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Syphilis- The Great Imitator

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Abstract— *Syphilis is an infectious disease with Treponema Pallidum being its causative agent. When not treated it can pass through 4 stages: primary, secondary, latent and tertiary.*

Syphilis has a broad spectrum of skin and mucosal manifestations and can imitate many other skin disease, hence the name "The great Imitator". The number of patients infected with syphilis has declined dramatically after penicillin invention.

Albania has not had a significant number of cases but eruptions has been seen time after time. Herein, we describe 5 cases of suspected syphilis presented at our clinic.

Keywords—Primary Syphilis, Secondary Syphilis, Primary Ulcer, Erythematous Macular Lesions.

I. INTRODUCTION

Syphilis is a chronic systemic infectious disease caused by *Treponema pallidum*, a microaerophilic spirochete, whose transmission occurs mainly by sexual contact. Its course is characterized by a multistage evolution, in a total of 4 distinct clinical stages in cases of non-treated disease, in which symptomatic phases alternate with periods of latency [1]. The myriad of possible clinical manifestations often represent a great challenge, a fact that led Sir William Osler to label it as 'the great imitator'.

In this report, we present 5 cases in which the clinical manifestations of the patients initially simulated other dermatologic diseases, giving the impression of Morbus Behcet in the first case, Genital Herpes in the second one, Ricketious infection in the third case, Psoriasis Guttata in the fourth case and Lichen Planus in the fifth case.

II. CASE REPORTS

Patient 1

The first case is a 32 year old, pregnant woman at 5fifth month of gestation who presented with an ulceration at labia majora and another at oral mucosa, which had been present since the 2nd month of gestation. Physical examination showed a painless ulcer with raised borders and scanty serous exudate, measuring 1.2 cm in diameter, located on labia majora.The lesion was firm on palpation, with borders being indurated. No regional lymph node was noted. Serologic tests for syphilis such as VDRL, FTA-ABS and MHA-TPA were negative.

Morbus Behcet was included in the differential diagnosis and was confirmed later.

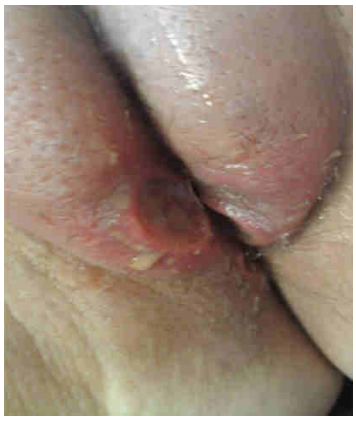

Fig.1: Patient 1.Ulceration on the labies.

Patient 2

The second case is a 45 year old man presenting with a genital small papulo nodular lesion which appeared 3 weeks ago. The lesion was red and indurated, located on glans penis. Serologic tests for syphilis VDRL and FTA-ABS resulted positive.Therefore, the patient was diagnosed with primary syphilis and genital herpes was excluded.

He was treated with penicillin benzathine 2,400,000 – 2 doses with a 7-day interval.

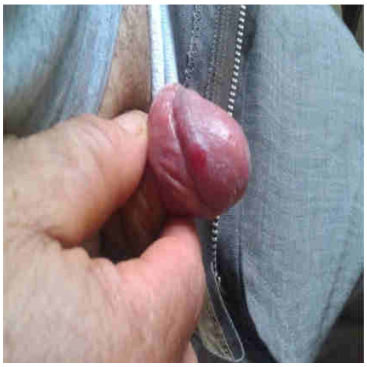

Fig.2: Patient 2.Lesion on the glans.

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Patient 3

The third case is a 69 year old male who presented at our clinic with papulo-squamous lesions distributed all over the body. He was being treated for Ricketsiae and he had an abdominal ulceration it was thought the inoculation site (Fig. 3c). He was also suffering from Diabetes Mellitus Type 2. He had a history of an ulcerated lesion at glans penis 4 weeks before the presentation.

Serologica tests were positive for VDRL, FTA-ABS and MHA-TPA. The patient was diagnosed with Secondary Syphilis.

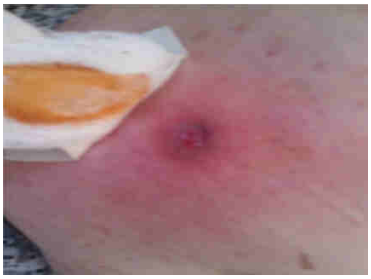

Fig.3: Patient.3Ulceration on the abdomen

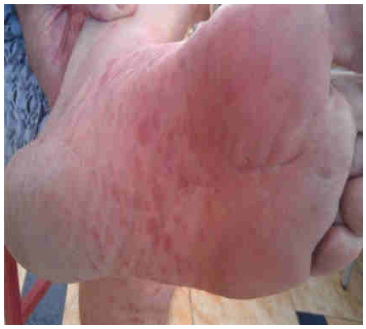

Fig.3.2: Patient 3. Papul squame on the soles

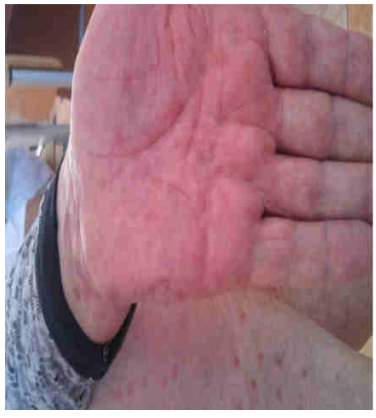

Fig.3.3: Patient 3.Papul squame on the palms.

Patient 4

The 4rth case is a 58 year old man with maculo-papular-fine scaly elements distributed all over the body (Fig. 4a). The lesions were more prominent in the abdominal and inguinal area. They were characterized by fine scales and violaceous color.At the begining was thought to be Pasoriasis guttata

The lesions were also present at the palmo-plantar area (Fig. 4c). No pruritus present. The patient reported the presence of a lesion at glans penis that preceded the appearance of cutaneous lesions by 10 days. The lesion persisted and is the only pruritic one. Syphilis was suspected therefore the required serologic testing was positive for RPR, VDRL and TPHA.

The patient was diagnosed with primary-secondary syphilis due to the persistence of the primary ulcer and the appearance of secondary syphilis lesions in the presence of the primary element. He was treated with Penicillin G 1.2 million U/ day for 14 days and prednisolone 25mg to prevent Jarisch- Herxheimer reaction.

Fig.4: Patient 4 .Erytheme, papul, squame on the abdomen.

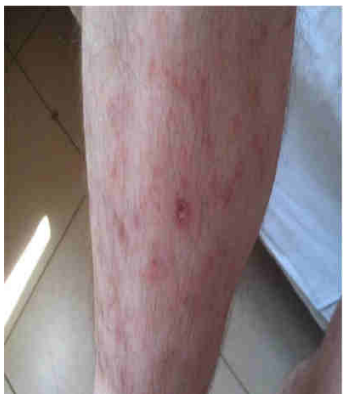

Fig.4.2: Patient 4.Erytheme, papul, squame on the legs.

Patient 5

The fifth case is a 62 year old woman who presented with erythematous macular lesions presented on the upper part of

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the body . RPR resulted negative, MHA- TP was positive and lichen planus was excluded.

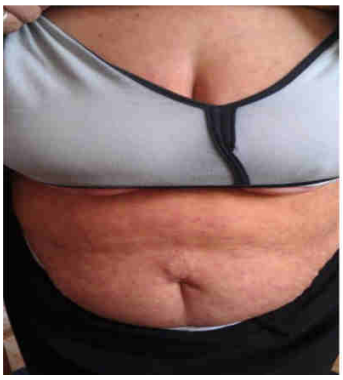

Fig.5: Papul squamous lesions on the abdomen.

III. DISCUSSION

Syphilis is characterized not only for evolving in distinct clinical stages, but also for having the ability to mimic a wide variety of diseases, in each of its phases.

In primary syphilis, the lesion appears on average 21 days after the infection. Localized erythema develops at the site of inoculation, which evolves into hardened and painless papules. Classically, after the surface necrosis, the typical well-circumscribed ulceration develops, with hardened borders and clear base – the chancre – associated with regional adenopathy [2]. Chancres must always be included in the differential diagnosis of any genital ulcer [1]. Primary syphilis, however, may present atypical morphology, location and symptoms, causing diagnostic difficulties, which results in only 30–40% of patients being diagnosed in the primary stage [3].

Extragenital chancres can occur in any mucocutaneous surface exposed to the infection, but are more common in the oral cavity and anal region [3]. Any ulcerated nodular lesion associated to lymph adenopathy should lead to the suspicion of primary syphilis. Differential diagnosis must be made with other infections, including tularemia; cat-scratch disease; sporotrichosis; mycobacteriosis; leishmaniasis and staphylococcal lymphangitis; and with granulomatous diseases and neoplasms with nodal metastasis. In the anal region, it is rarely restricted only to a nodular hardening and can be accompanied by fissures, which leads to confusion with hemorrhoids, anal fissures or even neoplasms [1]. Features vary according to the number of inoculated spirochetes, concomitant use of antibiotics, presence of co-infections, and the patient's immune state [1, 4].

The secondary stage results from the hematogenous and lymphatic dissemination and multiplication of the microorganism in different tissues. Recurring activity is characteristic of the disease with systemic and mucocutaneous manifestations [2]. Not all patients present the classic signs and symptoms. These may be subtle, transient and pass unnoticed; or so severe as to require hospitalization [5]. However, over 90% of patients present rash, which is almost always characteristic [4]. At the beginning, there is a macular rash with discrete pink, non-scaling, oval lesions – the syphilitic roseola –, predominantly on the trunk and upper flexor areas of limbs. Then, the lesions may develop into a papular-macular, papular-desquamative, lenticular, , nodular, annular, follicular, pustular or impetiginous aspect [5]. They can be generalized or grouped and located at precise spots [1]. Secondary syphilis polymorphism depends entirely on the intensity of the inflammatory infiltrate, level of cutaneous vascular involvement and the resulting ischemia [6].

When papular lesions are pruritic and lichenoid, it may be difficult to differentiate from lichen planus [7]. Annular lesions may also resemble annular granuloma, pityriasis rosea and dermatophytosis [8]. Where there is a hyper keratotic component, the resulting lesions are indistinguishable from psoriasis [5, 8]. Hyperkeratotic plaques on the soles give the impression of calluses and, when desquamative, can mimic tinea pedis [1, 5]. The differential diagnosis of nodular syphilis includes systemic mycosis, Kaposi's sarcoma, bacillary angiomatosis, foreign body granuloma type, lymphoma, pseudolymphoma, leprosy, sarcoidosis, . Secondary syphilis with pustular lesions can also lead to the erroneous diagnosis of pustular acne [8, 9].

Mucosal involvement can be part of the condition, consisting mainly of mucous patches, pharyngitis and condyloma lata [5]. The latter may be confused with condyloma acuminata [8].

Completing the picture, general symptoms may occur and rarely hepatitis, periostitis, arthritis, gastritis, meningitis and uveitis [3].Finally, untreated syphilis evolves into a third form, very rare nowadays, with a variety of manifestations that occur months to years after the beginning of the infection. This stage is characterized by the presence of a small number of *Treponema*, but with high cellular immune reactivity against this agent. Microorganisms can invade different systems and lead to injury by a delayed type of hypersensitivity reaction [2].

IV. CONCLUSION

In conclusion, syphilis is a readily acquired venerial disease with various cutaneous manifestations, sometimes diffiult to

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be diagnosed.Therefore, proper diagnosis and treatment of syphilis can be a challenge for dermato- venerologists.Thus, it is of considerable importance that dermatologists be familiarized with the many manifestations of syphilis and start considering it more often among their diagnostic hypotheses.

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SUMMARY

Syphilis is an infectious disease with Treponema Pallidum being its causative agent. When not treated it can pass through 4 stages: primary, secondary, latent and tertiary.

Syphilis has a broad spectrum of skin and mucosal manifestations and can imitate many other skin disease, hence the name “The great Imitator”. The number of patients infected with syphilis has declined dramatically after penicillin invention.

Albania has not had a significant number of cases but eruptions has been seen time after time.

we describe 5 cases of suspected syphilis presented at our clinic which mimic different skin diseases.The first case who presented ulceration at labias majora and an ulcer at oral mucosa,which had been present since the 2nd month of gestation and was confirmed as Morbus Behcet. The second case with a genital populo-nodular lesion, red and indurated, located on glans penis was diagnosed with primary syphilis and differentiate with genital herpes, the third one with small papulo-squamous elements distributed all over the body was differencated with Ricketsiae infection and confirmed as Secondary Syphilis. The 4rth case maculo- papulo-squamous elements distributed all over the body was differencated with psoriasis guttata, and confirmed as secondary syphilis. The 5-th case also with papulosquamous lesions all over the body was differenciate with lichen planus and after positiv MHA- TP the diagnosis of secondary syphilis was confirmed.

Diagnosis and treatment of syphilis can be a challenge for dermato- venerologists. Dermatologists have to be familiarized with the many manifestations of syphilis and start considering it more often among their diagnostic hypotheses.