



A STUDY OF DERMATOLOGICAL PROBLEMS FACED BY DIABETES PATIENTS:

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ABSTRACT Diabetes is one of the main reasons for developing dermatological problems especially its rampant in the diseased group. Diabetes is said to cause a plethora of dermatologic diseases including Bacterial Foot ulcer, Fungal infections, Cellulitis, Urticarias, Angular Stomatitis and Acanthosis nigricans. The target or aim of this study was to determine the various cutaneous manifestations in Diabetes patients. The target or aim of this study was to determine the various cutaneous manifestations in diabetes patients.

KEYWORDS : Diabetes, Dermatological problems, Fungal, Bacterial.

INTRODUCTION

Diabetes is one of the main reasons for developing dermatological problems especially its rampant in the diseased group. Diabetes is said to cause a plethora of dermatologic diseases including Bacterial Foot ulcer, Fungal infections, Cellulitis, Urticarias, Angular Stomatitis and Acanthosis nigricans. Diabetes mellitus (DM) is one of the major health problem with increasing numbers. Diabetes prevalence among all age groups globally estimates to about 2.8% in the year 2000 (171 million) and is estimated to reach up to 4.4% by the year 2030 (366 million). The gravity of which is going to be very high in developing and underdeveloped countries, where the prevalence will rise from 4.2% to 5.6%¹. Skin being the largest organ of the body also gets affected by both acute metabolic derangements as well as chronic degenerative complication of DM^{2,3}. Multitude of factors are involved in manifestation of dermatological signs of DM. Derangement in carbohydrate metabolism, alters metabolic pathways in the patients leading to manifestation of the disease in various forms involving all the systems of the body. The incidence of cutaneous disorders are more commonly seen than the manifestations of the disease in other systems of the body. Dermatological manifestations of DM are usually seen once the disease develops, at times they may precede the development of the disease and can give a clue of the impending metabolic disorder. Few of the skin manifestations are a result of direct metabolic changes arising due to hyperglycaemia and lipid abnormalities. Many of the other complications are as a result of vasculopathies, neuropathy or immunological. Results here are comparable to ones done by many others^{4,5}. Majority of subjects had a history of DM of over 10 years - 64%, and all those who had history of diabetes of over 10 years had dermatological manifestations. This assumes significance as with increasing duration of illness the complications tend to rise. They are due to the formation of advanced glycated products that are formed nonenzymatically causing cutaneous damage^{6,7}. The target or aim of this study was to determine the various cutaneous manifestations in Diabetes patients.

AIMS AND OBJECTIVES:

The main aim is to find out the different kinds of skin problems in diabetes patients.

MATERIALS AND METHODS

This study was done in the Department of Dermatology, Srinivas Institute of Medical Sciences, Mangalore.

Sixty diabetic patients were matched for sex and age with one hundred twenty controls and then the prevalence of the disease was found in each of them.

The study was done from May 2018 to April 2019.

RESULTS

Table 1: Age Distribution

Group	Number	Mean age	Std Deviation
Case	60	42.38 years	1.35 years
Control	120	45.37 years	1.93 years

Table 2: Presence and Absence of Disease

Parameter	Case	Control	p-value
Skin Disease	38 (60)	07 (120)	<0.05

Skin Manifestation Frequency

Fungal Disease:	21 patients.
Bacterial Infections:	11 patients
Cellulitis:	2 patients
Ulcers on leg:	1 patient
Granulomatous inflammation:	1 patient
Benign Lesion :	1 patient

These were the different skin manifestations that was appreciated in obese patients. It was also present in combination.

Table 3: Association with Diabetes and other co – morbidities:

Co-Morbidities	Frequency
Hypertension and CVS	2
Hypertension	05

Table 4: Sensitivity

	C	EC	PV	CK	CNS	MRSA
Amikacin		3				
Gentamycin		4				
Fluconazole	3					
Voriconazole				2		
Amphotericin B	2					
Ciprofloxacin		1				
Norfloxacin						
Levofloxacin		1				
Nitrofurantoin						
Fosfomycin						
Trimethoprim/Sulfamet hoxazole						1
Tigecycline		1				
Cefta						
Amoxiclav		1				
Doripenem		3				
Meropenem		3				
Linezolid						1
Teicoplanin						1
Vancomycin						1
Tetracycline						1
Cefexime		1				
Cefepime		1				
Imipenem			1		1	

C- Candida tropicalis

EC- Escherichia coli

PV- Proteus vulgaris

CK- Candida Krusei

CNS - Coagulase negative Staphylococcus

There was a significant increase of resistance to treatment in patients with co-morbidity.

DISCUSSION

Breakdown of human immune defence system is essential for Candida to be pathogenic. This study is undertaken to see the pattern of cutaneous fungal infections in type 2 diabetes mellitus to enrich

literature with data to help in effective management of diabetes mellitus as well as fungal infections. According to Sampath Kumar et al. the type of fungal infections, total of twenty four patients suffered from tinea pedis infection out of which seventeen were males and seven were females. Eleven patients suffered from onychomycosis, out of which, ten were males and one was female. A total of four patients suffered from Candidal skin infection, out of which, three were males and one was female. Four patients suffered from Candida angular cheilitis, out of which, male and female amounted to two cases each. Six males were noted to have Candida balanitis and three females suffered from vaginal yeast infections.

CONCLUSION:

Control of the dermatological complications of Diabetes play an important role in diminishing the morbidity of Diabetes.

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