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Bullous cutaneous larva migrans: an atypical case of creeping eruption

Larva migrans Cutânea Bolhosa: Um caso atípico de erupção serpiginosa

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ABSTRACT

Cutaneous larva migrans is a hookworm-related infestation caused by zoonotic nematode larvae such as the *Ancylostoma braziliense*. Herein a case of a 2-year-old child complaining initially of painfull blisters on her left foot is report. The correct diagnosis was delayed and only confirmed when serpiginous, erythematous tracks and bullae were developed. Patient was treated with fexofenadine oral, topical thiabendazole and a cream with ketoconazole, betamethasone dipropionate and neomycin sulfate. The reported case assumes importance because of the atypical presentation of the disease as a case of bullous cutaneous larva migrans.

KEYWORDS: Ancylostoma; Hookworm Infections; Parasites.

RESUMO

A larva migrans cutânea é uma infecção relacionada aos vermes-gancho causada por larvas de nematoides zoonóticos como o *Ancylostoma braziliense*. Aqui é relatado o caso de uma criança de 2 anos com queixa inicial de bolhas dolorosas no pé esquerdo. O correto diagnóstico foi definido com atraso e foi apenas confirmado quando faixas serpiginosas e eritematosas, e bolhas foram desenvolvidas. A paciente foi tratada com fexofenadina oral, tiabendazol tópico e creme com formulação de cetoconazol, dipropionato de betametasona e sulfato de neomicina. O caso relatado assume importância devido à apresentação atípica da doença como um caso de larva migrans cutânea bolhosa.

PALAVRAS-CHAVE: Ancylostoma; Infecções por verme-gancho; Parasita.

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INTRODUÇÃO

Cutaneous larva migrans (CLM), also known as “creeping eruption”, is a parasitic infestation produced by epidermal migration of hookworm larvae[1]. The larva enters skin following exposure with contaminated faeces of infected animals, mainly domestic dogs or cats[2]. Solitary tracts involving feet, hands, back, legs, abdomen, buttocks and genitalia are usually encountered[3,4]. Clinically, it is characterized by an itchy, raised, erythematous, linear or serpentine eruption[2]. Occasionally, atypical presentations of CLM involves the development of blistering (Bullous cutaneous larva migrans – BCLM) and/or pustular (Pustular cutaneous larva migrans – PCLM) lesions[5]. Here a case of BCLM on a 2-year-old child is report.

CASE REPORT

A 2-year-old brazilian girl presented with a history of two painfull blisters on the plantar surface of the left foot (Figure 1A). One blister was located near over the metatarsophalangeal joint (Figure 1B) and one on medial midfoot (Figure 1C). The girl developed the lesions after walking barefoot on a farm in Guarujá, São Paulo, Brazil. Because the child has a history of allergic reaction to insect stings, her parents initially thought the lesions were an allergic episode due to mosquito bites. Four specialists examined the child before a final diagnosis was provided and the lesions began to visible heal. During all the process, no histopathological or laboratory examination was performed by any of the specialists which caused a delay on the initial diagnosis and treatment.

The first doctor, a general paediatrician, misdiagnosed the blisters as warts. Child’s parents did not accept the diagnosis and no treatment were initiated. After three days of the first medical consultation, a serpiginous, slightly elevated, erythematous tracks were revealed arising into dorsolateral foot of the child (Figure 1D). The lesions also progressed with formation of bullae with a clear serous fluid (Figure 1E).

The diagnosis of cutaneous larva migrans was established by a second doctor, an allergist, who examined the girl. The patient was immediately treated with fexofenadine oral (antihistamine) and topical thiabendazole (antihelmintic). But in the following days, the child was experience extremely pain due to enlargement of bullae.

A third doctor, a dermatologist, was consulted in order to verify if the bullae were infected. The doctor drained all bullae (Figures 1F-H) and prescribed a topical ointment of ketoconazole, betamethasone dipropionate and neomycin sulphate (anti-inflammatory and antibactericidal). The parents continued administrating both allergist and dermatologist indicated treatment. After 2 weeks, the lesions and eruptions regressed and healed completely (Figure 1I).

For a final opinion, the parents consulted a neglected tropical diseases specialist in order to guarantee that the disease was properly treated and would not reappear. The specialist confirmed the diagnosis as an atypical case of CLM called bullous cutaneous larva migrans developed due to a delay diagnosis and treatment along with child’s history of

allergic reaction.

Figures 1A-I. Clinical photograph of the evolution of a bullous cutaneous larva migrans case on a 2-year-old child.

FINAL CONSIDERATIONS

CLM is an endemic tropical disease caused mainly by the filariform strongyloid third-stage of *Ancylostoma caninum*, *Ancylostoma braziliensis* and *Uncinaria stenocephala*[6]. Skin manifestations of CLM are typically characterized by linear or snake-like, migratory eruptions, and may be pruritic, painless, or painful[5]. The swelling lesions caused by hookworm-related cutaneous larva migrans subcutaneous can be mistaken by herpes zoster, scabies, loiasis, myiasis, cercarial dermatitis (schistosomiasis), tinea corporis, contact dermatitis, and myasis. Hence, proper anamnestic information and clinical aspect of the creeping eruption allow to prevent diagnosis delay and to avoid aggressive or inadequate intervention[7].

Generally, anthelmintic treatment (as oral albendazole or ivermectin, and topical thiabendazole) can reduce the symptoms and abbreviate the extent of disease without any development of complications[2,5].

Intense and severe reactions and complications of creeping eruption are less common and are typified with the presence of pruritus, edema, bullous (BCLM), and papular (PCLM) eruptions. These atypical presentations can be triggered by an acute irritant or allergic contact dermatitis caused by topical medication applied on the lesions or caused by to unknown antigens release by larvae[5]. In rare cases, CLM's patients may have complications due to the spread of the infection through the bloodstream to the lungs (Loeffler's syndrome) or small intestine (Eosinophilic enteritis), and bacterial infections caused by scratching[8].

The case report presented here of a BCLM on a 2-year-old child is a rare complications of CLM and occurs only in 9–15% of all patients[6]. It highlights how the lack of expertise and proper clinical examination can led to an incorrect or delayed diagnosis and treatment which may result in a worsening of the patient's medical condition, especially in allergic patients.

Onsoi and colleagues[9] reported that a large percentage of misdiagnoses of common cutaneous diseases may be due to general pediatricians being undereducated in the field of dermatology. Therefore, accurate recognition and appropriate management of CLM should be emphasized for educating general paediatricians to minimize misdiagnoses, curb disease impact and avoid complications.

Additionally, publication of clinical case reporting uncommon topography and atypical presentation of CLM are fundamental and important elements in the medical literature field for being the primary source for identification and treatment of new, rare and/or unusual presentation of common cutaneous diseases.

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