Onychomadesis following Gianotti-Crosti Syndrome

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Abstract
Onychomadesis is asymptomatic separation of the nail plate from the nail matrix, beginning at its proximal end, possibly due to a temporary nail matrix arrest. Here we describe a 13-month-old girl with onychomadesis on her hands, following Gianotti-Crosti syndrome.

Introduction
Beau’s lines and onychomadesis fall along a spectrum of nail dystrophies that occur secondary to nail matrix arrest (NMA). Beau’s lines are transverse, band-like depressions extending from one lateral edge of the nail to the other [1]. Onychomadesis is considered an extreme form of Beau’s line with subsequent separation of the proximal nail plate from the nail bed [2].

Conditions that can cause NMA include: infections, severe systemic diseases, nutritional deficiencies, trauma, periungual dermatitis, chemotherapy, fever, and drug ingestion [2].

Here we describe a 13-month-old girl with onychomadesis on her hands, following Gianotti-Crosti syndrome.

Case report

A 13-month-old girl was referred for evaluation of a rash that had been present for five days. Past history revealed an episode of watery diarrhea and fever, treated symptomatically, two weeks before the onset of the skin lesions. The rash had begun on the cheeks and upper extremities and spread to affect the lower extremities.

Examination revealed an otherwise healthy, active child. Multiple erythematous papules were noted on her face, and on both upper and lower extremities (Figure 1). Several papulovesicles were also present on her gluteal region (Figure 2). There were no lesions on the palms and soles. No hepatosplenomegaly or lymphadenopathy was detected.

A diagnosis of Gianotti-Crosti syndrome was made and a causative role of a gastrointestinal viral infection was suggested. Routine hematology and serum chemistry revealed no abnormalities. Serology tests for hepatitis A, B, and C virus were negative. We did not perform additional bacteriological and virological tests. A complete regression of the skin lesions was seen after 6 weeks, during the regression of the skin rash, changes on her fingernails were noted.

The mother denied any recent trauma, unusual activities or drug exposure.

Upon examination, painless, palpable grooves were noted on the nails, on the middle and index finger of the right hand (Figure 3), as well as the thumb, middle and ring finger of her left hand (Figure 4).

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Key words: Gianotti-Crosti syndrome, nail matrix arrest, Beau’s lines, onychomadesis, proximal nail shedding

Received: January 18, 2016; Accepted: February 01, 2016; Published: February 05, 2016
Beau’s lines and onychomadesis show strong associations with viral infections in childhood. Hand, foot and mouth disease (HFMD), followed by onychomadesis was first reported in 2000 in 5 children in Chicago [5]. Isolated onychomadesis cases following HFMD have been described in the France [6], Spain [7] and also Finland [8]. More recently, varicella related cases have been observed [9,10].

It is unclear whether the NMA resulted from an inflammation spreading from skin lesions around the nails, or whether a viral infection had severe systemic impact on the general condition of the children. The detection of Coxackie virus in the shedded nail particle, following HFMD, suggests that the viral replication itself may directly damage the nail matrix [11].

In the present case, acute diarrhea and fever preceded GCS for 2 weeks, and onychomadesis for 5 weeks. Both can be considered as late manifestations of a viral gastrointestinal infection.

Although there was a suspicion of viral etiology of GCS and onychomadesis, we did not perform serological tests because the patient would not have any additional benefit from them. Nevertheless, an etiologic diagnosis may only be reached in less than half of the patients, even using a large range of microbiological investigations [12,13].

GCS and onychomadesis remains an enigmatic reaction to different agents, and both conditions can be regarded as a rare and late complication of a viral infection in young children.

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