Lichen sclerosus mimicking Bowen's disease

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Abstract

Lichen sclerosus (LS) is a chronic inflammatory skin disease of unclear etiology in which lymphocytes play an important role. There is some evidence that LS is an autoimmune disease. The lesions are observed on mucosa areas in many cases in women genital region and on the skin of any part of the body. We report a case of a 54-year-old man. The single, inflamed lesion was situated in the scapula area of the back. It was clinically diagnosed as Bowen's disease. A significant improvement was observed after treatment with clobederm ointment.

Key words: lichen sclerosus, Bowen's disease.

Introduction

Lichen sclerosus (LS), also known as lichen sclerosus et atrophicus, is a chronic inflammatory skin disease of unclear etiology in which lymphocytes play an important role [1]. There is some evidence that LS is an autoimmune disease [2, 3]. Autoantibodies of IgG to extracellular matrix protein 1 were identified [4]. In some patients, there was an increased prevalence of autoimmune diseases in family members. Moreover, causes of infections may play a role. There is some information about *Borrelia burgdorferi* infection as a starting point of the lesions of LS. Thyroid diseases may also be important in some cases. Probably the real pathogenesis is multifactorial [5]. Lichen sclerosus is often connected with vitiligo, which may trigger an autoimmune reaction to melanocytes [6].

First symptom s can appear both in children and adults [7]. The lesions are observed on mucosa areas (anogenital region, oral cavity) and on the skin of any part of the body in an isolated or disseminated form. Women are reported to be affected nearly 10 times more often than men. Clinical features are characterized by whitish porcelain-like sclerotic lesions. The typical skin lesions are usually asymptomatic and benign. In contrast, the lesions in the anogenital region are itchy, burning and may sometimes transform into squamous cell carcinoma [3].

Aim

We want to present a non-typical case of lichen sclerosus observed as an inflammatory lesion well demarcated from the surrounding skin mimicking Bowen's disease.

Case report

The report presents a case of a 54-year-old man. The patient's medical and family history of skin diseases was negative. The physical examination, routine blood panels, antinuclear antibodies, thyroid antibodies, hepatitis and borrelia antibody tests were normal. The single, gradually enlarging, inflamed reddish-white, well-demarcated lesion, with an irregular border and scaling surface, 3 cm × 6 cm in diameter. It was situated in the scapula area of the back. It was clinically diagnosed as Bowen's disease because of gradually enlarging, well-demarcated erythematous plaque with an irregular border and scaly surface (Figure 1). The plaque was gradually enlarging from the beginning.

To our surprise, the biopsy showed atrophic changes of the epidermis with hyperkeratosis and complete smoothing in the dermal-epidermis junction. The layer of homogenous tissue under the epidermis varied in the thickness and subepidermal bullas were observed. Moderate infiltration of lymphocytes was seen in the dermis.

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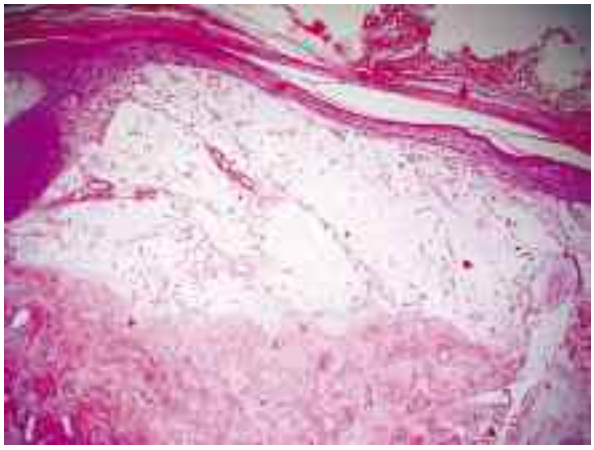

Figure 1. Bullous lichen sclerosus (H + E, OM 250 ×)

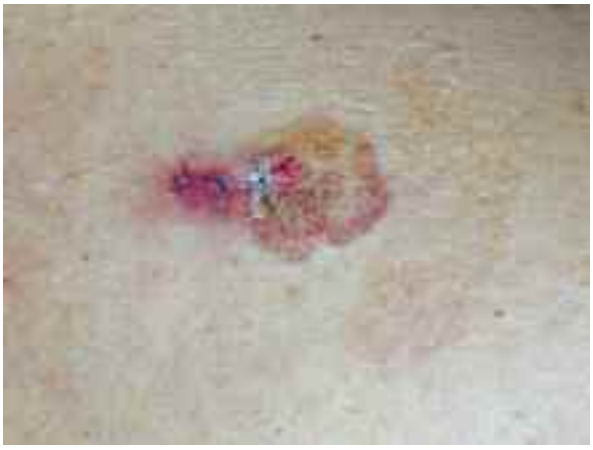

Figure 2. Bullous lichen sclerosus on the skin of the back

A histopathological examination showed a bullous variant of LS (Figure 2). The patient gave his written consent.

Discussion

Lichen sclerosus most commonly affects the anogenital region. In the lesions of this localization the cancerogenesis process may develop. It may occur when human papillomavirus infection is present at the same time. Extragenital lesions do not develop into malignancy [5, 6].

Extragenital lichen sclerosus of childhood presenting as erythematous patches was presented by Stavrianeas *et al.* [8]. Especially the existence of bullous lesions in extragenital LS is rare and has been reported infrequently [9]. Extragenital bullous lesions are generally asymptomatic and localized. Only incidentally bullous and hemorrhagic LS involve the scalp [10]. Kowalewski *et al.* showed alterations of the basement membrane zone in bullous and non-bullous variants of extragenital LS. In bullous LS, a blister formed below the lamina [11]. Approximately 20% of affected patients have extragenital lesions that present as small ivory, shiny round papules that become atrophic [10]. The lesions may also be a result of radiotherapy [12]. The mechanism of blister formation is unclear. The process of inflammation is suggested [13].

In differential diagnosis psoriasis should be considered because of well-demarcated and scaly lesions. The present case also needed to be distinguished from localized scleroderma because clinical features could be confused with morphea. The presence of bullae in LS is more frequent than in morphea and has a hemorrhagic component [13]. In many cases there is a close relationship between localized scleroderma and LS. Some authors suggest there are different manifestations of the same disease [14, 15].

The diagnosis of lymphocytoma may be considered when a well-demarcated nodular lesion appears after a tick bite. In our patient a serological test did not confirm *Borrelia burgdorferi* infection.

We showed one of the rare clinical pictures of LS which suggested Bowen's disease. A histopathological examination is crucial in confirming the diagnosis. In LS the edema and loss of elastic tissue is characteristic.

Topical treatment of LS is often unsatisfactory [16]. Nowadays topical steroids and tacrolimus are commonly used [17]. We applied clobederm ointment twice a day for a month and then once daily for 2 months. A significant improvement was observed. The lesion disappeared in most of its part.

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