Tropical Diabetic Hand Syndrome: A Case Report with an Overview of Literature

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Abstract

Background: Hand infections amongst patients living with diabetes are common in the tropical region and remain a major cause of morbidity and mortality. Tropical diabetic hand syndrome is the term that has been coined for diabetic hand infections that commonly occur in the tropics. This syndrome is not known to many physicians especially in sub-Saharan Africa and consequently it is overlooked and underreported. This indexed case is reported to create more awareness on the existence of tropical diabetic hand syndrome.

Case presentation: We report the case of 57 year-old black African driver, newly diagnosed with type 2 diabetes mellitus after he presented with a life threatening infection of the right hand for which a diagnosis of Lawal Group 3 right diabetic hand syndrome was made which eventually led to amputation of the right thumb.

Conclusion: Although tropical diabetic hand syndrome is associated with a high morbidity and mortality, its occurrence has been underreported by many medical practitioners in sub-Saharan Africa. Education of diabetic patients on hand care and appropriate glycaemic control is a cost-effective and easier way to prevent the occurrence of tropical diabetic hand syndrome.

Keywords
Tropical diabetic hand syndrome; Underreported; Sub-Saharan Africa

Abbreviations: TDHS – Tropical diabetic hand syndrome

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occurrence of TDHS warrants the need to increase its awareness amongst physicians, as early diagnosis and prompt intervention will result in better outcome [1,2]. Despite the early presentation of our patient, TDHS was not promptly diagnosed partly because he had no previous history of diabetes and probably due to lack of awareness on TDHS by the attending physician.

Management of TDHS remains challenging mainly due to late diagnosis, coupled with the lack of existing guidelines and protocols for the management of this disease entity. Ndhumba et al. in a study set out to establish a protocol for the holistic management of TDHS to improve digit/hand salvage and function in their centre concluded that TDHS appears to be more aggressive in some patients than in others and a multidisciplinary approach, with early involvement of the surgical team, and a radical surgical debridement are essential to improve outcomes [8]. Although the goal of medical treatment (i.e. glycaemic control) is simple and easily achieved, surgical goals (salvage of limb or life, preservation of hand function) are more complex, costly, and difficult to achieve [8]. Educating health care workers, diabetic patients, and their relatives on hand care is an important preventive measure. Diligence in taking anti-diabetic medications, early presentation, and appropriate care of TDHS are required for meaningful improvement in outcomes of patients with diabetes who develop hand sepsis in the tropics [8].

Diabetic hand sepsis seen today in tropical countries is a reflection of a problem which previously also occurred among people with diabetes in the developed countries [4]. The reduction in its occurrence in the Western regions is probably due to increase awareness of diabetes and its complications, improved glycaemic control amongst diabetic patients and access to expert care [4]. Good health facilities that carry out educative programs on the prevention and control of diabetes and its complication are largely absent in sub-Saharan Africa in particular and the tropical region at large. Consequently, most patients remain unaware of their glycaemic status and diabetic patients are ignorant of complications. Government policies are needed to create more day care diabetic clinics that focus more on the prevention than management of diabetic complications.

Education of diabetic patients and health staff regarding proper hand care, nutrition and the importance of immediate medical consultation following hand trauma or even after unexplained redness and swelling of hand in diabetic patients will go a long way to reduce the incidence of TDHS [3,7]. Prevention of permanent disability and death due to TDHS will require early recognition by patients and medical practitioners, improved management of glycaemic levels in resource-limited countries, and surgical intervention during less severe stages of the condition [7].

Conclusion

Although tropical diabetic hand syndrome is associated with a high morbidity and mortality, its occurrence has been overlooked and consequently underreported by many physicians in sub-Saharan Africa. Education of diabetic patients on hand care and appropriate glycaemic control is a cost-effective and easier way to prevent TDHS.

Consent for Publication

Written informed consent was obtained from the patient for publication of this case report. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Competing Interests

The authors declare that they have no competing interests.

Authors Contributions

Eugene Vernuy Yeika and Cedrick Mbassi managed the patient. Eugene Vernuy Yeika wrote the original manuscript. Derrick Tembi Efe and Siméon Pierre Choukem reviewed and corrected the manuscript. All authors read and approved the final manuscript.
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