

Condyloma Latum on the Lower Lip as an Isolated Manifestation of Secondary Syphilis – a Case Report

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Abstract

Oral lesions are described in all stages of syphilis, except in the latent stage. During the secondary stage of infection, oral lesions, saliva and blood of infected person are very contagious. The aim of this case report was to point to the secondary syphilis in differential diagnosis of oral diseases.

A 30-year-old homosexual man presented with a three-week history of a painless verrucous lesion on his lower lip. Physical examination revealed a hypertrophic painless papillomatous lesion on the lower lip. The lesion was partly split with peripheral fissures. There were no generalized lymphadenopathies and no evidence of systemic disease. Further examination showed no other mucous membrane or cutaneous lesions elsewhere on the body. The external genitalia were normal. The patient was HIV-negative and otherwise healthy. A review of his medical history was significant for previous well documented treatment of anal chancre, which was successfully commenced at our Institute in 2010. It also revealed a history of a single unprotected receptive oral sex with an unknown partner 3 months before the onset of lesion. The diagnosis of condyloma latum on the lower lip was considered on clinical grounds. Laboratory findings, including complete blood count and blood chemistry were within normal limits. The VDRL (venereal disease research laboratory) test was positive with a titre of 1 : 128. Treponema pallidum hemagglutination assay (TPHA) was positive. HIV serology was non-reactive.

The final diagnosis of solitary condyloma latum on the lower lip, as the only sign of secondary syphilis, was confirmed by positive results of routine serologic tests for syphilis. The patient was diagnosed with secondary syphilis and treated with a single intramuscular injection of benzathine penicillin, 2.4 million units. The lesion regressed completely within 2 weeks. Three months later the VDRL titer had fallen to 1 : 8 and HIV serology remained negative.

Polymorphic oral manifestations in syphilis indicate that this disease should not be overlooked in the differential diagnosis of not only benign, but even malignant oral lesions.

In conclusion, as far as the world literature available to us is concerned, this would be the first report of isolated solitary condyloma latum on the oral lip that, in the absence of any other clinical signs or symptoms of the disease, led to the diagnosis of secondary syphilis.

Key words

Syphilis, Cutaneous; Lip Diseases; Treponema pallidum; Diagnosis, Differential; Treatment Outcome; Signs and Symptoms; Case Reports

Syphilis is a sexually transmitted infection caused by *Treponema pallidum*. The disease is known as a multi-stage disease and it is characterized by diverse and wide-range clinical manifestations. If untreated, syphilis progresses through four stages: primary (chancre), secondary (mucocutaneous lesions

and/or lymphadenopathy with or without organ involvement), latent (asymptomatic) and late; in 25% of those who are untreated, the disease takes a chronic course. Oral lesions are described in all stages, except in the latent stage. Oral ulcers may be seen at any stage, but particularly in secondary syphilis, during

the secondary stage of infection; oral lesions, saliva and blood of infected person are very contagious (1, 2)

In this report, we present a rare case of a solitary oral lesion, as an isolated manifestation as well as a diagnostic clue of secondary stage syphilis. It also underlines the importance of taking into consideration this “great imitator” in the differential diagnosis of oral diseases and reviews oral manifestations of infectious syphilis.

Case report

A 30-year-old homosexual man presented with a three-week history of a painless verrucous lesion on his lower lip. Physical examination revealed a well-defined, round flat-topped, white in colour, non-ulcerated hypertrophic painless papillomatous lesion on the lower lip. The lesion was partly split with peripheral fissures (Figure 1). There were no generalized

lymphadenopathies and no evidence of systemic disease. Further examination showed no other mucous membranes or cutaneous lesions elsewhere on the body. The external genitalia were normal. The patient was HIV-negative and otherwise healthy. A review of his medical history was significant for previous well documented treatment of anal chancre, which was successfully commenced at our Institute in 2010. It also revealed a history of a single unprotected receptive oral sex with an unknown partner 3 months before the onset of lesion. The diagnosis of condyloma latum (CL) on the lower lip was considered on clinical grounds.

Laboratory findings, including complete blood count and blood chemistry were within normal limits. The VDRL (venereal disease research laboratory) test was positive with a titre of 1 : 128. *Treponema pallidum* hemagglutination assay (TPHA) was positive. HIV serology was non-reactive.



Figure 1. Hypertrophic, raised, papillomatous lesion on the lower lip partly split with peripheral fissures

The final diagnosis of solitary CL on the lower lip, as the only sign of secondary syphilis, was confirmed by positive results of routine serologic tests for syphilis. The patient was diagnosed with secondary syphilis and treated with a single injection of benzathine penicillin, 2.4 million units intramuscularly. The lesion regressed completely within 2 weeks. Three months later, the VDRL titer had fallen to 1 : 8 and HIV serology remained negative.

Discussion

The syphilitic infection is usually transmitted through sexual contact. It occurs through oral sex in at least 13% of cases and in one fifth to one third in men who have sex with men (2). Oral lesions are among clinical manifestations in infectious syphilis. In the primary stage of disease lesions are the result of unprotected oral intercourse. Oral sex is commonly practiced by sexually active male-female and same-gender couples of various ages, including adolescents. Oral sex involves both giving and receiving oral stimulation to the penis, the vagina, and/or the anus. Although the risk of HIV transmission by oral sex is small, other sexually transmitted diseases especially gonorrhea, syphilis and herpes are more easily transmissible through oro-genital contact (3). During an outbreak of early syphilis in Belgrade, about 60% of cases contracted the disease by oral sex (4).

The primary lesion develops at the site of inoculation about three weeks (range 10 - 90 days) after infection with *Treponema pallidum*. About 5% of all primary chancres are found in extra genital locations and the majority of them occur in the mouth (40 - 75%) although they can be observed on any part of the body (5). The lip is the most common extragenital site for primary syphilitic lesions. Most lip chancres in males tend to occur on the upper lip, in females on the lower lip. Primary syphilis of the mouth manifests as a solitary ulcer with irregular raised border, and usually on the lips or the tongue, accompanied by a cervical lymphadenopathy. Rare appearances of a chancre on the tonsils and the pharynx have been described, as well (6).

Without treatment, chancre resolves within 2 - 8 weeks. Lesions of secondary syphilis erupt 3 to 12 weeks after the appearance of the chancre, but may develop months later or in up to 15% of cases, before chancre disappears (2).

An extremely broad spectrum of skin and mucosal lesions are seen in patients with secondary syphilis (7). Mucous membrane lesions in secondary stage are extremely infectious. These are highly infectious and usually fairly painless ulcers (mucous patches and snail-track ulcers) (1). Nevertheless, the three manifestations are well recognized: condylomata lata (CL), mucous patches and macular lesions. The latter usually occur on the hard palate and are manifested as red flat to slightly raised lesions in the form of pharyngitis. Mucous patches are painless, oval or circular lesions covered with thin mucosa on which shallow, rounded erosions covered with macerated scaling and erythematous edge can be seen. Present in 7 - 12% of secondary syphilis cases, the lesions may appear anywhere in the mouth, commonly on the tongue and lips. Confluence of several denuded lesions may occur on the tongue. They may be seen also on the glans of the uncircumcised penis, inner vulva and anus. Split papules are elevated mucous patches with central fissures in the oral commissures. Furthermore, sometimes these patches make serpentine like lesions, so-called "snail track" ulcers (1, 2). Special papular lesions in secondary syphilis are very contagious CL, which have been reported in 9 - 44% of cases. CL may appear in two different forms: the first includes flat moist papules, and the second elevated verrucous or cauliflower-like papules or plaques usually located in the oral commissures. The later type, found in our patient, was described on the lower lip. CL consists of flesh-colored or hypopigmented macerated papules or plaques. Their surface may be smooth, papillated or covered with cauliflower-like vegetations. Lesions in intertriginous areas may erode or proliferate, forming elevated, brown, velvety plaques or grouped hypertrophic nodular lesions that resemble raspberries (frambesiform syphilis). CL tend to develop at sites where two body surfaces are in apposition such as anogenital areas, scrotum, medial thighs and behind the ears. Constant moisture, friction and maceration at these sites facilitate coalescence and growth of syphilitic papules, resulting in development of plaque-like condylomas. The common sites are the genital and anal, less frequently, the oral commissures, face, nasolabial folds, axillae, inframammary folds, toe webs and umbilicus (8, 9). In secondary syphilis, moist, flat, papulonodular lesions of oral CL often

appear at the mucocutaneous junctions and on mucosal surfaces especially at the commissures of the lips (1).

The secondary stage of syphilis usually recedes in 2 to 12 weeks. However, the classic, above given description is present only in 60% of cases, and various deviations are common (2). An accurate and thorough patient history is important, since the diagnosis of secondary syphilis requires a high index of clinical suspicion, because the primary stage may go undiagnosed. Furthermore, the primary stage of syphilis may not develop in certain circumstances, such as in HIV positive patients (10). Not all patients present with classic symptoms and clinical findings. These may be subtle, transient, and easily overlooked. However, the infection is systemic, even in the absence of symptoms, despite the fact that the most common and recognizable manifestations are mucocutaneous (2). In our patient the characteristic morphology of the lesion present on the lip, a well-defined, raised, round, flat-topped, white in colour, non-ulcerated hypertrophic painless papillomatous lesion on the lower lip suggested a clinical diagnosis of condyloma latum. Although the primary stage of infection has not been registered in our case, medical history and data indicated that the primary lesion may have been present. The obvious and largest distinction between chancre, and CL are ulcerations and papillomatosis, respectively. Moreover, it has been postulated that CL often develop within the vicinity of the primary chancre (10).

CL may mimic condylomata acuminata or bowenoid papulosis, which are associated with human papillomavirus infection. However, being not contagious, oral lesions are also described in the tertiary stage of syphilis (6). Gummas, destructive granulomas, usually occur on the hard palate and tongue. They can ulcerate and cause bone destruction or perforation of the palate. In contrast to CL, syphilitic leukoplakia is a large whitish homogenous area on the dorsal side of tongue and can show malignant alteration.

The diagnosis of CL is based on typical skin lesions and positive serologic tests for syphilis, as in our case. Dark field microscopy detects *Treponema pallidum* based on characteristic morphology and motility. It can be used both for primary and secondary lesions, and it is a very valuable tool: sensitive, inexpensive and may be performed at the point of care. Dark-field

examination is a diagnostic test of choice in chancre and most lesions of secondary syphilis, especially CL and mucous patches. Dark-field microscopy was not performed in our patient due to technical limitations. The test is invalid for oral lesions because saprophytic treponemas that can not be differentiated from *T. pallidum* are common in the mouth (2). In such cases, a lymph node aspirate can be examined by dark-field microscopy. If the diagnosis is otherwise unequivocal as a result of these examinations, or clinical evaluation of typical lesions coupled with reactive serologic results, skin biopsy is recommended. Oral syphilitic lesions are frequently seen as a diagnostic challenge to dentists, who are usually the first to examine oral lesions. Biopsies are occasionally the first examination performed, but histologic findings are considered nonspecific and the diagnosis is usually made through serologic tests (10). However, recently it has been suggested that the presence of plasma cell arteritis and plasma cell neuritis represent a combination that has not been reported in any other pathologic condition of the oral cavity and may be specific enough to direct the clinician toward the diagnosis of syphilis prior to clinical confirmation (11). Polymorphism of oral clinical findings in syphilis indicates that this disease should not be overlooked in the differential diagnosis of oral lesions such as oral hairy leukoplakia, lichen planus, oral condylomata acuminata, candidiasis and oral squamous cell carcinoma (1, 2, 11). Early detection of characteristic oral lesions facilitates the diagnosis and enables prompt treatment of syphilis.

CL in our patient was a solitary lesion and the only sign of secundarism, since there were no other mucous membrane or cutaneous lesions elsewhere on the body, as well as no generalized lymphadenopathies and no other evidence of systemic disease. There were several reports on cases of secondary syphilis with no other lesions but oral, and in each case oral lesions led to the diagnosis of secondary syphilis, without evidence of systemic disease, even without generalized lymphadenopathies (12). However, contrary to our case, the lesions were more extensive, multiple or rather erosive (12, 13). Solitary condyloma latum was reported, but on the umbilicus (9). In 2010, Vera et al, reported four patients with interdigital CL and reviewed the world literature since 1940, where 18 previously reported patients were found. Thus, in the total number

of 22 patients, they detected the following: an isolated interdigital space was affected in 50% of patients; besides the interdigital CL, 82% of patients presented with other secondary skin lesion; CL was the only manifestation only in 4 patients (18%) (8).

Conclusion

As far as the world literature available to us is concerned, this the first report of an isolated solitary condyloma latum on the lip that, in the absence of any other clinical signs or symptoms of the disease, led to the diagnosis of secondary syphilis.

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Abbreviations

HIV - human immunodeficiency virus
VDRL - venereal disease research laboratory
TPHA - *Treponema pallidum* hemagglutination assay
CL - condylomata lata

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Condyloma latum na donjoj usni kao jedina manifestacija sekundarnog sifilisa – prikaz slučaja

Sažetak

Uvod. Usna duplja može biti zahvaćena lezijama u svim stadijumima stečenog sifilisa.

Cilj rada bio je da ukaže na značaj lezija sekundarnog sifilisa u diferencijalnoj dijagnozi oralnih oboljenja.

Prikaz slučaja. U radu je dat prikaz tridesetogodišnjeg muškarca homoseksualne orijentacije koji se javio dermatologu zbog bezbolne verukozne promene na donjoj usni koja je trajala tri nedelje. Anamnestički podaci, klinička slika i pozitivni serološki testovi na sifilis ukazali su na sekundarni stadijum oboljenja u kojem je *condyloma latum* na donjoj usni u odsustvu drugih promena na koži i sluznicama, uključujući i

odsustvo regionalne i generalizovane limfadenopatije, bio jedina klinička manifestacija infekcije. Nakon sprovedene terapije benzatin penicilinom G, promena se promptno u potpunosti povukla.

Diskusija. Polimorfizam kliničke slike u usnoj duplji kod obolelih od sifilisa upućuje na značaj ovog oboljenja u diferencijalnoj dijagnozi bolesti usne duplje poput čupaste oralne leukoplakije, lihen planus, kondiloma izazvanih humanim papiloma virusima, oralne kandidijaze i karcinoma skvamoznih ćelija usne duplje.

Zaključak. Prema nama dostupnoj literaturi, ovo bi bio

prvi objavljeni slučaj izolovanog solitarnog *condyloma latum* na sluznici donje usne, koji je u odsustvu bilo

kog drugog znaka ili simptoma, predstavljao jedini klinički znak sekundarnog sifilisa.

Ključne reči

Kutani sifilis; Bolesti usana; *Treponema pallidum*; Diferencijalna dijagnoza; Ishod terapije; Simptomi i znaci; Prikazi slučajeva