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CASE REPORT

Documenting a Rare Occurrence: Bullous Diabeticorum in a Type 2 Diabetic Patient

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ABSTRACT
Bullous diabeticorum is a rare skin condition that is associated with uncontrolled diabetes mellitus, characterized by spontaneous blister formation mainly on hands or legs . We present a case of a 58-year-old male with type 2 diabetes who developed tense blisters on his right leg without any preceding trauma. Diagnosis was confirmed through clinical and histopathological examination, revealing subepidermal blisters. Management focused on supportive care and blood glucose control, leading to resolution of lesions over several weeks. This case emphasizes the need for awareness of bullous diabeticorum in diabetic patients, facilitating timely diagnosis and preventing unnecessary interventions.
Keywords: case report, Bullous Diabeticorum, Skin manifestation of DM2, Rare occurrence dermopathy.

INTRODUCTION
Bullous diabeticorum is a spontaneous, non inflammatory, and blistering condition, that is, uniquely affects patients with diabetes mellitus.[1] Bullous diabeticorum is a rare skin condition, characterized by the spontaneous formation of large, painless blisters or bullae on the skin. These blisters generally appear on the legs, feet, and sometimes on the arms or hands. Although the exact cause of bullous diabeticorum is not clear, it is believed to be associated with poor blood sugar control, though it can occur even in patients with well- controlled diabetes. Featuring a case of bullous diabeticorum with a history of diabetes mellitus type 2, who presented with an acute onset of blisters that were diagnosed as diabetic bullae.

CASE REPORT
A 58-year-old male visited the outdoor with a asymptomatic, tense blisters on his feet. There was no history of any trauma, exposure to any chemical substance, insect bite. He had a history of uncontrolled type 2 DM for the past 10 years for which he had been taking oral hypoglycemic agents, metformin 500mg twice daily along with glimiperide 1 mg twice daily. He had similar bullous lesions on his arms, legs and buttocks previously, however, those healed spontaneously.

OBSERVATION
On clinical examination, many irregular, fluid-filled blisters were present just above the medial malleolus in his left foot [Figure 1]. Those blisters on gentle palpation were mildly painful. The dorsalis pedis peripheral pulses were normally felt. Few scars were present on the right shin due to similar previous lesions. The liver function test shows mild increase in SGOT and SGPT suggestive of steatohepatitis. The kidney function test infer creatinine value of 1.8 mg/dl . Estimated eGFR using CKD-EPI 2021 Formula is 43.1 mL/min/1.73m². According to KDIGO 2012 Clinical Practice Guideline this is CKD Stage IIIb. Lipid Profile estimation shows dyslipidemia with serum Cholestrol of 230 mg/dl and Serum Triglyceride of 190 mg/dl .24 hour Albumin : Creatinine ratio(ACR) reveals microalbuminuria. Complete blood count was unremarkable. At presentation, his Fasting blood sugar(FBS) level was 280mg/dl , post prandial blood sugar (PPBS) was 433 mg/dl & HBA1C was 11.9 % with average blood glucose (ABG) 295mg/dl. The tissue section for HPE shows no particular findings. Based on the history and

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examination, a clinical diagnosis of bullous diabeticorum (diabetic bulla) with uncontrolled DM Type 2 was made.

The aspiration of blisters was done with a small bore 2cc needle and the roofs of the blister were left intact to prevent any other secondary infection. For the control of blood sugar Injection insulin glargine 12 IU was subcutaneously added during bed time, along with Injection Regular Insulin (Human Actrapid) 8 IU thrice daily before food as a bolus regime .The lesions healed automatically without any further complications, and the patient is being followed up for his glycemia control

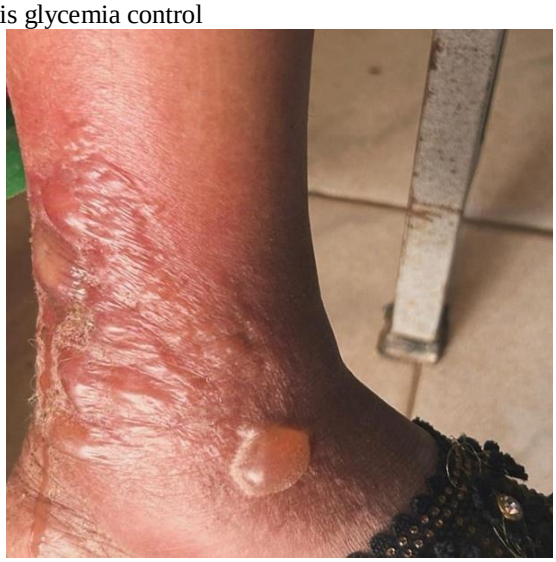

Fig1: Multiple blisters (aspirated) above the malleolus & a single blister below

DISCUSSION

Bullous diabeticorum is a rare cutaneous, spontaneous, blistering condition affecting approximately 0.16% of patients with diabetes.[2] It is a diagnosis of exclusion with nonspecific histopathologic findings.[3] The pathophysiologic process remains unclear, though poor glycemic control is thought to play a role.[2] The blisters are usually large and asymmetrical in shape.[4] These serous fluid filled tense bullae (sized few mm to cm) may even sometimes be hemorrhagic.[2] The cutaneous manifestations in DM include acanthosis nigricans, acrochordrons, diabetic dermatopathy, necrobiosis lipoidica, and bullous diabeticorum.[r] Although the exact etiology is not clear, it is widely accepted that prolonged uncontrolled blood sugar , vascular changes, and associated diabetic neuropathy plays a significant role in the development of bullous diabeticorum. The circumstance is generally self-limiting, with blisters typically healing within a few weeks without leaving any scar, though proper wound care is essential to prevent secondary bacterial infections. For patients with diabetes mellitus, maintaining proper blood glucose control is essential in reducing the incidence and severity of skin manifestations, including Bullous Diabeticorum. Regular monitoring of whether if there is any breech in skin integrity, particularly on legs, and prompt intervention when blisters appear can significantly improve patient outcomes and prevent complication.

CONCLUSION

No laboratory test exists to confirm the diagnosis of this condition[1]Due to the lack of diagnostic tests, it is frequently misdiagnosed with other bullous disorders of skin. Proper clinicopathological correlation is critical to differentiate Bullous Diabeticorum from its mimickers, as management strategies vary. A high index of suspicion and clinical awareness are essential for accurate diagnosis. While Bullous Diabeticorum does not usually cause significant long-term issues, it serves as a reminder of the skin-related complications of poorly managed diabetes. Regular monitoring of blood sugar or any signs of neuropathy and proper management can help prevent further complications and improve patient day to day life.

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