



# Diabetic Foot: Even The Most Innocent may Turn into A Threat

Musa Salmanoglu<sup>1</sup>, Yalçın Önem<sup>2</sup>

## ABSTRACT

Diabetic peripheral sensory neuropathy leading to insensate foot is a well-recognized complication of the diabetes mellitus. Herein, we report a patient with diabetic neuropathy who developed foot ulcer as a result of careless removal of a tape from the patient's skin. Health professionals should bear in mind that diabetic patients are extremely vulnerable to injury and require extreme vigilance.

**Key words:** Diabetes mellitus, complication, diabetic neuropathy, wound

## Diyabetik Ayak: En Masum Bir Tehdite Dönüşebilir

### ÖZET

Ayaklarda hissizliğe neden olan diyabetik periferik duyuşal nöropati diyabetes mellitusun iyi bilinen komplikasyonlarından birisidir. Burada, hastanın cildinden bantın dikkatsiz bir şekilde çıkarılmasına bağılı olarak yara gelişen diyabetik nöropatili bir hasta bildirilmektedir. Sağlık profesyonelleri diyabetik hastaların yaralanmaya karşı çok hassas olduklarını ve daha fazla dikkat gerektirdiğini akıllarında tutmalıdırlar.

**Anahtar kelimeler:** Diyabetes mellitus, komplikasyon, diyabetik nöropati, yara

## INTRODUCTION

Foot complications in diabetic patients represent a gradually growing global healthcare problem, which is associated with substantial morbidity and mortality. Diabetic peripheral sensory neuropathy, which has historically been described as losing the gift of pain, alone is recognized to be responsible for the majority of diabetic foot wounds, such that diabetic patients with normal foot sensations seldom are affected (1). Herein we describe one such unexpected consequence of losing protective sensation of the feet in a diabetic patient hospitalized normally for the cure of a foot wound.

## CASE

A 62-year-old female with type 2 diabetes of 12 years'

duration presented due to a non-healing post-operative wound on her right foot. She had a relatively poor glyce-mic control with a hemoglobin A1C level of 7% (normal 3.3%-6.4%) and severe loss of foot sensation. She had severe loss of foot sensation, which assessed by the 10-g Semmes-Weinstein monofilament. Physical examination and dopler USG assessment revealed a near-total arte-rial occlusion of the affected extremity. The patient was therefore referred for vascular surgery. Three weeks later, after undergoing a successful revascularization procedure, she was re-admitted to our department. On examination granulation of the wound bed was observed to be enhanced, the temperature of the foot improved and pedal pulses, which were previously absent, were palpable. However, to our great surprise, we noticed that she developed a new wound close to her ankle over the same foot (Figure 1). Detailed medical history re-

<sup>1</sup>Department of Internal Medicine, Izmir Military Hospital, Izmir, Turkey, <sup>2</sup>Department of Internal Medicine, Gulhane Military Medical Academy Haydapaşa Teaching Hospital, 34668, Istanbul, Turkey

**Correspondence:** Yalçın Önem  
GATA Haydapaşa Eğitim Hastanesi, İç Hastalıkları Servisi, 34668, Üsküdar, İstanbul, Turkey  
Tel: +90 5332339430 Fax: +90 216 3487880 E-mail: yalonem@hotmail.com



**Figure 1.** Full thickness skin loss involving subcutaneous tissues.

vealed that a tape was applied over this area to fix the intra-venous cannula during surgery. The tape was stuck firmly to her skin and probably careless removal of the tape resulted in detachment of the skin, which in turn eventually ended up as an open wound. Fortunately, the new wound showed fast healing following regular comprehensive wound care.

## DISCUSSION

The international working group on the diabetic foot has long before established a diabetic foot risk classification system aimed at identifying and stratifying diabetic patients at risk for foot ulceration (IWGDF). Diabetic patients deprived of the protective sensation and diagnosed to sustain diabetic peripheral sensory neuropathy are classified as patients with at-risk-foot and are recommended to be followed on a 6-monthly basis (2). Since, a variety of studies have validated the effectiveness of this classification system and have highlighted the key role of the loss of “protective sensation” in the diabetic foot. The vulnerability of the skin of the diabetic patient with sensory neuropathy may be further accentuated by several other factors such as poor perfusion, renal failure, etc. In the current case, the patient carried both neuropathy and angiopathy as risk factors, which provided a permissive environment for

ulceration. The patient, probably due to sensory neuropathy, did not feel any tape-related discomfort and ensuing ulceration. Most common encounters related to insensate feet are thermal injuries reported usually from patients using hot water or heaters to warm up their feet. Unfortunately similar diabetic foot injuries may develop in hospitalized patients due to a lack of basic knowledge of the disease and/or a lack of vigilance of the health care provider (3,4). The common component in the causal pathway to lower extremity wounding in all these mal practice cases is apparently peripheral neuropathy.

It is imperative that health care providers bear in mind that diabetic patients are extremely vulnerable to injury and require extreme vigilance. Actually as lack of knowledge impedes the ability to be effective in vigilance, educative lectures should be periodically delivered to the health care professionals in an interactive fashion to decrease the risk of nosocomial injuries. Additionally, health care providers should also be aware that hospital acquired injuries may pose both health-care institutions and themselves into serious medico-legal liability issues.

## REFERENCES

1. McNeely MJ, Boyko EJ, Ahroni JH, et al. The independent contributions of diabetic neuropathy and vasculopathy in foot ulceration. How great are the risks? *Diabetes Care* 1995;18:216-9.
2. Lavery LA, Armstrong DG, Vela SA, et al. Practical criteria for screening patients at high risk or diabetic foot ulceration. *Arch Intern Med* 1998;158:157-62.
3. Uzun G, Karagoz H, Mutluoglu M, Ozdemir Y, Uz O, Senol MG. Non-invasive blood pressure cuff induced lower extremity wound in a diabetic patient. *Eur Rev Med Pharmacol Sci* 2012;16:707-8.
4. Uzun G, Mutluoglu M, Evinc R, Ozdemir Y, Sen H. Severe burn injury associated with misuse of forced-air warming device. *J Anesthesia* 2010;24:980-1.