A Case of Neurodermitis Circumscripta with Generalized Pruritus

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ABSTRACT

Neurodermitis Circumscripta also known as Lichen Simplex Chronicus is a chronic inflammation of the skin characterized by lichenification of the skin as a result of excessive scratching. We hereby report this in a 70 year old female who presented with complaints of itching all over the body and lesions on the skin of right leg since two months. She is a known case of bronchial asthma and hypertension. After proper history taking and investigations she was diagnosed as Neurodermitis Circumscripta with generalized Pruritus. She was treated with intralesional steroids, oral Doxepin and antibiotics. Complete remission of symptoms occurred in 3 months.

KEYWORDS: Pruritus, Intralesional Steroids, Dermatitis, Lesions, Lichenification.

INTRODUCTION

Neurodermatitis Circumscripta also commonly called as Lichen Simplex Chronicus(LSC) is a chronic skin disease characterized by small, round itchy spots that thicken and become leathery, which occur as result of constant scratching or rubbing of skin[1]. Itching is the most predominant symptom and provokes a compulsive desire to scratch results in development of lichenified plaques which provoke further itching, giving rise to a chronic skin condition caused by this itching-scratching cycle[2]. Common sites are nape of neck, ankles, anogenital region and scalp. Effective management of skin conditions involves correction of the associated emotional factors[3].

CASE REPORT

The present case report is about a 70-year-old female patient with low socioeconomic status who presented to dermatology out-patient department with itching all over the body and lesions on the skin of right leg since two months. She is a known case of bronchial asthma and hypertension. There was no history of any local applications or any drug intake. On examination, she was hyperpigmented, itching all over the body since 3 months and scaly plaques were found all over the skin and lateral aspects of right leg (figure 1). Routine blood and urine investigations, blood sugar, liver, renal and thyroid functions were normal. Skin biopsy revealed hyperkeratosis, hypergranulosis, acanthosis, and thickening of collagen in dermis suggesting Neurodermitis Circumscripta with generalized Pruritus. Patient was given intralesional injection of Triamcinolone acetonide 2.5 mg/ml weekly for 4 weeks along with Doxepin hydrochloride 10 mg, Levocitrizine 5mg at night and Augmentin 625mg TID for one week. There was marked reduction in itching in the 1st week and complete regrowth of normal skin at end of 4 weeks. Doxepin was stopped after 3 months. Patient came for follow-up monthly thereafter for 6 months with no remission.
DISCUSSION
Neurodermatitis Circumscripta is thickening of the skin with variable scaling that arises secondary to repetitive scratching or rubbing. Neurodermitis Circumscripta is not a primary process. Rather, a person senses pruritus in a specific area of skin and causes mechanical trauma to the point of lichenification [4]. The peak incidence of Neurodermitis Circumscripta is between 35 and 50 years of age and the condition is more common in women, with a female-to-male ratio of 2:1. It can present in either gender and at any age, including during childhood, when it more commonly occurs in boys [5]. It occurs in people with anxiety disorders and nonspecific emotional stress as well as in patients with any type of chronic dermatitis [6].

Itch scratch cycle is paroxysmal and patient scratches until it pains or bleeding occurs. This self-perpetuating mechanism is the main pathogenesis of Neurodermitis Circumscripta [7]. Insect bites, scars (eg, traumatic, postherpetic/zoster), acne keloidalis nuchae, xerosis, venous insufficiency, and atopic eczema are common factors [8]. Etiology of Neurodermatitis Circumscripta results in single or multiple, slightly erythematos, scaly, well demarcated, hyperpigmented, lichenified, rough plaques, on any location that the patient can reach including the nape of the neck, extensor forearms and elbows, vulva or scrotum, upper medial thighs, knees, lower legs, and ankles [9]. Routine laboratory studies are of no diagnostic value. Diagnostic tests such as skin biopsy, patch testing, fungal culture, skin scrapings. Topical treatment modalities for Neurodermitis Circumscripta with varying success are potent topical steroids, intralesional steroids [10], keratolytic agents such as Salicylic acid, Capsacin, Tacrolimus, Pimecrolimus and Cryotherapy. Systemic modalities of treatment include sedatives, antihistamines, tricyclic antidepressants and psychotherapy.

Transcutaneous electric nerve stimulation has been reported to be effective in reducing itch [11]. The patient in the case study provides many of the classic characteristics as Neurodermitis Circumscripta such as itching all over the body and lesions on the skin of the right leg. The goal of treatment is to stop the itch-scratch-itch cycle and allow the skin to heal. Topical steroids like Halobetasol ointment, for two weeks, are the current treatment of choice as they decrease inflammation and itch while concurrently softening the hyperkeratosis [12]. If the patient is not responding to topical therapy then Oral steroids like Prednisone 40 mg PO for 5 days, then 20 mg PO for 10 days can be given. IM Triamcinolone 1 mg/kg (up to 80 mg total) can be used instead of Prednisone for severe, itchy or extensive Neurodermitis Circumscripta. If it is an infection then antibiotics like Cefadroxil 500 mg for 7 days, Fluconazole 150 mg PO for 2 weeks. Sedatives like Doxepin or Hydroxyzine 10 to 75 mg for night time itching [13].

CONCLUSION
Neurodermatitis Circumscripta is a chronic inflammatory skin disease characterized by paroxysms of pruritus and the development of lichenoid changes of the skin. The disease occurs from repeated scratching or rubbing, either as a habit or in response to stress. There is no underlying dermatological disorder. Internal treatment is the main treatment for the disseminated type of Neurodermitis Circumscripta, where as external treatment is suggested for the localized type. This case is reported for the importance of differential diagnosis in cases of pruritis with dermatitis in individuals with emotional factors such as emotional depression, nervous tension, irritability, and stress.

REFERENCES


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