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Case Report

Pityriasis lichenoides chronica

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Abstract Pityriasis lichenoides (PL) is defined as a skin disorder with an unclear etiology that mostly affects children and adolescents. Pityriasis lichenoides chronica (PLC) is the chronic form, characterized by recurrent collections of scaly erythematous papules that spontaneously disappear over weeks, months or years. Here we report a case of a male, who presented with the main complaint of partially brownish red nodules that were scaly and brown-black spots, without itching, all over the body, present over the past 2 years. The nodules extend to the stomach area, both arms, both legs and finally to almost all parts of the body. The patient was treated with 500 mg erythromycin tablets four times a day and 0.25% desoximethasone ointment which was applied twice a day. Pityriasis lichenoides chronica is a skin condition with unknown etiology that appears as scaly erythematous papules that are easily detached, recurrent and can disappear spontaneously for several weeks, months to years. A gold standard therapy for PL is not yet available and is still a future challenge.

Key words
Pityriasis lichenoides; Pityriasis lichenoides chronica; Erythromycin.

Introduction

Pityriasis lichenoides (PL) is defined as a skin disorder with an unclear etiology that mostly affects children and adolescents. Pityriasis lichenoides has a spectrum of acute and chronic disease types; pityriasis lichenoides et varioliformis acuta (PLEVA), pityriasis lichenoides chronica (PLC) and the most severe variant known as febrile ulceronecrotic Mucha-Habermann disease (FUMHD).[1–4] Pityriasis lichenoides chronica as the chronic type of pityriasis lichenoides is characterized by recurring bouts of scaly erythematous papules that spontaneously resolve over weeks to months.[1] Some of the precipitating factors reported, are astemizole, oral contraceptives, chemotherapeutic agents, infectious triggers (particularly viruses) and herbs.[5] Epidemiological studies indicate that PL can impact all racial and ethnic groups worldwide.[6] Pityriasis lichenoides affects people of all ages, however it is more prevalent in children and adolescents. Males suffer more often from PL where the prevalence is 1.5:1 to 3:1 in PLC.[1,7]

Making the diagnosis of a case of OT is a challenge in itself. Pityriasis lichenoides is often a clinical diagnosis, but the typical histopathological picture confirms the diagnosis.[8] The management of PL follows the spectrum of on-going disease. Topical corticosteroids and antihistamines are given to treat pruritus symptoms that may be experienced by the patient, but do not affect the course of the disease. Tetracyclines and erythromycin have both been used successfully to treat PL lesions. Phototherapy has also a promising treatment option.[6]

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Figure 1 Clinical appearance of the patient on first visit.

Case Report

A 28 years old, unmarried man, Batak ethnicity, employee, came for treatment at the Dermatology and Venereology Polyclinic, University of North Sumatra Hospital on March 16 2022. The patients had the main complaint of red, partly brown, scaly rashes and brown spots blackish without itching all over the body, present over the since the last 2 years. Two years ago, red, scaly rashes appeared which were occasionally accompanied by itching on the back and chest. One year ago, red nodules without itching appeared more and more and expanded to the stomach area, both arms, both legs and finally to almost all parts of the body. In the last two months, complaints spread to both arms and there were more and more of them, as a result, the patient was embarrassed to wear short sleeves. At this point, the patient decided to seek treatment. The patient works as a private employee. History of exposure to allergens and irritants was denied. None of the family members had the same complaints as the patient.

On physical examination, the general condition was good, looked mildly ill, compos mentis awareness, body temperature 36.8°C, blood pressure 120/70 mmHg, pulse 78x/minute, respiratory rate 18x/minute, body weight 80 kg, height 167 cm. Dermatological examination found erythematous papules, hyperpigmented macules, multiple, lenticular milier size, circumscript, generalized **(Figure 1)**.

Based on anamnesis and dermatological examination, the patient was diagnosed with Pityriasis lichenoides chronica, psoriasis gutata and prurigo nodularis. The patient's provisional diagnosis was pityriasis lichenoides chronica. The patient was given treatment in the form of erythromycin 500 mg every 6 hours, desoximethasone ointment 0.25% applied twice a day on red and black rashes for 7 days. He was also advised to use a moisturizer twice a day after bathing in the morning and evening and to come for control one week later.

A biopsy was performed on the rash from the brachial region and then histopathological examination was carried out. The results of microscopic histopathological examination found stratified squamous epithelium that experienced hyperkeratosis and acanthosis with nuclear morphology within normal limits, cells with perinuclear hallo (coilocytes) were found. In the epidermal and dermoepidermal junction layers, red blood cell infiltration and lymphocytic inflammatory cell infiltration were found. Blood vessels dilatation and congestion. The conclusion of histopathological examination supported pityriasis lichenoides **(Figure 2).**

At the second visit, after 2 weeks of treatment, the patient admitted that no new lesions had

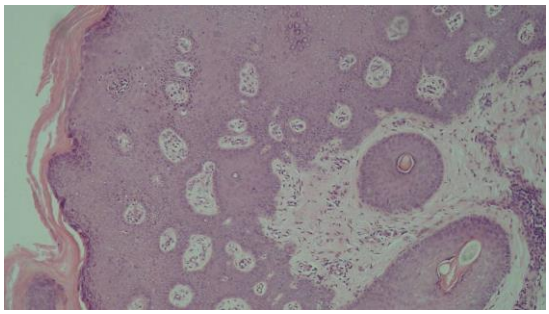

Figure 2 The result of histopathological examination.

appeared, although there had been no significant changes in the patient's skin lesions. According to the history, clinical findings along with histopathological examination, PLC was the working diagnosis for this patient. On dermatological examination, there were scaly erythematous papules, hyperpigmented macules, multiple, lenticular millier size, circumscript, generalized **(Figure 3).** The previous treatment was continued, namely erythromycin 500 mg every 6 hours, desoximethasone 0.25% ointment applied twice a day on red and black rashes for 7 days. Patients was also advised to use a moisturizer twice a day after bathing in the morning and evening.

The patient, despite being advised to do so, he did not come back. The prognosis for this patient is relatively good.

Discussion

Pityriasis lichenoides is divided into several spectrums of inflammatory skin diseases, namely PLEVA, PLC and FUMHD. Pityriasis lichenoides chronica usually manifest as easily detached, recurrent scaly erythematous papules that spontaneously disappear over weeks, months to years.[9-11] The etiopathogenesis of PL is not clearly understood. There are three main etiopathogenesis theories: (i) an inflammatory immune response elicited by drug or infection (ii) T-cell dyscrasia related inflammation and (iii) immune complex-mediated hypersensitivity vasculitis. The third theory may be relevant with the development of vascular and epidermal damage.[2]

A variety of potential infectious agents have been summarized in the literature, including toxoplasmosis, herpes simplex, parvovirus B19, cytomegalovirus, adenovirus, varicella-zoster virus, Epstein-Barr virus (EBV), HIV, measles and post-MMR vaccines, streptococcus, staphylococcus and mycoplasma infections.[12-14]

Although PL lesions can affect any part of the skin, including mucous membranes, they are most frequently seen on the trunk and proximal extremities. Postinflammatory hypopigmentation or hyperpigmentation can result from any type of PL. Chronic lesions may resolve with postinflammatory hypopigmentation, sometimes presenting as idiopathic guttate hypomelanosis. Scarring can be a result of chronic lesions. On the other hand, acute lesions cause more serious and deeper skin damage and frequently disappear causing varioliform (smallpox-like) scars.

Figure 3 After 7 days of treatment.

The polymorphic development of lesions at different phases of evolution is a defining feature of PL.[1] Small, firm lichenoid papules that are reddish-brown in color with diameter of 3-10 mm are the hallmark lesion of PLC. A notable diagnostic feature is the ability to gently scrape away adhered "mica-like" scales to reveal a lustrous brown surface. Over 3 or 4 weeks, papules appear and the scales separate spontaneously into pigmented macules, which gradually fade.[5]

The patient was diagnosed with PLC, guttate psoriasis and prurigo nodularis. The differential diagnosis of PL includes multiple papular eruptions, in particular the rash forming predominantly scaly papules which must be distinguished from PLC. Guttate psoriasis (Latin; Gutta “drop”) is a variant of psoriasis that manifest with small papules eruption (0.5-1.5 cm in diameter) on the proximal extremities and upper trunk. It usually affects young people, especially adolescents.[15] Prurigo nodularis is a chronic skin disorder classically seen as hyperkeratotic papules, plaques, or nodules usually found on the extensor extremities surface. It’s very itchy and may affect any age. The differential diagnosis can be ruled out based on the history and typical clinical picture.[1,6] Based on the history, dermatological and histopathological examination, the patient was diagnosed with PLC.

The blood test show unspecific abnormalities, like leukocytosis.[1] In this case, microscopic histopathological examination results support PL. Stratified squamous epithelium was found which experienced hyperkeratosis and acanthosis with nuclear morphology within normal limits, cells with perinuclear hallo (koilocytes) were found. In the epidermal and dermoepidermal junction layers, red blood cell infiltration and lymphocytic inflammatory cell infiltration were found.[3,5,16]

Dermoscopy can be used to diagnose PL swiftly in addition to histological investigation, which is the gold standard for the diagnosis of PL. it provides a quick, easy and objective diagnosis, thereby reducing the number of cases requiring a biopsy. The clinical management of OT is difficult because of its uncertain etiology. Treatment may not be necessary in cases with minimal disease activity. On the other hand, systemic therapy is recommended when the clinical course is more severe and the lesion is more acute.[9,17] Combination therapy, such as systemic antibiotics, topical corticosteroids and phototherapy may ultimately be the best option.[6]

The prognosis in this case is relatively good. Pityriasis lichenoides is recurrent and may heal within months or, more rarely, persist for years. Pityriasis lichenoides does not always react to treatment, and can recur if treatment is stopped.[1]

Conclusion

Pityriasis lichenoides is a papulosquama dermatosis that primarily affects children and adolescents. PL has a spectrum of disease types acute (PLEVA), chronic (PLC), to the most severe variant (FUMHD). Careful history, dermatologic examination and histopathological investigation are important to rule out the differential diagnosis. Although acute OT is generally a self-limiting disease, treatment is necessary to control signs and symptoms, and is a cosmetic nuisance that often impairs the patient's quality of life.

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Authors' contribution

AYA: Identification and management of the case, manuscript writing, final approval of the version to be published.

DAD: Diagnosis and management of the case, critical review, final approval of the version to be published.

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