Bullous Diabeticorum: A Rare Blistering Manifestation of Diabetes

Debajyoti Chatterjee, Anshul Radotra[1], Bishan D. Radotra, Sanjeev Handa[2]

Departments of Histopathology and [2]Dermatology, Leprology and Venereology, Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh, India, [1]MBChB Student, Final Year, University of Birmingham, Birmingham B15 2QU, United Kingdom

Bullous diabeticorum is a rare cutaneous complication of diabetes mellitus (DM). It is a spontaneous, non inflammatory, blistering condition usually found in long-standing diabetic patients with poor glycemic control.[1] It can mimic other vesicobullous disorders, and is often underdiagnosed.

A 65-year-old female presented with a 2-year history of recurrent, asymptomatic, tense blisters on her feet. There was no history of any repeated trauma, exposure to chemicals, insect bite, or any constitutional symptoms. She previously had similar lesions on her arms, back, and buttocks, however, they healed spontaneously. She had a history of uncontrolled type 2 DM for the past 20 years, for which she had been taking oral hypoglycemic agents. There were no features to suggest neuropathy. Urine examination did not reveal any microalbuminuria. At presentation, her blood sugar level was within normal range.

On clinical examination, multiple, irregular, fluid-filled blisters on non erythematous background were present on the dorsum of her left foot, with a crusted erosion on the lateral malleolus of her right ankle [Figure 1a and b]. The peripheral pulses were normal. The clinical differential diagnoses included bullous pemphigoid, podopompholyx with endogenous eczema, and bullous diabeticorum.

Skin biopsy was performed three times, which showed similar findings. The biopsies revealed acanthotic epidermis with an intraepidermal bulla and secondary crusting [Figure 2a]. There was mild spongiosis and exocytosis, comprising lymphocytes and few neutrophils [Figure 2b]. No acantholytic cells were present. The dermis showed edema, mild perivascular lymphomononuclear infiltration, and few eosinophils. Direct immunofluorescence was negative for IgG, IgA, IgM, and C3. Based on these findings and clinical history, a diagnosis of bullous diabeticorum was made.

The patient was treated with aspiration of her blisters with a small bore needle and the roofs were left intact to prevent secondary infection. The lesions healed without complications, and the patient is being followed up closely for her glycemia control.

The cutaneous manifestations in DM include acanthosis nigricans, acrochordrons, diabetic dermatopathy, necrobiosis lipoidica, and bullous diabeticorum.[2] Bullous diabeticorum is a very rare manifestation of diabetes, and hence, the physician must have a high index of suspicion for such cases. It is a spontaneous, recurrent, non inflammatory, blistering condition that usually affects the acral and distal skin of lower extremities with a male-predominance.[3] The bulla are usually large and asymmetrical in shape, tense, and filled with serous fluid. This condition is seen more often in adults suffering from long-standing uncontrolled diabetes with peripheral neuropathy.[4] One such case has been reported previously from our institute.[5] The etiology of this condition is unknown but is likely to be multifactorial.

The diagnosis of bullous diabeticorum is a diagnosis of exclusion, and histopathological examination including direct immunofluorescence is essential to rule out other vesicobullous disorders. The histological features are non-specific. It can show intraepidermal or subepidermal blisters with variable degree of spongiosis as well as scanty-to-moderate non specific inflammation. No laboratory test exists to confirm the diagnosis of this condition.[1] Management of bullous

Address for correspondence:
Dr. Sanjeev Handa, Department of Dermatology, Leprology and Venereology, Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, India.
E-mail: handa_sanjeev@yahoo.com

Access this article online

Website: www.idoj.in

DOI: 10.4103/idoj.IDOJ_340_16

Quick Response Code:

How to cite this article: Chatterjee D, Radotra A, Radotra BD, Handa S. Bullous diabeticorum: A rare blistering manifestation of diabetes. Indian Dermatol Online J 2017;8:274-5.

Received: September, 2016. **Accepted:** November, 2016.

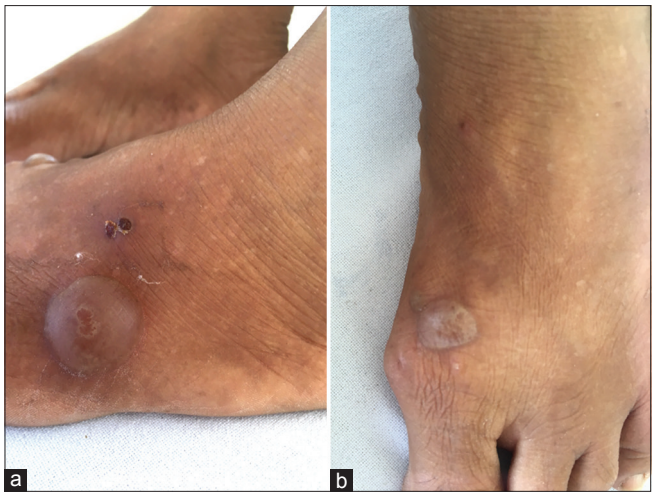

Figure 1: (a and b) Multiple, irregular, tense, fluid-filled blisters on the dorsum of the left foot

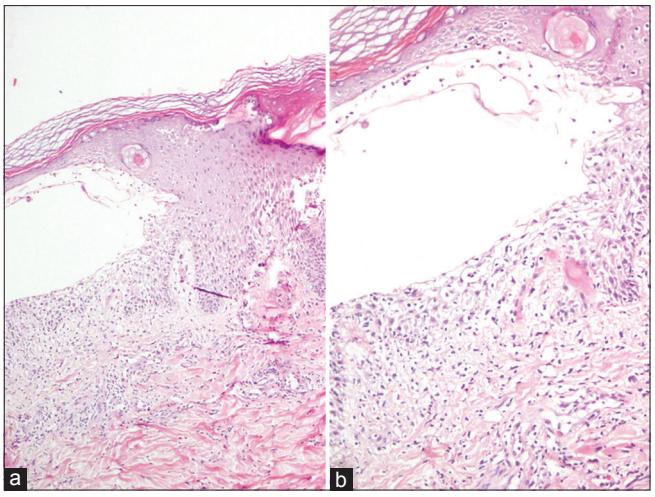

Figure 2: (a) Photomicrograph showing an intraepidermal bulla (H and E, ×100). (b) There is presence of spongiosis and mild exocytosis (H and E, ×200)

diabeticorum is conservative. Blister should be kept clean to prevent secondary infection.[1] While lesions typically heal spontaneously within 2–6 weeks, they often recur at the same or different locations, as was seen in our index case.

Bullous diabeticorum is a rare cutaneous manifestation of DM. Because there is no specific diagnostic test, it is often underdiagnosed or misdiagnosed and treated inappropriately for other bullous disorders. A high index of suspicion and awareness is required. A proper clinicopathological correlation is essential to establish the diagnosis because the management of this condition is different from its clinical mimickers.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Gupta V, Gulati N, Bahl J, Bajwa J, Dhawan N. Bullosis diabeticorum: Rare presentation in a common disease. Case Rep Endocrinol 2014;2014:862912.
2. Mahajan S, Koranne R V, Sharma S K. Cutaneous manifestation of diabetes mellitus. Indian J Dermatol Venereol Leprol 2003;69:105-8.
3. Aye M, Masson EA. Dermatological care of the diabetic foot. Am J Clin Dermatol 2002;3:463-74.
4. Ghosh SK, Bandyopadhyay D, Chatterjee G. Bullosis diabeticorum: A distinctive blistering eruption in diabetes mellitus. Int J Diabetes Dev Ctries 2009;29:41-2.
5. Handa S, Sharma R, Kumar B. Bullosis diabeticorum. Indian J Dermatol Venereol Leprol 1995;61:62-3.