

Original Research Article

Cutaneous manifestation of diabetes mellitus among the tertiary care centre patients

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Abstract: The metabolic complications and pathologic changes that occur in diabetes mellitus (DM) influence the occurrence of various dermatoses. The main Aim is to evaluate the prevalence of skin manifestation of diabetics in patients attending skin OPD. Materials and Methods was the descriptive study was conducted in the Department of Dermatology, Shimoga Institute of medical sciences, Shimoga. One hundred patients with the diagnosis of diabetes mellitus and having skin lesions, attending the dermatology OPD constituted the study population. In Results the study of 100 patients comprised of gender ratio of M: F- 1.7: 1 with mean age 52 years. Most common manifestation in our study was of infection (43%) of which dermatophytic infection was predominant. Eczema (20%) and skin tags (9 %) followed infection. In Conclusion the Cutaneous manifestations may break out anytime during the course of the disease or may be the first sign of DM presentation. Increased prevalence of fungal infection maybe associated due to moist conditions.

Keywords: diabetes mellitus, Eczema

INTRODUCTION

Diabetes mellitus is a heterogeneous group of metabolic disorders characterised by elevated serum glucose levels resulting from defects in insulin production, action, or in a combination.

Chronic hyperglycaemia resulting in production of advanced glycosylated end products (AGE) is responsible for most of the complications of diabetes [1]. Global presence of type 2 diabetics in the year 2000 was 171 million which is likely to be 366 million in the year 2030[2]. The International Diabetes Federation (IDF) estimates the total number of diabetic subjects to be around 40.9 million in India and this is further set to raise to 69.9 million by the year 2025[3]. Estimates by WHO suggest that the number of diabetic subjects would increase to 80 million by the year 2030 in India [2]. More than one third of diabetic patients have some type of dermatologic manifestations during the course of their chronic disease [4] and it may be also the presenting complaints in a few.

BACKGROUND AND AIM

The metabolic complications and pathologic changes that occur in diabetes mellitus (DM) influence the occurrence of various dermatoses. To evaluate the prevalence of skin manifestation of diabetics in patients attending skin OPD.

MATERIAL AND METHODS

The study was conducted in the Department of Dermatology, Shimoga Institute of Medical Sciences, and Shimoga. One hundred patients with the diagnosis of diabetes mellitus and having skin lesions, attending the dermatology OPD constituted the study population. Clinical details regarding age, sex, duration of diabetes mellitus, and treatment modalities were noted. Inclusion criteria were skin manifestation with diabetes. Exclusion criteria were patients without diabetes. All the patients were examined thoroughly and screened for any cutaneous disorders. Relevant microbiologic investigations were done whenever necessary to diagnose the cutaneous disorder.

RESULTS

The study comprised of 100 patients of diabetes mellitus with skin lesions. There were 59 males and 41 females (M: F = 1.7:1). The sex wise distribution of diabetics in duration is depicted in Figure 1.

The youngest patient was 30 years and oldest was 79 years with a mean age of 51.99 years. The duration of diabetes was <10 years in 67 patients. 29 patients had 11-20 years of diabetes, and 4 patients had >20 years of diabetes and the same is depicted in Figure

2. Ten patients were newly diagnosed as diabetics. Various types of skin lesions and duration of diabetes

mellitus observed are presented in Figure 3. Various types of skin infections observed are shown in Table 1.

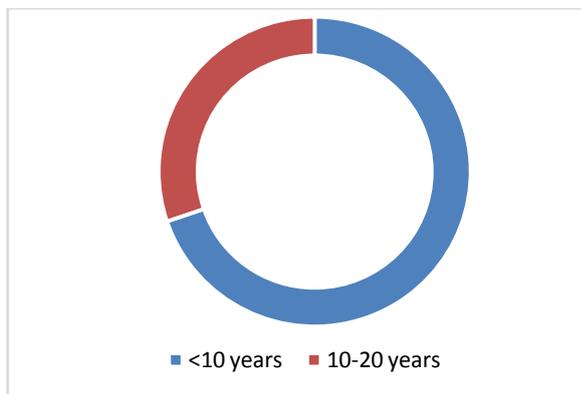


Fig 1: Sex wise distribution of diabetics

Table 1: Skin infections observed

Infection	Total
Fungal	35
Candidal	11
Dermatophytic	24
Bacterial	7
Cellulitis	3
Carbuncle	2
Furuncle	2
Viral	1
Herpes zoster	1

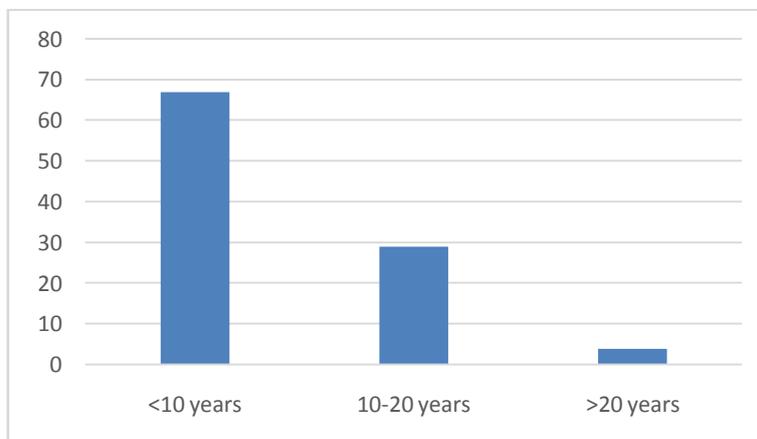


Fig-2: Duration of onset of Diabetes among patients

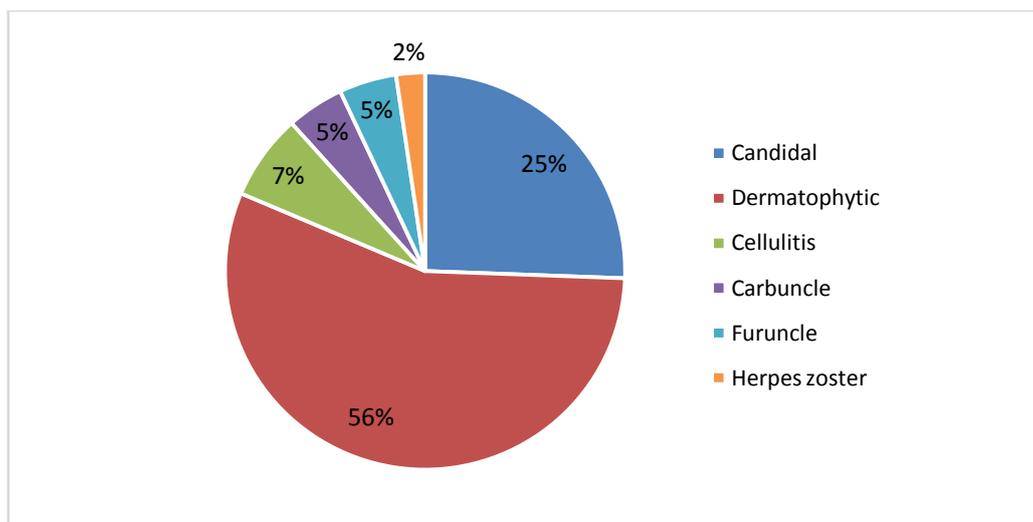


Fig-4: Types of skin infections

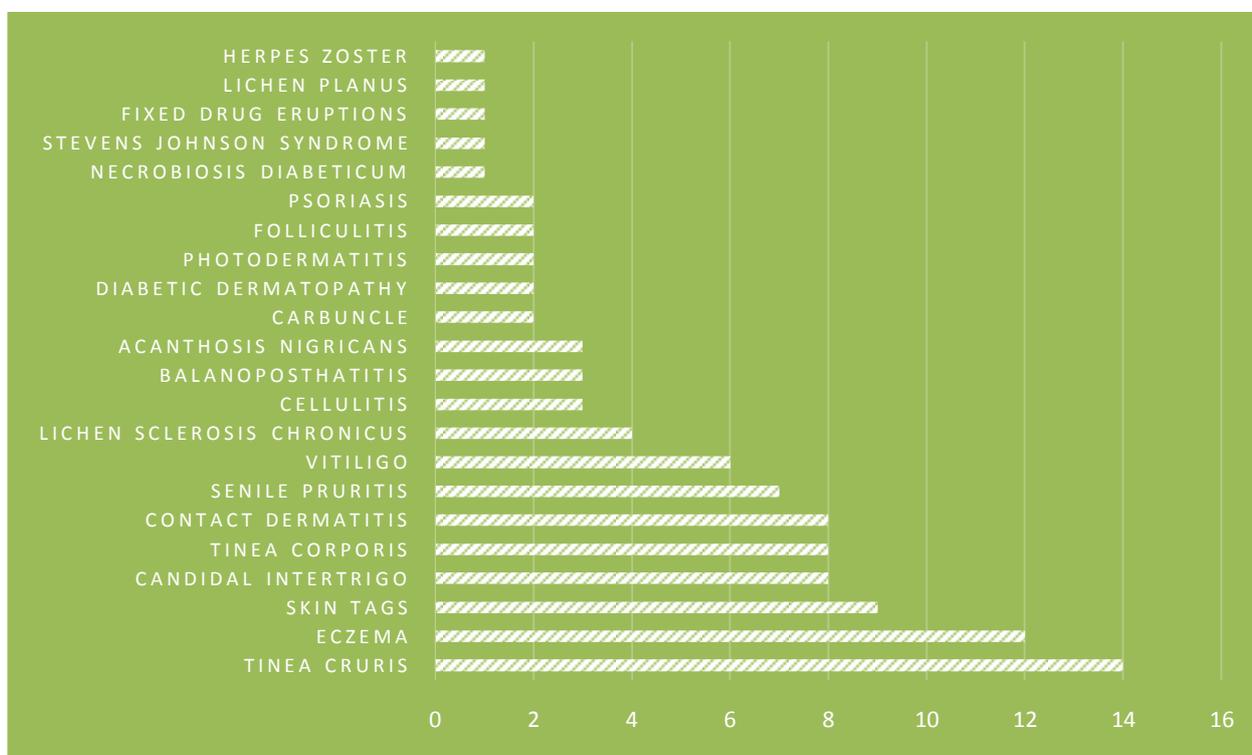


Fig-3: Type of skin lesions observed

DISCUSSION

Diabetes can affect every part of the body, including the skin. In fact, such problems are sometimes the first sign that a person has diabetes. The most common manifestation in our study was infection accounting for 43% of which fungal infection was the predominant one. Dermatophytic infection (24%) followed by Candidal infection (11%).

Infection is common because of different mechanisms at the cellular level including decreases chemo taxis due to hyper osmolar serum, impaired release of cytokine as a consequence of lack of insulin

secretion [5]. Infection may also be due to alteration in normal flora leading to pathogenic transformation of organisms of normal flora. Fungal Infection has an higher incidence in our studies as compared to other studies [6, 7, 8]. Fungal infection was followed by eczema which accounted for around 20% of the cutaneous manifestation. Skin tags which accounted for 9% of the total lesions in our study, which is considered to be characteristic of Diabetes in Thapa *et al.*; [9].

CONCLUSION

Diabetics are more predisposed to skin diseases. These manifestations may break out anytime

during the course of the disease or may be the first sign of DM presentation, and can also be more severe in these populations. Increased incidence of fungal infection may be due to moist conditions in our region.

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