Pityriasis lichenoides chronica: case reports – the role of infectious agents?

Pityriasis lichenoides chronica: opis przypadków – rola czynników infekcyjnych?

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ABSTRACT

Introduction. Pityriasis lichenoides chronica (PLC), which is a benign eruption with lymphocytic infiltrates of the skin, presents as a persistent, erythematous, papular eruption with scale. Patients may have guttate, hypopigmented macules with scale in addition to papules. It is related histopathologically to pityriasis lichenoides et varioliformis acuta (PLEVA), which presents as a recurrent papulonecrotic eruption. The PLC is a cutaneous disease of unknown etiology that most commonly affects children and young adults. The highly variable presentation of this condition often poses a diagnostic challenge.

Objective. Presentation of two adults with PLC probably induced by infectious agents.

Case reports. A woman presented with scaly, pruritic, erythematous-to-brown flattened papules, which varied in size from 3 mm to 1 cm, on the trunk and extremities, being first diagnosed as guttate psoriasis. A man sought medical advice for a disseminated eruption on the trunk and extremities, observed for 2 months before the consultation. He was in a good medical state, with no comorbidities and no medication. He complained of discrete pruritus and urethral discharge for many days.

Conclusions. Pityriasis lichenoides may have arisen secondarily to these infections or there were two simultaneous diseases. Further studies must elucidate the role of infectious agents in this pathology.

STRESZCZENIE

Wprowadzenie. *Pityriasis lichenoides chronica* (PLC), która jest łagodną osutką z obecnością nacieków limfocytarnych w skórze, manifestuje się jako długo utrzymujące się rumieniowo-grudkowe wykwity z obecnym złuszczaniem. Oprócz grudek można stwierdzić odbarwione, złuszczające się plamki. Histopatologicznie PLC jest powiązana z *pityriasis lichenoides et varioliformis acuta* (PLEVA), która objawia się jako nawracające zmiany grudkowo-martwicze. *Pityriasis lichenoides chronica* jest chorobą skóry o nieznanej etiologii, najczęściej występującą u dzieci i młodych dorosłych. Wysoce zmienny obraz choroby często jest przyczyną trudności diagnostycznych.

Cel pracy. Przedstawienie dwóch przypadków PLC u dorosłych, które najprawdopodobniej były następstwem infekcji.

Opis przypadków. U kobiety zmiany polegały na obecności złuszczających się, rumieniowo-przebarwionych, płaskich grudek o wielkości od 3 mm do 1 cm z towarzyszącym świądem. Wykwity zlokalizowane były na tułowiu i kończynach i początkowo rozpoznawane były jako łuszczyca wysiewna. U mężczyzny stwierdzono rozsiane zmiany skórne na tułowiu i kończynach utrzymujące się od 2 miesięcy. Pacjent był w dobrym stanie ogólnym i nie przyjmował żadnych leków. Uskarżał się jedynie na niewielki świąd i od wielu dni na wyciek z cewki moczowej.

Wnioski. *Pityriasis lichenoides* mogło być następstwem infekcji lub niezależną chorobą. W celu wyjaśnienia roli czynników infekcyjnych niezbędne są dalsze badania.

INTRODUCTION

Pityriasis lichenoides chronica (PLC), which is a benign eruption with lymphocytic infiltrates of the skin, presents as a persistent, erythematous, papular eruption with scale. Patients may have guttate, hypopigmented macules with scale in addition to papules [1]. It is related histopathologically to pityriasis lichenoides et varioliformis acuta (PLEVA), which presents as a recurrent papulonecrotic eruption.

The PLC is a cutaneous disease of unknown etiology that most commonly affects children and young adults. The highly variable presentation of this condition often poses a diagnostic challenge.

OBJECTIVE

We present two cases of pityriasis lichenoides chronica probably induced by group A β-hemolytic *Streptococcus* in one case and by *Trichomonas vaginalis* in the other.

CASE REPORTS

Patient 1

A 45-year-old woman presented with scaly, pruritic, erythematous-to-brown flattened papules, which varied in size from 3 mm to 1 cm, on the trunk and

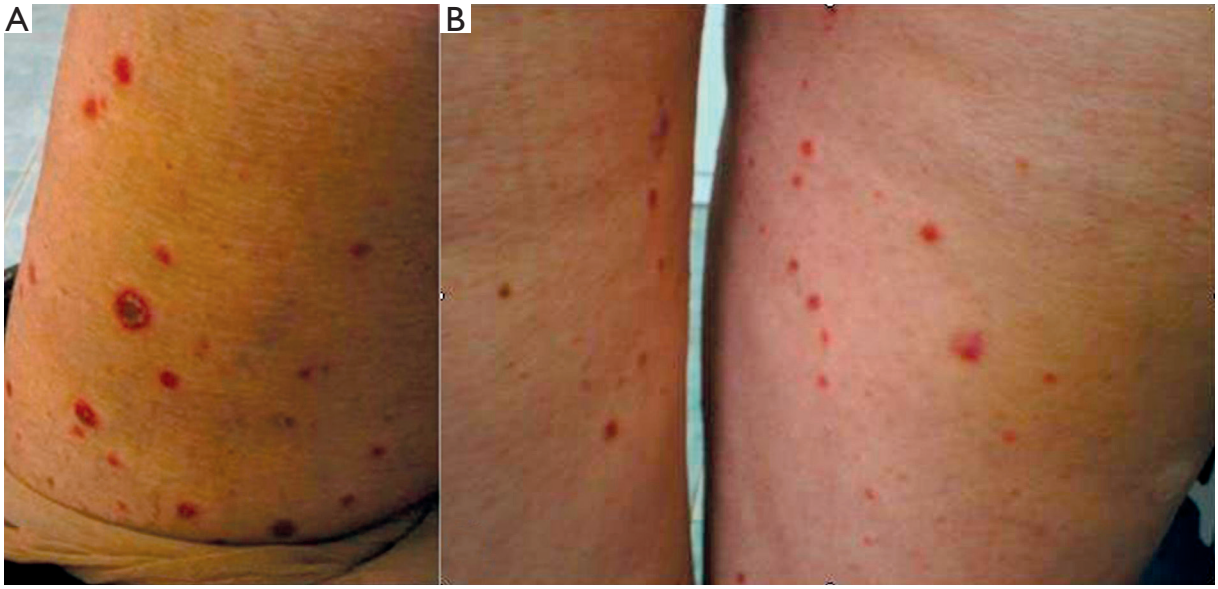

Figure 1. **A** – Erythematous papules on the lower leg with centrally adherent micaceous scales. **B** – Papules at different clinical stages of development on the extremities

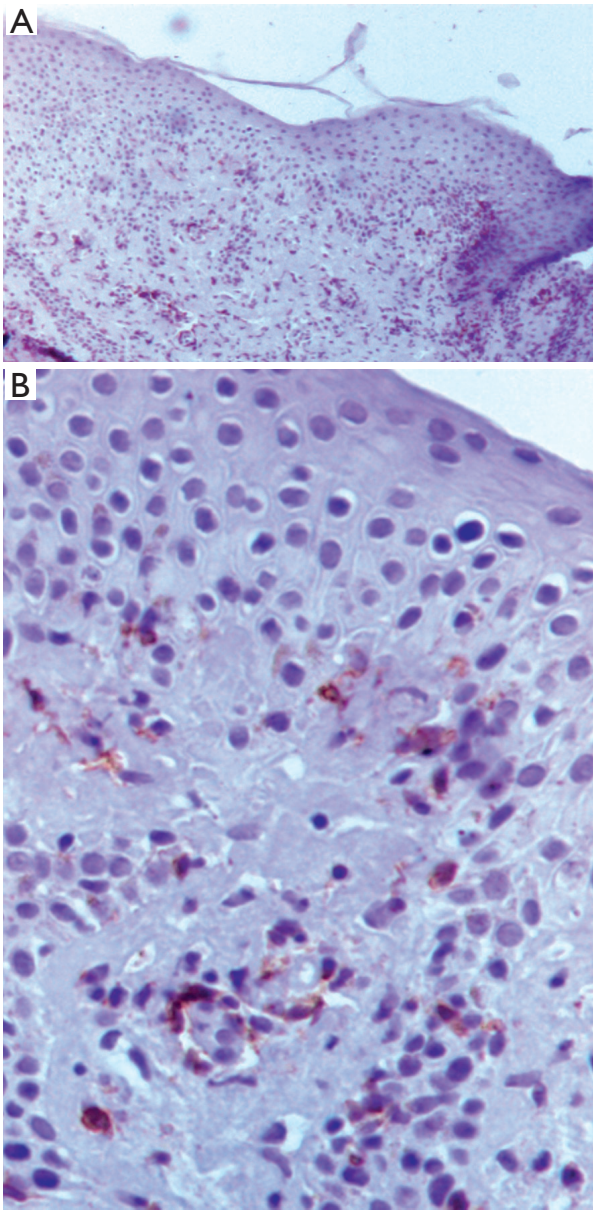

Figure 2. Histopathological examination. Dermis with perivascular infiltrate composed of mononuclear cells; the infiltrate does not invade the walls of the vessels and there is no extravasation of red cells. **A** – H + E staining, **B** – CD 45 positive

extremities, being first diagnosed as guttate psoriasis (Figs. 1 A and B). The close view of the lesions showed fine centrally attached mica-like shiny scales, which raised the suspicion of pityriasis lichenoides chronica.

Laboratory findings were within normal limits, with the exception of the evidence of group A β-hemolytic *Streptococcus* in throat swab cultures and antistreptolysin-O (ASO) antibody titers over normal value (500 UI/ml).

The histopathological report confirmed the suspicion of pityriasis lichenoides chronica (Figs. 2 A and B).

Immunohistochemistry: CD 20 was negative in the inflammatory infiltrate and CD 45 was strongly positive.

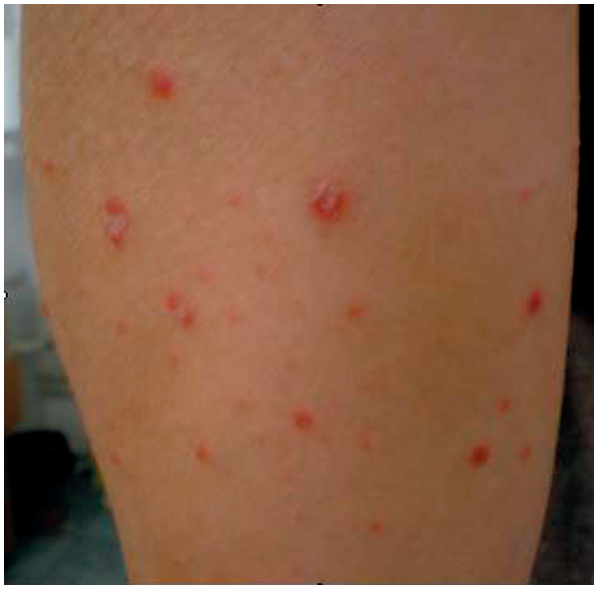

Figure 3. Pink papules on the proximal part of extremities with the easily detached scales

Antibiotic therapy was started, with macrolides for 10 days, followed by 4 administration of dibenzylethylenediamine-dipenicillin G 1.2 million/week and phototherapy (narrow-band UVB) for 2 weeks.

The evolution was favorable, with persistent minimal residual hyperpigmentations and discrete xerosis. The laboratory investigations returned to normal values within 1 month and the patient was not followed up.

Patient 2

A 28-year-old male patient sought medical advice for a disseminated eruption on the trunk and extremities, observed 2 months before the consultation (Fig. 3). He was in a good medical state, with no comorbidities and no medication. He complained of discrete pruritus and urethral discharge for many days.

The urethral smear evidenced *Trichomonas vaginalis* (Giemsa-stained smears and culture).

A punch biopsy was taken from a fresh papule from the left limb and the suspicion of pityriasis lichenoides chronica was kept in mind.

Based on clinical and histopathological results (Figs. 4 A and B), a diagnosis of pityriasis lichenoides chronica was established and treatment with topical steroids class II and tinidazole 1 g daily for 5 days orally was recommended. The skin lesions disappeared in approximately one month, with no recurrences.

DISCUSSION

Pityriasis lichenoides is a disease of unknown origin. Older studies supported an immune complex pathogenesis, whereas more recent studies suggest

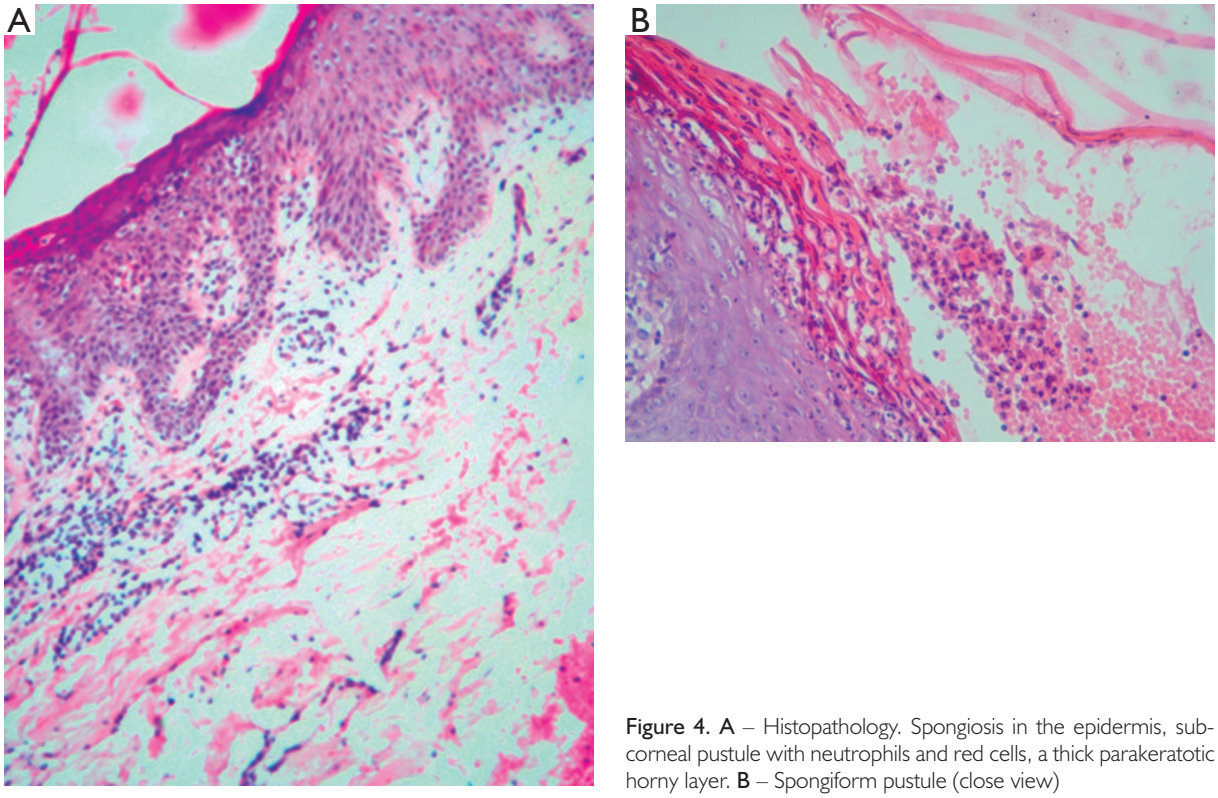

Figure 4. A – Histopathology. Spongiosis in the epidermis, subcorneal pustule with neutrophils and red cells, a thick parakeratotic horny layer. **B** – Spongiform pustule (close view)

that it is a lymphoproliferative disorder, probably triggered by an antigenic stimulus, such as a virus or other infectious agent.

The pathognomonic lesion is an erythematous papule that develops a reddish brown hue and a centrally adherent micaceous scale, that can easily be detached, to reveal a shiny, pinkish brown surface. The papule spontaneously flattens and regresses over a period of weeks. It often leaves a hyper- or hypo-pigmented macule [2, 3]. The entire course of an eruption can take several years and, very often, lesions may be present in all stages of development [4]. Pityriasis lichenoides chronica usually occurs on the trunk and proximal parts of the extremities, but acral and segmental distributions have also been described, the lesions being usually asymptomatic.

Infectious agents have long been suspected as etiologic factors in this disease and many reports from the literature link pityriasis lichenoides chronica with various pathogens in genetically susceptible individuals [5]: HIV, varicella-zoster virus, Epstein-Barr virus (EBV), cytomegalovirus [6], parvovirus B19 [7], adenovirus, *Staphylococcus*, *Streptococcus* [8], herpes virus [9], *Mycoplasma*, chronic hepatitis C virus [10] and *Toxoplasma*. The PLC in association with human immunodeficiency virus infection has been reported and improves with the rise in CD4 count. The EBV has been associated with PLEVA outbreaks, and PLC was associated with a fulminant case of infectious mononucleosis, which resolved with resolution of the EBV and treatment with narrow-band ultraviolet B phototherapy. Toxoplasma was reported in PLC in 1972 in 6 of 11 patients. Other infectious agents that have been implicated as causing PLC include adenovirus and parvovirus B19. Niemczyk *et al.* described a case of a child with a history of previous infection, in which pneumococci and *Haemophilus influenzae* were isolated [11].

The evidence that bacterial infection could be contributory to the pathogenesis of pityriasis lichenoides chronica is suggested by the successful use of antibiotics such as erythromycin and tetracycline. Piamphongsant in his study on 13 patients with PLC could isolate coagulase-positive staphylococci in 4 patients in their throat swab cultures [12]. Other bacteria including coagulase-negative staphylococci, B streptococci, *Streptococcus pneumoniae* and *Pseudomonas aeruginosa* were also isolated in other patients. Most of his patients showed a good clinical response to tetracycline therapy.

We have described two cases of pityriasis lichenoides chronica with typical lesions, induced (or triggered) by group A β-hemolytic *Streptococcus* and *Trichomonas vaginalis*.

Pityriasis lichenoides may have arisen secondarily to these infectious or there were two simultaneous diseases. Further studies must elucidate the role of infectious agents in this pathology.

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