



## **Multidisciplinary Approach in Diabetic Foot Care in Iran (New Concept)**

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### **Dear Editor-in-Chief**

Diabetes mellitus is a prevalent disorder in Eastern Mediterranean Region (EMR) and is a major cause of foot ulceration and amputation. According to WHO reports, the prevalence of diabetes is 10.3% in Iran with an approximate male to female ratio of 1:1 (1). In this regard a national survey in Iran illustrated the diabetes prevalence is 7.7% in adults (25–65 years) (2). However, another study in Tehran showed a higher range (14.0%) (3). It has been reported that lower limb amputation due to diabetes is higher in Iran than universal average (4). The evaluation of the burden of diabetes in Iran in 2000 suggested that the burden of neuropathy, diabetic foot and amputation based on Disability Adjusted Life Years (DALYS) were; 33286, 5848, and 1573 years which means that about 15 percent of diabetes's burden is caused by these three complications (5). Additionally the mean duration of hospital admission for Diabetic Foot (DF) was 4 weeks in Iran and amputation rate was 40% between 1975 and 1995 (6). Regarding the necessity of conducting certain interventions to increase patients' awareness and improve wound healing along with reducing the amputation rate, Iranian Diabetic Foot Research Network (IDFRN) in 2005 was ascertained by Endocrinology and Metabolism Research Center (EMRC) of Tehran University of Medical Sciences. IDFRN follows the countrywide programs in the fields of management, education, and research.

**Management:** So far DF clinics in Tehran and four other provinces have been established to pro-

vide adequate foot care by means of multidisciplinary approach (diabetic foot team consist of general practitioner, nurse, podiatrist, endocrinologist, vascular surgeon, intervention cardiologist, infectious diseases specialist, orthopedic surgeon and physiatrist). In this regard, DF management protocol provided the unification method for DF management in all clinics.

**Education:** Foot care education program target both public and patients. In this regard more than 30 educational booklets and brochures have been compiled and made available. Health Care Professionals (HCPs) have been trained through organizing seminars, workshops, and distance learning courses. Several books along with DF guideline have been published. Virtual Education is available for both HCPs and patients in diabetic foot website (<http://emri.tums.ac.ir/dmfoot-en>) and diabetes virtual clinic (<http://emri.tums.ac.ir/vclinic-en>). It should be mentioned that 3415 patients at risk of diabetic foot and 1218 healthcare providers have been educated about DF in Iran until 2010(7).

**Research:** In addition different therapeutic research projects have been carried in all centers including ultrasonic wound debridement, bio implant dressing, and novel drug for DF ulcer treatment. One of these projects led to production a new herbal extract (Semeli). Nowadays, the IDFRN has been conducted 9 randomized clinical trials, and several other studies about independent risk factors of DF amputations.

## Conclusion

Regarding DF as a common complication of diabetes requiring a multidisciplinary approach in various fields, IDFRN has successfully made the first move in Iran and cause close collaboration between healthcare providers to unify DF management methods and thereby reduce the amputation rate (8). Accordingly the result of the recent multicenter study to assess the characteristics of patients with DF, suggested that amputation rate in hospital employing a multidisciplinary approach compared with another center was lower (23.7% compared to 30.1%). In spite of all these efforts, this network faces several challenges including inadequate hospital beds, low levels of patient's attentiveness about DF management, lack of adequate device for offloading, unpleasant design footwears for offloading, and expensive appropriate wound dressing products.

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