

Frequency of skin diseases among patients attending a diabetic clinic

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Abstract

Skin diseases are common among diabetic patients. Although data on the prevalence of skin diseases in the community is available, little is known of the frequency of skin diseases in Sri Lankan diabetic patients. Therefore, we carried out a study to determine the prevalence of skin diseases in diabetic patients.

Our study was carried out on 300 patients attending the diabetic clinic at the Colombo South Teaching Hospital and they were examined for the presence of skin diseases. The frequency of skin diseases in the diabetic population was compared to that of the community and the odds ratio was calculated.

Skin infections were common among diabetic patients, especially fungal (48.67%) and bacterial infections (11.67%). Diabetic skin manifestations such as diabetic dermopathy (7%), scleroderma like syndrome (13.33%) and acanthosis nigricans (18.33%) was also common. Vitiligo which is usually seen among IDDM patients was mainly seen in NIDDM patients in our study.

We conclude that there is a high frequency of skin diseases among diabetic patients which could be prevented by proper education and glycaemic control.

Introduction

Skin diseases are common among diabetic patients, with skin infections and vitiligo being the commonest^{1,2}. Although data on the prevalence of skin diseases in the community are available³, little is known of the frequency of skin diseases in Sri Lankan diabetic patients. The recently published guidelines for management of NIDDM, does not mention about skin care⁴. Therefore, we carried out a study to determine the prevalence of skin diseases in diabetic patients.

Methods

We studied 300 consecutive patients (246 females, 64 males), attending the diabetic clinic, in the out patient department of the Colombo South Teaching

hospital. The mean age of the population was 56.88 (24-83 years) and the mean duration of diabetes was 5.75 years (1 week to 30 years). The patients were examined by a group of doctors including a dermatologist for the presence of skin diseases. The frequency of skin diseases among the diabetic patients was compared with that of the prevalence of skin diseases in a Sri Lankan³ and the odds ratio calculated.

Results

Table 1 shows the comparison of the prevalence of skin diseases between the two populations. Table 2 shows the prevalence of skin diseases that were found in the diabetic patients only. The frequency of skin diseases among diabetic patients was markedly higher when compared to that of non-diabetic patients. Diabetic patients appear to be susceptible to all infections, especially acute bacterial infections, fungal infections scabies and leprosy. 23.3% of the diabetic patients had candidiasis (web space infection and angular stomatitis). 38% of the diabetic patients had disorders of nails (onychomycosis and paronychia).

Vitiligo was also common (10%) and was comparable to the prevalence of vitiligo in diabetic populations in other countries². Cutaneous manifestations of diabetes (dermopathy, scleroderma like syndrome) were seen in a significant proportion of patients².

Discussion

Our study shows that there is a high frequency of skin diseases among diabetic patients attending diabetic clinics in hospitals, with skin infections, vitiligo, and nail disorders being the commonest.

Poor glycaemic control is a predisposing factor for infection and in the study population, 79.06% had FBS values >110 mg/dl while 23.64% had FBS values >180 mg/dl. However, infection itself can result in hyperglycaemia. Therefore, it is difficult to comment whether the high FBS is a result of infection or poor glycaemic control.

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Table 1. Comparison of the frequency of skin diseases between diabetic patients and the community

<i>Disease</i>	<i>Diabetic patients</i>		<i>Community</i>		<i>odds ratio</i>
	<i>Number</i>	<i>prevalence</i>	<i>Number</i>	<i>prevalence</i>	
Fungal infections	146	48.67	259	14.3	5.66
Tinea corporis	13	41.33	43	2.3	1.86
Tinea cruris	4	1.33	0	0	
Tinea pedis	0	0	22	1.2	
Tinea of the scalp	0	0	2	0.1	
Pityriasis vesicolor	59	19.66	190	10.5	2.08
Bacterial infections	41	13.67	26	1.44	10.84
Acute bacterial infections	35	11.67	23	1.27	10.24
Leprosy	6	2	1	0.06	36.84
Viral infections	15	5	36	1.99	2.59
Warts	14	4.66	34	1.88	2.55
Herpes zoster	1	0.33	0	0	
Molluscum contagiosum	0	0	2	0.11	
Parasitic infections	14	4.6	7	0.39	12.58
Scabies	14	4.66	3	0.17	29.42
Pediculosis	0	0	4	0.22	
Disorders of nails	114	33	36	1.99	30.13
Pigmentary Disorders	94	31.33	31	1.72	26.33
Vitiligo	30	10	22	1.2	9.1
Hypomelanosis	64	21.33	9	0.5	54.15
Dermatitis/eczema	15	5	173	9.5	0.5
Generalised pruritus	16	5.33	15	0.83	6.73
Psoriasis	3	1	8	0.44	2.27
Papular urticaria	7	2.33	37	2.05	1.14
Miscellaneous	2	0.67	26	1.44	0.46

Table 2. Skin conditions that were found only in diabetic patients

Disease	Number	Percentage
Fungal infections	30	10
Web space infection	40	13.33
Angular stomatitis		
Acanthosis nigricans	55	18.33
Diabetic dermopathy	21	7
Scleroderma like syndrome	73	24.33
Prayer sign	40	13.33
Xanthelasma	5	1.66
Acquired perforated dermatosis	3	1
Pigmented purpuric dermatosis	5	1.66
Foot ulcers	2	0.67
Pitted keratolysis	6	2

Poor personal hygiene and overcrowding are predisposing factors for scabies. The high prevalence of scabies, web space infection and nail disorders indicate the need for educating diabetic patients regarding proper foot care and personal hygiene.

Vitiligo is known to be associated with IDDM. However, in our study this condition was seen mainly among NIDDM patients (94.4%). A high prevalence of idiopathic guttae hypomelanosis was observed (odds ratio 54.15) among diabetic patients. Therefore, further studies are required to determine the relationship between these two conditions.

Scleroderma like syndrome, prayer sign and diabetic dermopathy, which are cutaneous markers for microvascular disease were quite frequent (31.33%). However, the relationship between these cutaneous markers of microvascular disease and retinopathy, nephropathy and neuropathy could not be established, as this study was not designed to assess this.

A major limitation of our study was that 82% of those attending the diabetic clinic were either females who were either housewives or unemployed. The males who attended the clinic were retired or unemployed.

We conclude that skin diseases are common among diabetic patients. Screening for skin diseases should form a regular procedure in diabetic clinics. Some of these can be prevented by good glycaemic control and advice regarding foot care and personal hygiene. We recommend that screening for skin diseases to be adopted in all diabetic clinics in Sri Lanka.

References

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