Blistering distal dactylitis: A distinct clinical entity

MJ Weinberg MSc MD, MM Al-Qattan MBBS FRCSC, J Mahoney MD FRCSC
Division of Plastic Surgery, St Michael's Hospital, Toronto, Ontario

MJ Weinberg, MM Al-Qattan, J Mahoney. Blistering distal dactylitis: A distinct clinical entity. Can J Plast Surg 1994;2(4):181-182. A rare case of blistering distal dactylitis in an adult is described. The differential diagnosis of this distinct clinical entity is also discussed.

Key words: *Dactylitis, Hand infection, Streptococcal infection*

La dactylite vésicante distale, entité clinique distincte

RÉSUMÉ : Un cas rare de dactylite vésicante distale est décrit chez un adulte. Le diagnostic différentiel de cette entité clinique distincte est aussi présenté.

Blistering distal dactylitis is a distinct clinical entity that has gone virtually unnoticed in the plastic and hand literature, but is well described in the pediatric and dermatological literature (1-6). This uncommon infection is caused by β-hemolytic streptococci and is manifested by a superficial blistering lesion over the volar fat pad of the distal portion of the finger or thumb. The lesion may be confined to the pulp or may have a dorsal or proximal extension. The infection is more commonly seen in children and is treated with debridement of the blister along with penicillin.

CASE REPORT

A 49-year-old, right handed, male executive was seen in the emergency department because of a two-day history of pain, redness, and swelling of the right index finger. There was no history of trauma or herpetic infections. On examination, the patient had a fever of 39.6°C. The right index was diffusely swollen, red and tender, but there was no evidence of tenosynovitis. The hand was splinted and elevated and the patient started on intravenous penicillin and cloxacillin. The next day, superficial blisters were noticed over the volar aspect of the distal and middle phalanges of the index finger (Figure 1). The blisters were debrided and the drained thin white pus was sent for culture, which showed no growth. The patient was continued on intravenous antibiotics for four days and was then discharged home on oral antibiotics and dressing changes. The infection subsided completely with full recovery of hand function.

DISCUSSION

Blistering distal dactylitis is a rare but distinctive infection. Adult infections are extremely rare but have been reported both in diabetics (4) and nondiabetics (5). Our patient was a nondiabetic adult with a classic clinical picture; however, cultures were sterile, probably because the patient had received intravenous antibiotics before debridement of the blisters.

The hand surgeon should be aware of the clinical picture of blistering distal dactylitis because many reported cases (especially children) showed no associated constitutional

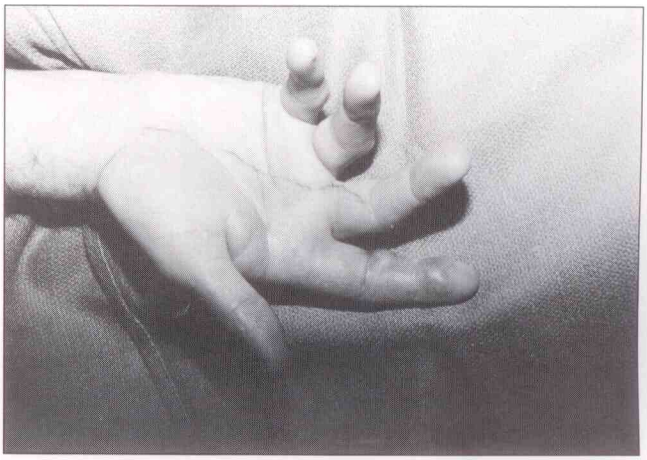

Figure 1) *Blistering distal dactylitis of the right index finger of a 49-year-old man*

Correspondence and reprints: Dr J Mahoney, St Michael's Hospital, Room 420B, 30 Bond Street Toronto, Ontario M5B 1W8

symptoms, fever or cellulitis (1-3,6). In these cases, the diagnosis is based on the clinical picture and bacterial cultures.

The differential diagnosis of an isolated blister in the volar aspect of a digit includes thermal and chemical burns, staphylococcal bullous impetigo, and herpetic whitlow.

In children, it is sometimes difficult to exclude the possibility of a burn and the issue of child abuse was raised in a previous case of blistering distal dactylitis (2). When the diagnosis of staphylococcal bullous impetigo is difficult to rule out on the basis of clinical appearance, Schneider and Parlette (3) recommended starting the patient on erythromycin or a semisynthetic penicillin active against both streptococci and staphylococci, awaiting final culture results. Findings from Gram strain and Tzanck preparation will help evaluate the possible presence of a herpetic infection.

Skin changes in our patient were rapid, suggestive of imminent digital gangrene (7). A similar pattern of acute fulminating infection is seen in streptococcal fasciitis (8) and it may be that the lack of fascia in the finger is reflected in the different appearance of this particular entity in the finger compared to other anatomical regions.

The recent increase in streptococcal infections (9) may be associated with an increase in the incidence of this previously rare condition.

REFERENCES

1. Hays GC, Mullard JE. Blistering distal dactylitis: A clinically recognizable streptococcal infection. Pediatrics 1975;56:129-31.
2. McCray MK, Esterly NB. Blistering distal dactylitis. J Am Acad Dermatol 1981;5:592-4.
3. Schneider JA, Parlette III HL. Blistering distal dactylitis: A manifestation of group A-β hemolytic streptococcal infection. Arch Dermatol 1982;118:879-80.
4. Benson PM, Solivan G. Group B streptococcal blistering distal dactylitis in an adult diabetic. J Am Acad Dermatol 1987;17:310-1.
5. Parras F, Ezpeleta C, Romero J, Sendagorta E, Buzon L. Blistering distal dactylitis in an adult. Cutis 1988;41:127-8.
6. Frieden IJ. Blistering dactylitis caused by group B streptococci. Pediatr Dermatol 1989;6:300-2.
7. Smith RB. Streptococcal infection with digital gangrene. Hand 1977;9:279-82.
8. Riefler III J, Molavi A, Schwartz D, DiNubile M. Necrotizing fasciitis in adults due to group B streptococcus. Report of a case and review of the literature. Arch Inter Med 1988;148:727-9.
9. Position statement by the Infectious Diseases and Immunization Committee, Canadian Paediatric Society. Group A streptococcus: A re-emergent pathogen. Can Med Assoc J 1993;148:1909-11.