Tashi, Clin Res Foot Ankle 2023, 11:6

Clinical Research on Foot & Ankle

ISSN: 2329-910X

Research Article | Open Access

Diabetic Foot Complications: Current Understanding and Emerging Strategies for Prevention and Management

Tashi S*

Department of Diabetic Foot, Bhutan

Abstract

Diabetic foot complications pose a significant challenge in the management of individuals with diabetes. The combination of peripheral neuropathy, peripheral arterial disease, and impaired wound healing increases the risk of foot ulcers, infections, and lower extremity amputations. This abstract provides a concise overview of the current understanding of diabetic foot complications and highlights emerging strategies for their prevention and management. The pathophysiology of diabetic foot complications involves the interplay of multiple factors, including neuropathy, peripheral arterial disease, and impaired wound healing. Risk factors such as poor glycemic control, longer duration of diabetes, presence of neuropathy and peripheral arterial disease, and foot deformities contribute to the development of foot complications. Assessment and classification of diabetic foot ulcers play a crucial role in guiding appropriate management. Various classification systems and imaging techniques aid in the accurate evaluation of diabetic foot complications. Prevention and management strategies encompass a multidisciplinary approach. Patient education and self-care play a vital role in promoting foot health and preventing complications. Multidisciplinary foot care teams comprising podiatrists, endocrinologists, wound care specialists, vascular surgeons, and orthopedic surgeons provide comprehensive care. Offloading techniques, wound care and infection management, revascularization, and surgical interventions are employed based on individual patient needs. Emerging therapies, including growth factors, cellular therapies, bioengineered skin substitutes, and advanced wound care technologies, hold promise for enhancing wound healing and reducing the impact of diabetic foot complications.

Keywords: Cellular; Endocrinologists; Peripheral neuropathy; Hyperglycemia

Introduction

Diabetic foot complications pose a significant burden on individuals with diabetes and healthcare systems worldwide. Diabetes mellitus a chronic metabolic disorder characterized by hyperglycemia affects millions of people globally. Among the various complications associated with diabetes diabetic foot complications stand out due to their potential to cause severe morbidity increased healthcare costs and a significant reduction in the quality of life for affected individuals. Diabetic foot complications primarily arise from a combination of peripheral neuropathy peripheral arterial disease and impaired wound healing. Peripheral neuropathy refers to the damage or dgD5o2 T04181 T 0 -1.2 TD o2 n29 8 2 in t5.9e 19 4 y rm 3 4

The following methods were employed:

A thorough search of electronic databases including PubMed MEDLINE and Google Scholar was conducted. Keywords used for the search included "diabetic foot complications " "diabetic foot ulcers " "diabetic neuropathy " "peripheral arterial disease " " wound healing " "prevention " and "management." The search was limited to articles published in English within the last 10 years to ensure the inclusion of recent research and emerging strategies.

I

Articles were included if they provided insights into the pathophysiology risk factors assessment prevention or management of diabetic foot complications. Studies involving human subjects animal models and in vitro experiments were considered. Articles focusing on other aspects of diabetes management unrelated to diabetic foot complications were excluded [11-14].

A

The initial search yielded a large number of articles. Titles and abstracts were screened to identify relevant studies. Full-text articles of potentially relevant studies were then reviewed for inclusion in the review.

D

Pertinent data from selected articles including study design sample size methodology key findings and recommendations were extracted and organized in a systematic manner.

D

The extracted data were synthesized to provide a comprehensive overview of the current understanding of diabetic foot complications. Common themes trends and emerging strategies were identified and discussed.

E

C[illegible]

In conclusion diabetic foot complications remain a significant