis was put forth. The triad of oro-oculo-genital manifestations prompted a differential diagnosis of erythema multiforme, HIV associated lesions, gonorrhea and Behcet's syndrome. Other entities bearing resemblance to our case may also include pemphigus and benign mucous membrane pemphigoid.



Fig 1

Fig 2

Figures: Figure 1 - Painless, irregular, serpiginous, raised, hypopigmented plaques on the chin. Figure 2 - Eruption on the right upper eyelid.



Fig 3

Fig 4

Figures: Figure 3 - Nodule with central linear erosion at the left corner of mouth. Figure 4 - Scrapable, white plaques on the labial mucosa, buccal mucosae, and lateral borders of the tongue

Serological investigations including complete blood count, Venereal Disease Research Laboratory (VDRL) test, enzyme-linked immunosorbent assays (ELISA) for HIV were done. He was HIV seronegative, ESR was raised and the VDRL test showed a positive result. The confirmatory test, TPHA (Treponema Pallidum Hemagglutination Assay) was found to be positive with a

titre of 1:640, clinching a final diagnosis of secondary syphilis.

The patient was treated with 2.4 million units Benzathine penicillin once a week for 1month. He was also given benzocaine 0.2% for topical application on the oral ulcers and was recalled after 15 days. All the lesions healed completely after 15 days of commencement of medication. He was lost to further follow up and did not report even after multiple reminders.

DISCUSSION

The term syphilis was coined from the poem "Syphilis, sive Morbus Gallicus" by Girolamo Fracastoro, an Italian physician and poet, in which the fictional shepherd, Syphilus, is a victim of the disease [6]. Syphilis is characterized by episodes of active disease interjected by phases of latency [7]. Syphilis can be classified as either congenital or acquired. The acquired form can be classified as primary, secondary, latent, and tertiary, depending on the elapsed time after exposure [8].

Secondary Syphilitic lesions are due to the hematogenous dissemination of treponemes from syphilitic chancres. Thus, the term "disseminated syphilis" is more pertinent [9]. This stage typically occurs 6 to 8 weeks after the primary infection. Lesions of secondary syphilis can mime many other diseases, which include a generalized rash, fever, malaise, myalgia, alopecia, and generalized lymphadenopathy. Alopecia related to secondary syphilis is classically described as patchy with a moth-eaten appearance. Manifestations of secondary syphilis usually resolve without treatment [6]. Oral and paraoral manifestations may present as lesions which may be macular (roseolas, leukomelanoderma), papular (small miliar or lichenoid, or with large size-lenticular or nummular), papulosquamous, psoriasiform, annular, nodular, condylomata lata, malignant syphilis, and other features like loss of hair, and alteration of the nails [10].

The initial finding in disseminated syphilis is an evanescent macular rash, also known as *Syphilitic Roseola*, which is often overlooked. It may be polymorphic, indolent, or transient but is not vesicular or bullous [11]. In the later course, symmetric papular eruptions appear, on the entire trunk and the extremities, including the palms and the soles known as *Papular Syphilids*. They are usually scaly, although they may be

smooth, follicular, or sometimes, pustular. Alopecia also occurs in untreated cases, reflecting involvement of hair follicles. Immunocompromised people often present with *Pustular Syphilids* (multiple papules). *Syphilitic Leukoderma* is presence of dubiously outlined hypopigmented areas, seen in dark skinned people. Another highly infectious mucosal lesion is *Syphilitic Angina*, which often occurs with Tonsillitis [12].

The presence of papular and pustular lesions that rapidly progress to necrosis and ulceration, many times with oyster-like or rupoid crusts and accompanied by intense general symptoms, represent a variant, described as early malignant syphilis [13], or *lues maligna* which often occur in HIV infected individuals [14]. *Condyloma latum* refers to one or more large, raised, white or gray lesions which develop in warm and moist areas. These lesions are due to the local breakdown of secondary lesions with extension of infection in areas of tissue trauma, most frequently involving the axilla and groin [9]. *Mucous patches* may occur in myriad forms, but in general these may manifest as oval or crescentic erosions, covered by a grey mucoid exudate, with an erythematous border. At the commissures, the mucous patches may appear as split papules, while on the distal and lateral aspects of the tongue, they may begin to ulcerate or manifest as irregular fissures. The mucous patches may coalesce, or arise anew as, serpiginous lesions, termed as snail track ulcers [15].

Several patients also present with lymph node enlargement. Subclinical hepatitis can be detected in approximately 10% of all patients by appropriate laboratory studies and is supported by histologic findings. Less common presentations include iritis, anterior uveitis, arthritis, and glomerulonephritis or nephrotic syndrome. Circulating immune complexes that contain treponemal antigen and human fibronectin, are present in this stage, and their deposition in relevant organs is considered inevitable in the pathogenesis of these syndromes [9].

Diagnosis is aided by a detailed personal history followed by serological tests. Non-treponemal tests include VDRL and Rapid Plasma Reagin (RPR), while Treponemal tests such as Fluorescent Treponemal Antibody Absorption (FTA-ABS), TPHA and Enzyme Immunoassay (EIA) are more complex, based upon the recognition of specific antibodies to cellular components of *T. palladium*, which are used for confirmation [16]. The differential diagnoses consist of pityriasis rosea, drug

eruptions, psoriasis, lichen planus and acute febrile exanthems.

Intramuscular Benzathine penicillin 2.4 megaunits either as a single dose or weekly in two to three doses are the mainstay of treatment. In patients allergic to penicillin, oral doxycycline 100 mg twice daily for 2 weeks is given or tetracycline 500 mg four times daily for 2 weeks or azithromycin 500 mg daily for 1 week should be given. Patients should be warned of the *Jarisch-Herxheimer reaction* that causes flu-like illness within 24 hours of starting treatment. This can cause grave consequences in patients with neuro/ oculo/cardiovascular syphilis and may be ameliorated by prednisolone 10–20 mg three times a day for 3 days starting 24 hours before giving antitreponemal treatment [11].

CONCLUSION

The present case exemplifies the need for diligence with suspected STDs in the differential diagnosis of oral ulceration. Increased awareness of the symptoms and signs of acute infections is needed; together with alacrity to cogitate the diagnosis of syphilis in patients with dubious symptoms. It is difficult to discuss such a socially stigmatized disease, thus proper patient counseling is very much needed. This paper highlights the importance of oral findings, early diagnosis, and its proper management to prevent further complications.

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