

Chapter 6

OZONE THERAPY IN DIABETIC FOOT ULCER

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Introduction

Diabetes Mellitus (DM) is a life-long chronic disease. The Society of Endocrinology and Metabolism of Turkey (SEMT) defines diabetes as “a chronic metabolism disease requiring constant medical care in which the organism cannot sufficiently benefit from carbohydrates, fats and proteins due to a lack of insulin or defects under the influence of insulin”. Diabetes is a life-long disease that has acute and chronic complications, creates financial and spiritual responsibilities and obligations for individuals, their families, people around them and society, affects life expectancy negatively, and requires a multidisciplinary approach (SEMT, 2017).

In all the societies developed and developing through rapid changes in lifestyles, the prevalence of especially type-2 diabetes has been rapidly increasing. 425 million people between the ages of 20 and 79 were reported to have diabetes in 2017, while 629 million people are projected to have diabetes by 2045 (IDF, 2017). The number of people with diabetes is 58 million in Europe, a considerable part (12.1%) of which is comprised of those in Turkey (IDF, 2017). The prevalence of type-2 diabetes was found to be 13.7% in the study of Diabetes Epidemiology in Turkey (TURDEP-II) (Satman, 2013). According to data from National Disease Burden Study in 2013, in comparison of 2000 and 2013, while diabetes was in the tenth place in 2000 with an increase of 60% in disease burden, it took its place near the top in 2013 by rising to the fourth place. Diabetes is the eighth most common cause of death in the world after ischemic heart disease, stroke, lower respiratory tract infections, chronic obstructive pulmonary disease, diarrhea-related diseases, HIV/AIDS (human immunodeficiency virus/acquired immune deficiency syndrome) and respiratory tract cancers. 5 million people in the world have been reported to have lost their lives due to diabetes and their complications. Approximately half of these deaths are seen in patients who are 60 years old or below, and this rate reaches to as high as 75% in less developed regions (IDF, 2015).

Uncontrolled diabetes causes a lot of complications to appear by causing hyperglycemia and affecting every system of a body. Besides, the risk of infections to develop is higher in patients with diabetes compared to people without diabetes. The prevalence, incidence and mortality of cardiovascular diseases in patients with diabetes are 2-8 times higher than people without diabetes (Grundy& et al., 2002; THSK, 2014a; THSK, 2014b). Diabetes is the biggest reason for kidney failure and non-traumatic amputation cases. The risk of lower extremity amputation in patients with diabetes is 25 times higher compared to people without diabetes (THSK, 2014a; THSK, 2014b).

scientific studies must be carried out about traditional treatment methods and ozone implementation in terms of advanced nursing practices, because TCM is implemented in the treatment of diabetic foot ulcer. Among these implementations, ozone therapy is regarded as an alternative method, and it is important that ozone therapy be considered in nursing care and planning.

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