Case Report

Blistering Distal Dactylitis Resembling a Finger Dipped in Milk Cream: An Uncommon Case Report

Ishwar Singh Dharmshaktu, Naveen Agarwal, Ganesh Singh Dharmshaktu
Department of Orthopaedics, Government Medical College, Haldwani, Uttarakhand, India

Abstract

Blistering distal dactylitis is an uncommon condition resulting from superficial skin infection, leading to bullous eruption in the distal phalanx. In rare instances, the extent of the lesion beyond classical presentation is reported. The most commonly described causative agent is *Staphylococcus aureus* and the condition has a good prognosis if diagnosed and managed early. We report a rare presentation of blistering distal dactylitis in the form of an extensive involvement of the affected finger with purulent bullous formation. The drainage of the pus and appropriate antibiotics led to the good outcome. The knowledge of the characteristic clinical picture of blistering distal dactylitis and its varied presentations shall help it diagnose early in routine clinics.

Keywords: Blistering dactylitis, bullae, child, hand, infection, *Staphylococcus aureus*

Introduction

Blistering distal dactylitis (BDD) is a localized infection usually affecting the distal fat pad of the fingers more commonly than the toes of young children or adolescents.[1] A superficial bulla of varying size with tenderness is noted in the distal part of the finger that very rarely extends toward the palm. Group A beta-hemolytic *Streptococcus* is the usual organism, but occasionally, *Staphylococcus aureus* or epidermidis is also reported.[2] Blistering involving a bigger area within the finger may be striking in its appearance and the knowledge of this entity is important for early diagnosis and management.

Case Report

A 5-year-old child was presented to us with a history of atraumatic episodes of pain and increased swelling in his left middle finger for 5 days. The complaint was initially neglected by parents for being a self-limiting condition only to consult when visibly stark swelling limited to the left index finger was noted overnight with creamy-white collection surrounding the digit [Figure 1]. On clinical evaluation, localized tenderness with encasement of the finger with purulent material was noted while distal neurovascular status was intact. There were no systemic comorbidities and the laboratory work was unremarkable except leukocytosis with neutrophilia. The aspiration under aseptic condition following informed consent was done to yield 8 mL of purulent exudate which also acted therapeutically with clinical improvement in the following days. The culture was positive for *S. aureus* and oral cephalexin as per the sensitivity reports was started for 2 weeks. Active range of motion exercises was encouraged throughout the treatment, leading to excellent outcomes.

Discussion

BDD is an uncommon but noteworthy infection that may have a good outcome in most cases but may present as a recurrent problem in few cases.[3] Nagging infection with methicillin-resistant *S. aureus* has also been reported with this condition making appropriate diagnosis critical for good outcome.[4] Many times, the swelling can have variable sizes and shapes. One report of the condition affecting proximal

Access this article online

Quick Response Code:

Website: www.matrixscimed.org

DOI: 10.4103/mtsm.mtsm_7_22

Address for correspondence: Dr. Ganesh Singh Dharmshaktu, Department of Orthopaedics, Government Medical College, Haldwani - 263 139, Uttarakhand, India.
E-mail: drganeshortho@gmail.com

How to cite this article: Dharmshaktu IS, Agarwal N, Dharmshaktu GS. Blistering distal dactylitis resembling a finger dipped in milk cream: An uncommon case report. Matrix Sci Med 2022;6:115-6.

Received: 05-03-2022 **Accepted:** 26-05-2022 **Published:** 06-10-2022

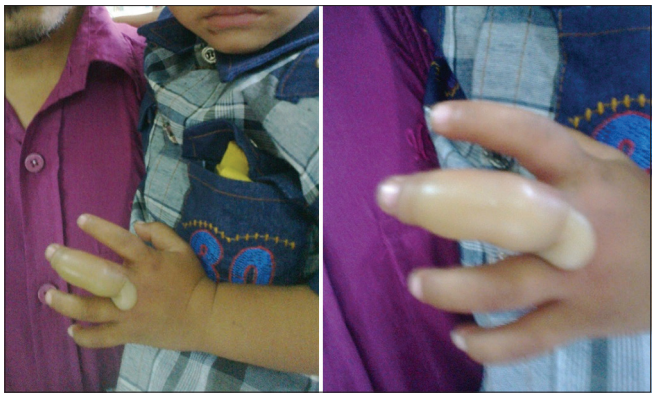

Figure 1: The clinical image of the child with an isolated tense blistering swelling with purulent fluid over the left middle finger on the dorsal aspect and extending up to the knuckle (left image). Magnified view showing a large extent of the lesion up to the knuckle region is rare and stark presentation (right image)

and distal phalanx as tense superficial blister and resembling a "nipple pacifier" for kids is interesting.[5] Gram staining, which is recommended in the diagnosis, was done in that case to reveal the causative organism *Streptococcus*. Bullous impetigo may be a closely associated differential diagnosis of the condition.[6] Other similar-looking conditions may coexist with BDD, thus making diagnosis difficult. One case report of herpetic whitlow, caused by herpes simplex virus, resulting in bullies and vesicular eruption in the distal phalanx is reported.[7] The culture of blister fluid readily identifies the causative organism. Rapid antigen detection tests for Group A *Streptococcus* have been found to be effective in initiating early treatment, leading to a good recovery.[8] The treatment of BDD is usually done by incision and drainage of the lesion, dressings, and suitable antibiotics such as beta-lactamase resistant ones.[9] The reports of this condition in immunocompromised patients are also reported frequently and are a cause of concern in those subsets of patients.[10] The condition can be readily identified by its characteristic clinical picture but knowledge of this condition is important, especially at the primary care level where many cases may be misdiagnosed and complicated. Knowledge and careful clinical observation may improve our diagnosis in conditions with characteristic features.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the parents have given their consent for images and other clinical information to be reported in the journal. The parents understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Norcross MC Jr., Mitchell DF. Blistering distal dactylitis caused by *Staphylococcus aureus*. Cutis 1993;51:353-4.
2. Lyon M, Doehring MC. Blistering distal dactylitis: A case series in children under nine months of age. J Emerg Med 2004;26:421-3.
3. Hinkamp CA, Shah NH, Holland N, Wright A. Recurrent blistering distal dactylitis due to *Staphylococcus aureus* in an immunocompetent elderly woman. BMJ Case Rep 2018;2018:bcr2017222772.
4. Fretzayas A, Moustaki M, Tsagris V, Brozou T, Nicolaidou P. MRSA blistering distal dactylitis and review of reported cases. Pediatr Dermatol 2011;28:433-5.
5. Inamadar AC, Palit A. "Nipple pacifier" like blister over middle finger. Indian J Dermatol Venereol Leprol 2011;77:710.
6. Scheinfeld NS. Is blistering distal dactylitis a variant of bullous impetigo? Clin Exp Dermatol 2007;32:314-6.
7. Ney AC, English JC 3rd, Greer KE. Coexistent infections on a child's distal phalanx: Blistering dactylitis and herpetic whitlow. Cutis 2002;69:46-8.
8. Jung C, Amhis J, Levy C, Salabi V, Nacera B, Samia R, *et al.* Group A streptococcal paronychia and blistering distal dactylitis in children: Diagnostic accuracy of a rapid diagnostic test and efficacy of antibiotic treatment. J Pediatric Infect Dis Soc 2020;9:756-9.
9. McCray MK, Esterly NB. Blistering distal dactylitis. J Am Acad Dermatol 1981;5:592-4.
10. Scheinfeld N. A review and report of blistering distal dactylitis due to *Staphylococcus aureus* in two HIV-positive men. Dermatol Online J 2007;13:8.