



## Skin Manifestation Of Diabetes Mellitus

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## Abstract

### Background

Diabetes mellitus is a common and debilitating disease that affects a variety of organs including the skin. the skin manifestation is a term that describes the cutaneous signs, symptoms or physiological changes of a non-dermatological disorder.

### Aim of study

To evaluate the prevalence and patterns of skin manifestations in patients with diabetes mellitus.

### Patient and method

This cross section study included 237 patient selected randomly in diabetic endocrine central and Al Nasiriya teaching hospital during ( 30 of November 2021 until 7 of February 2022).

### Results

Diabetic dermopathy 10.1%, Diabetic bullae 2.1%, Ulceration 13.1%, necrobiosis lipoidica 0. 4%, Granuloma annulare 1.3%, Dermatophytosis 1.3%, Rubeosis faciei 0. 4%, Digital gangrene 1.3%, Eruptive xanthomas 0.3%, Xerosis 11.4%.

### Conclusion

High prevalence of Ulceration in our diabetic population is 13.1%, the second high prevalence xerosis 11.4%, the third high prevalence Diabetic dermopathy 10.1%, Diabetic bullae 2.1%, necrobiosis lipoidica 0. 4%, Granuloma annulare 1.3%, Dermatophytosis 1.3%, Rubeosis faciei 0. 4%, Digital gangrene 1.3%, Eruptive xanthomas 0.3%.

## Introduction

The term diabetes mellitus describes a metabolic disorder of multiple etiology characterized by chronic hyperglycemia with disturbances of carbohydrate, fat and protein metabolism resulting from defects in insulin secretion, insulin action, or both.(1)

### *Classification;-*

Type 1 Diabetes ( $\beta$ -Cell Destruction, Usually Leading to Absolute Insulin Deficiency) Immune-Mediated Diabetes

Type 2 Diabetes (Ranging From Predominantly Insulin Resistance With Relative Insulin Deficiency to Predominantly an Insulin Secretory Defect With Insulin Resistance

Other specific types of diabetes:- Genetic defects of the  $\beta$ -cell, Genetic defects in insulin action, Endocrinopathies, Drug or chemical induced diabetes and Gestational diabetes(2) (3).

## **Skin manifestations**

### *Definition*

is a term that describes the cutaneous signs, symptoms or physiological changes of a non-dermatological disorder. Skin disorders will be present in 79.2% of people with diabetes(4) The skin manifestation include :-

1.Noninfectious Skin lesions (necrobiosis lipoidica, diabetic dermopathy, diabetic bullae, yellow skin, eruptive xanthomas, acanthosis nigricans, oral leucoplakia, lichen planus).

2.Infections (bacterial, fungal).

3.Skin reactions to diabetic treatment (sulphonylureas or insulin) (5)

Classification of the noninfectious and infectious skin lesions :-

### **1. Acanthosis Nigricans**

The definition is dermatologic manifestation of diabetes mellitus that affects men and women of all ages. Is multiple poorly demarcated plaques with grey to dark-brown hyperpigmentation and a thickened velvety to verrucous texture. is located in intertriginous or flexural surfaces such as the back of the neck, axilla, elbows, palmer hands (also known as “tripe palms”), inframammary creases, umbilicus, or groin(6). The Prevalent of Acanthosis Nigricans is more common in type 2 diabetes mellitus(7). The treatment of Acanthosis Nigricans may improve current lesions and prevent future cutaneous manifestations. AN is best managed with lifestyle changes such as dietary modifications, increased physical activity, and weight reduction. In patients with diabetes, pharmacologic adjuvants, such as metformin, that improve glycemic control and reduce insulin resistance are also beneficial(8).

### **2. Diabetic Foot Syndrome**

The detention is neuropathic and vasculopathic complications that develop in the feet of patients with diabetes.

The Prevalent Diabetic Foot Syndrome in patients with diabetes is 1% to 4% and 4% to 10%, respectively is slightly more prevalent in type 1 diabetes compared with type 2 diabetes(9) (10).

The treatment should involve an interdisciplinary team-based approach with a focus on prevention and management of current ulcers. Prevention entails daily surveillance, appropriate foot hygiene, and proper footwear, walkers, or other devices to minimize and distribute pressure. An appropriate wound care program should be used to care for ongoing ulcers. Different classes of wound dressing should be considered based on the wound type. Hydrogels, hyperbaric oxygen therapy, topical growth factors, and biofabricated skin grafts are also available(11).

### **3. Diabetic Dermopathy**

The definition is the most common dermatologic manifestations of diabetes, initially presents with rounded, dull, red papules that progressively evolve over one-to-two weeks into well-circumscribed, atrophic, brown macules with a fine scale(12)(13) (14). The prevalence of Diabetic Dermopathy has a strong predilection for men and those older than 50 years of age.

The treatment is typically avoided given the asymptomatic and self-resolving nature of Diabetic Dermopathy as well as the ineffectiveness of available treatments. However, Diabetic Dermopathy often occurs in the context of micro vascular complications and neuropathies so should be treated as a complication(15).

#### **4. Bullous Diabeticorum**

The definition is an uncommon eruptive blistering condition that presents in those with diabetes mellitus(16). It is non-erythematous, firm, sterile bullae. Bullae frequently present bilaterally involving the acral areas of the lower extremities(17).

The prevalence of BD is around 0.5% amongst patients with diabetes and is believed to be higher in those with type 1 diabetes(18).

The treatment of Bullous Diabeticorum resolves without treatment and are therefore managed by avoiding secondary infection and the corresponding sequelae (e.g. necrosis, osteomyelitis). This involves protection of the affected skin, leaving blisters intact (except for large blisters, which may be aspirated to prevent rupture), and monitoring for infection(19).

#### **5. Necrobiosis lipoidica**

The definition is a rare chronic granulomatous dermatologic disease that is seen most frequently in patients with diabetes. It is a single or group of firm well-demarcated rounded erythematous papules characterized by circumferential red-brown borders and a firm yellow-brown waxy atrophic center containing telangiectasias(20).

The prevalence is less than 1% of patients with diabetes will develop Necrobiosis lipoidica(21).

The treatment of Corticosteroids are often used in the management of NL and may be administered topically, intralesionally, or orally. Corticosteroids can be used to manage active lesions, but is best not used in areas that are atrophic. Success has also been reported with calcineurin inhibitors (e.g. cyclosporine), anti-tumor necrosis factor inhibitors (e.g. infliximab), pentoxifylline, antimalarials (e.g. hydroxychloroquine), PUVA, granulocyte colony stimulating factor, dipyridamole and low-dose aspirin.(22)

#### **6. Eruptive xanthomas**

The definition is a clinical presentation of hypertriglyceridemia. Presents as eruptions of clusters of glossy pink-to-yellow papules, ranging in diameter from 1 mm to 4 mm, overlying an erythematous area. The lesions can be found on extensor surfaces of the extremities, the buttocks(23).

The prevalence is around one percent in type 1 diabetes and two percent in type 2 diabetes(24).

The treatment 6. Eruptive xanthomas can resolve with improved glycemic control and a reduction in serum triglyceride levels(25). This may be achieved with fibrates or omega-3-fatty acids in addition to an appropriate insulin regimen(26).

#### **7. Generalized Granuloma Annulare**

The condition initially presents with groups of skin-colored or reddish, firm papules which slowly grow and centrally involute to then form hypo- or hyper-pigmented annular rings with elevated circumferential borders(27)

The prevalent It occurs more frequently in women than in men, and in those with type 1 diabetes(28).

The treatment of Generalized Granuloma Annulare has a prolonged often resolving disease course and multiple treatments have been suggested to better manage. However, much of the support stems from small studies and case reports. Antimalarials, retinoids, corticosteroids, dapsone, cyclosporine, PUVA, and calcineurin inhibitors have been suggested as therapies(29).

#### **8. Rubeosis faciei**

The definition is a benign findings presents with chronic erythema of the face or neck. Telangiectasias may also be visible. The flushed appearance is often more prominent in those with lighter colored skin(30).

The prevalent present in about 7% of patients with diabetes, in hospitalized patients, the prevalence may exceed 50%(31). The Facial erythema may improve with better glycemic control and reduction of caffeine or alcohol intake(32).

9. **Yellow Skin and Nails** It is common for patients with diabetes, particularly elderly patients with type 2 diabetes, to present with asymptomatic yellow discolorations of their skin or fingernails. These benign changes commonly involve the palms, soles, face, or the distal nail of the first toe(33).

#### **10. Necrotizing fasciitis**

The condition presents early with erythema, induration, and tenderness which may then progress within days to hemorrhagic bullous. Patients will classically present with severe pain out of proportion to their presentation on physical exam. Involvement can occur on any part of the body but normally occurs in a single area, most commonly affecting the lower extremities(34).

The treatment those patients with diabetes and necrotizing fasciitis are more likely to require amputation during their treatment .Treatment is emergent and includes extensive surgical debridement and broad-spectrum antibiotics(35).

#### **11. Erythrasma**

The definition is a chronic asymptomatic cutaneous infection, most often attributed to *Corynebacterium minutissimum*. Erythrasma presents with non-pruritic non-tender

clearly demarcated red-brown finely scaled patches or plaques. These lesions are commonly located in intriginuous areas such as the axilla or groin(36).  
the prevalent of erythrasma more in Diabetes mellitus, as well as obesity and older age.  
The treatment Erythrasma  
Treatment options include topical erythromycin or clindamycin, Whitfield's ointment, and sodium fusidate ointment. More generalized erythrasma may respond better to oral erythromycin.

## **12. dermatophyte**

the definition is infections appear to be more prevalent among patients with diabetes . Various regions of the body may be affected but foot is the most common. It presents with pruritus or pain and erythematous keratotic or bullous lesions(37) (38) (39) (40). the treatment of Dermatophyte include topical or systemic antifungal medications depending on the severity(41).

## **13. Xerosis**

The detention is one of the most common skin presentations in patients with diabetes. Affected skin may present with scaling, cracks or a rough texture. These skin changes are most frequently located on the feet of patients with diabetes(42).  
The prevalent has been reported to be present in as many as 40% of patients with diabetes(43).  
The treatment xerosis can be managed with emollients like ammonium lactate(44).

## **Aim of the study**

To evaluate the prevalence of skin manifestations in patients with diabetes mellitus. To analyze the prevalence and pattern of skin disorders among diabetic patients in Thi-Qar government.

## **Patient and method**

This cross section study included 237 patient selected randomly in diabetic endocrine central and Al Nasiriya teaching hospital during ( 30 of November 2021 until 7 of February 2022).

We took history from all patients include their age, gender, resident and did examination special skin examination and we delineated type of skin manifestation with assistance of dermatologist . We send the patients for investigation included lipid profile, random blood sugar, fasting blood sugar, HBA1C and we used instrument in table1

**Table 1**

name of investigation	Type of Instrument used	Type of kit used
lipid profile	Architect plus	Chol R1, CreaC R2
random blood sugar	Architect plus	Chol R1, CreaC R2
fasting blood sugar	Architect plus	Chol R1, CreaC R2
HBA1C	Architect plus	Chol R1, CreaC R2

Inclusion criteria for all patient have diabetic mellitus and exclusion all patients with burn .We use SpSS program for analysis of date.

Characteristic of patient include the age there are 2 less than 15 years , 35 between 15-45 and 200 more than 45 years. The numbers of male are 100 and the number of female are 137 . The occupation there are 28 employed, 109 unemployed, 91 housewife and 9 student. The resident there are 103 lives in rural area and 134 lives in urban area. The type of diabetic there are 29 type (1) and 208 type (2). The duration of diabetic there are 56 less than5 years, 94 between 5-10 years and 87 more than 10 years. Type of therapy there are 146 receive insulin .88 receive oral hypoglycemic drugs and 3 mixed.

## Result

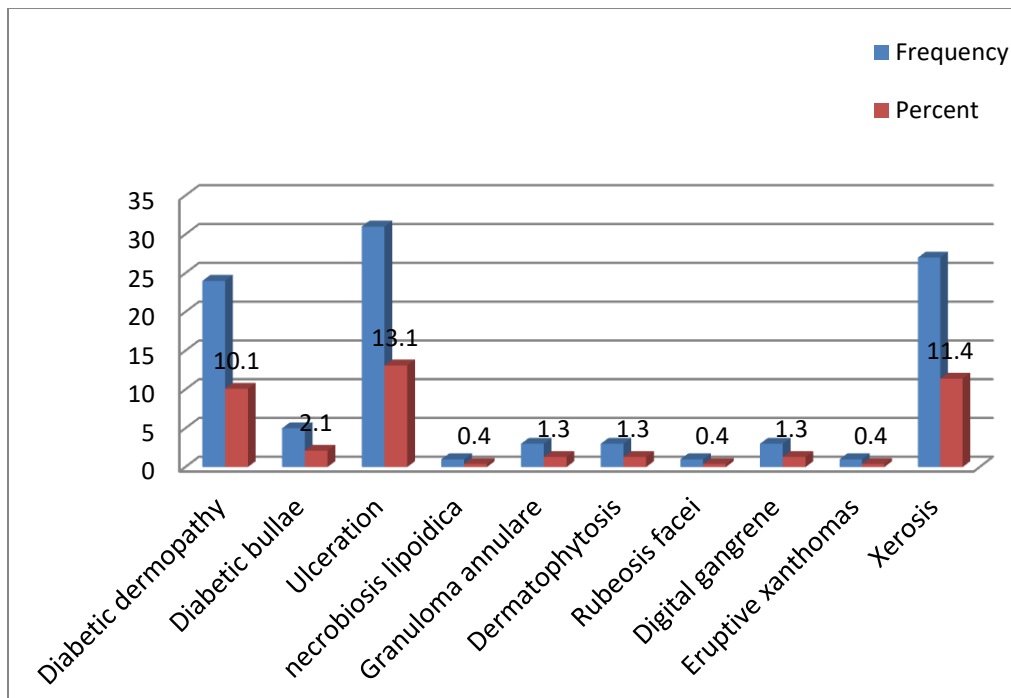


Figure one types of skin disease among diabetic patients

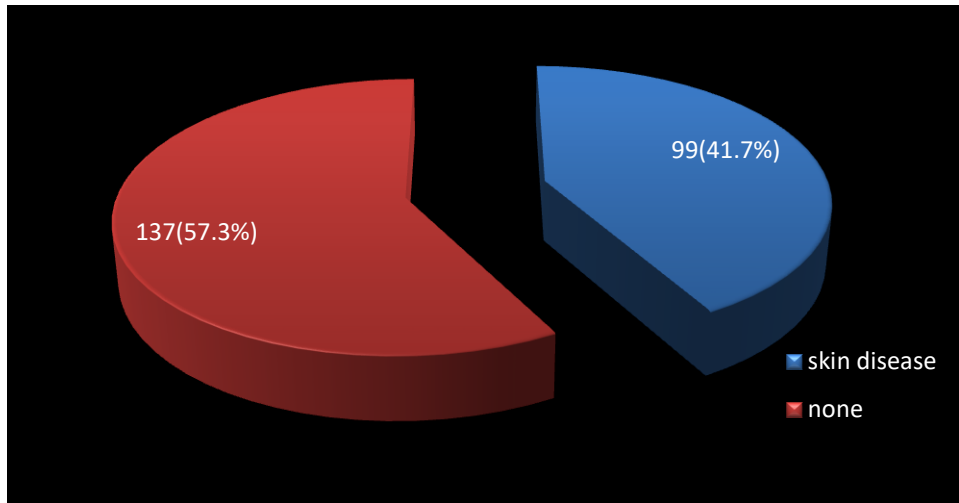


Figure tow : distribution of diabetics according to their skin manifestations

Table 2 include relationship of patients characteristics with skin manifestation

**Table 2**

		Non	Skin diseases	Total	Pearson Chi-Square
Age	<15y	2	0	2	12.002 <sup>a</sup>
		1.4%	0.0%	0.8%	.002 <sup>b</sup>
	15-45y	29	6	35	
		21.0%	6.1%	14.8%	
	>45	107	93	200	
		77.5%	93.9%	84.4%	
Gender	Female	87	50	137	3.716 <sup>a</sup>
		63.0%	50.5%	57.8%	0.052
	Male	51	49	100	Odds ratio
		37.0%	49.5%	42.2%	=1.672
Occupation	Employed	13	15	28	11.271 <sup>a</sup>
		9.4%	15.2%	11.8%	.008 <sup>b</sup>
	Non employed	57	52	109	
		41.3%	52.5%	46.0%	
	Housewife	59	32	91	
		42.8%	32.3%	38.4%	



	Student	9	0	9	
		6.5%	0.0%	3.8%	
Residence	Urban	81	53	134	.625 <sup>a</sup>
		58.7%	53.5%	56.5%	.429
	Rural	57	46	103	Odds ratio=1.323
		41.3%	46.5%	43.5%	
Type of diabetes	Type I	27	2	29	16.524 <sup>a</sup>
		19.6%	2.0%	12.2%	.000
	Type II	111	97	208	Odds ratio =11.779
		80.4%	98.0%	87.8%	
Duration	<5y	38	18	56	2.875 <sup>a</sup>
		27.5%	18.2%	23.6%	.248 <sup>b</sup>
	5-10y	51	43	94	
		37.0%	43.4%	39.7%	
	>10y Count	49	38	87	
		35.5%	38.4%	36.7%	
Type of treatment	Insulin	83	63	146	2.293 <sup>a</sup>
		60.1%	63.6%	61.6%	.318
	Oral hypoglycemic drugs	52	36	88	
		37.7%	36.4%	37.1%	
	Mixed	3	0	3	
		2.2%	0.0%	1.3%	
Hypertension	Yes	84	56	140	.442 <sup>a</sup>
		60.9%	56.6%	59.1%	.506
	No	54	43	97	Odds ratio=1.194
		39.1%	43.4%	40.9%	
Smoking status	Non smoker	123	72	195	10.637 <sup>a</sup>
		89.1%	72.7%	82.3%	.001
	Smoker	15	27	42	Odds
		10.9%	27.3%	17.7%	

Count	138	99	237	ratio=3.075
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Table 3 include relationship of skin manifestation with patient gender, age and type of diabetic

**Table 3**

Type of skin lesion		age			Fisher's Exact Test, p value	gender			Fisher's Exact Test, p value	Type of diabetic			F,E, P
		15-45y	>45	Total		female	male	total		Type1	Type2	total	
Diabetic dermatopathy		1	23	24	11.44	15	9	24	12.79	0	24	24	16.45
		16.7%	24.7%	24.2%	293 <sup>b</sup>	30.0%	18.4%	24.2%	0.095	0.0%	24.7%	24.2%	0.232
Diabetic bullae		0	5	5		3	2	5		0	5	5	
		0.0%	5.4%	5.1%		6.0%	4.1%	5.1%		0.0%	5.2%	5.1%	
Ulceration		4	27	31		11	20	31		1	30	31	
		66.7%	29.0%	31.3%		22.0%	40.8%	31.3%		50.0%	30.9%	31.3%	
necrobiosis lipoidica		0	1	1		0	1	1		0	1	1	
		0.0%	1.1%	1.0%		0.0%	2.0%	1.0%		0.0%	1.0%	1.0%	
Granuloma annulare		1	2	3		2	1	3		1	2	3	
		16.7%	2.2%	3.0%		4.0%	2.0%	3.0%		50.0%	2.15	3.0%	
Dermatophytosis		0	3	3		3	0	3		0	3	3	
		0.0%	3.2%	3.0%		6.0%	0.0%	3.0%		0.0%	3.1%	3.0%	
Rubeosis faciei		0	1	1		1	0	1		0	1	1	
		0.0%	1.1%	1.0%		2.0%	0.0%	1.0%		0.0%	1.0%	1.0%	

	Digital gangrene	0	3	3		0	3	3		0	3	3
		0.0%	3.2%	3.0%		0.0%	6.1%	3.0%		0.0%	3.1%	3.0%
	Eruptive xanthomas	0	1	1		1	0	1		0	1	1
		0.0%	1.1%	1.0%		2.0%	0.0%	1.0%		0.0%	1.0%	1.0%
	Xerosis	0	27	27		14	13	27		0	27	27
		0.0%	29.0%	27.3%		28.0%	26.5%	27.3%		0.0%	27.8%	27.3%
Total	Count	6	93	99		50	49	99		2	97	99
	% within age	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%		100.0%	100.0%	100.0%

Table 4 include the relationships of skin manifestation with patients occupation and duration of diabetic

**Table 4**

Type of skin lesion	Diabetic dermopathy	Duration of diabetes				FE, p value	Employed	Non Employed	Housewife	Total	FE, P value
		<5y	5-10y	>10y	Total						
		3	12	9	24	16.664	5	8	11	24	30.439
		16.7%	27.9%	23.7%	24.2%	0.489	33.3%	15.4%	34.4%	24.2%	0.005
	Diabetic bullae	0	3	2	5		1	1	3	5	
		0.0%	7.0%	5.3%	5.1%		6.7%	1.9%	9.4%	5.1%	
	Ulceration	9	11	11	31		5	20	6	31	
		50.0%	25.6%	28.9%	31.3%		33.3%	38.5%	18.8%	31.3%	
	necrobiosis lipoidica	1	0	0	1		1	0	0	1	

		5.6%	0.0%	0.0%	1.0%		6.7%	0.0%	0.0%	1.0%	
	Granuloma annulare	0	3	0	3	1	1	1	1	3	
		0.0%	7.0%	0.0%	3.0%	6.7%	1.9%	1.9%	3.1%	3.0%	
	Dermatophytosis	0	2	1	3	0	0	0	3	3	
		0.0%	4.7%	2.6%	3.0%	0.0%	0.0%	0.0%	9.4%	3.0%	
	Rubeosis faciei	0	0	1	1	0	0	0	1	1	
		0.0%	0.0%	2.6%	1.0%	0.0%	0.0%	0.0%	3.1%	1.0%	
	Digital gangrene	0	1	2	3	1	2	2	0	3	
		0.0%	2.3%	5.3%	3.0%	6.7%	3.8%	3.8%	0.0%	3.0%	
	Eruptive xanthomas	1	0	0	1	0	0	0	1	1	
		5.6%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	3.1%	1.0%	
	Xerosis	4	11	12	27	1	20	20	6	27	
		22.2%	25.6%	31.6%	27.3%	6.7%	38.5%	38.5%	18.8%	27.3%	
Total	Count	18	43	38	99		15	52	32	99	
	% within duration	100.0%	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	100.0%	

Table 5 include the relationships between the skin manifestation and patients type of treatment and smoking

**Table 5**

Type of skin lesion	Diabetic dermopathy	Type of treatment			F.E., P	smoker			F.E, P value	resident			F.E, P value
		insulin	oral hypoglycemic drugs	Total		yes	no	total		rural	urban	total	
		14	10	24	7	7	17	24	5.698	11	13	24	10.627
		22.2%	27.8%	24.2%	25.9%	25.9%	23.6%	24.2%	0.825	20.8%	28.3%	24.2%	0.240
	Diabetic bullae	2	3	5	2	2	3	5		4	1	5	
		3.2%	8.3%	5.1%	7.4%	7.4%	4.2%	5.1%		7.5%	2.2%	5.1%	
	Ulceration	21	10	31	7	7	24	31		16	15	31	
		33.3%	27.8%	31.3%	25.9%	25.9%	33.3%	31.3%		30.2%	32.6%	31.3%	
	necrobiosis lipoidica	0	1	1	1	1	0	1		0	1	1	
		0.0%	2.8%	1.0%	3.7%	3.7%	0.0%	1.0%		0.0%	2.2%	1.0%	
	Granuloma annulare	2	1	3	1	1	2	3		0	3	3	
		3.2%	2.8%	3.0%	3.7%	3.7%	2.8%	3.0%		0.0%	6.5%	3.0%	
	Dermatophytosis	2	1	3	0	0	3	3		1	2	3	
		3.2%	2.8%	3.0%	0.0%	0.0%	4.2%	3.0%		1.9%	4.3%	3.0%	
	Rubeosis faciei	1	0	1	0	0	1	1		1	0	1	
		1.6%	0.0%	1.0%	0.0%	0.0%	1.4%	1.0%		1.9%	0.0%	1.0%	
	Digital gangrene	3	0	3	1	1	2	3		1	2	3	
		4.8%	0.0%	3.0%	3.7%	3.7%	2.8%	3.0%		1.9%	4.3%	3.0%	

	Eruptive xanthomas	0	1	1	0	0	1	1		1	0	1	
		0.0%	2.8%	1.0%	0.0%	0.0%	1.4%	1.0%		1.9%	0.0%	1.0%	
	Xerosis	18	9	27	8	8	19	27		18	9	27	
		28.6%	25.0%	27.3%	29.6%	29.6%	26.4%	24%		34.0%	19.6%	27.3%	
Total	Count	63	36	99		27	72	99			53	46	
	% within type of treatment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%			100.0%	100.0%	

Table 6 include the relationships between the skin manifestation and patient hypertension

**Table 6**

Type of skin lesion		hypertension		Total	F.E, P value
		yes	no		
Diabetic dermopathy		19	5	24	19.418
		33.9%	11.6%	24.2%	0.004
Diabetic bullae		3	2	5	
		5.4%	4.7%	5.1%	
Ulceration		10	21	31	
		17.9%	48.8%	31.3%	
necrobiosis lipoidica		0	1	1	
		0.0%	2.3%	1.0%	
Granuloma annulare		1	2	3	

		1.8%	4.7%	3.0%	
	Dermatophy tosis	2	1	3	
		3.6%	2.3%	3.0%	
	Rubeosis faciei	0	1	1	
		0.0%	2.3%	1.0%	
	Digital gangrene	2	1	3	
		3.6%	2.3%	3.0%	
	Eruptive xanthomas	0	1	1	
		0.0%	2.3%	1.0%	
	Xerosis	19	8	27	
		33.9 %	18.6%	27.3 %	
Total	Count	56	43	99	
	% within hypertensio n	100. 0%	100.0%	100.0 %	

## Discussion

We compared our study with study included 347 diabetic patients at the age range of 14-75 years old in Basrah, Iraq and the result was Xerosis 19.1%, Diabetic dermopathy 18.15%, Acanthosis nigricans 17.9 %, Rubeosis faciei 6.6%, Foot ulcer 4.6%, Bullosis 2.6%, Necrobiosis lipoidica 1.1%, Granuloma annulare 0.6%, Eruption xanthoma 0.3%, which agree with our study(45). And other study in Iraqi included 200 consenting patients were interviewed during the period 2005-2006, namely 96 males and 104 females and the result was Diabetic dermopathy 6.5%, Foot ulcer 3.2%, Necrobiosis lipoidica 0.8%, Acanthosis nigricans, which not agree with our study may because our patient not use emollient to exerosis and not adherent to the treatment and we have 13% of patient with ulcer becous poor control their glycemic level (46).and compared with A cross-sectional descriptive study of 500 consecutive patients attending diabetic clinic was conducted in a tertiary care hospital in Indian, the result was Xerosis 4.4%, Dermophyte 8.1%, Acanthosis nigricans 5%, Foot ulcer 0.2%, Necrobiosis lipoidica 0, Eruption xanthoma 0.6%, which was agree with our study but less percentage may be because good control on diabetes and available a lot of diabetic care center(47).and we compared our stury with 106 diabetic patients attending the Department of Dermatology, Al-Farwaniya Hospital, Kuwait, and diabetic in-patients with skin disorders were examined over a period of 18 months from March

2004 to August 2005, the result was the infections (68.0%) were the major cutaneous manifestations with fungal infection occurring in 41 patients followed by bacteria in 27. The second most common presenting symptom was pruritus. This study not agree with our study we have less infectious disease maybe because our patient less attending to dermatological department so not diagnostic(48). Finally we compared our study with study conducted in Brazil evaluated 403 patients with type 1 (n = 125) and type 2 (n = 278) DM assisted in the outpatient clinic from Ribeirão Preto Hospital in 2000. The study demonstrated that 81 % of patients had at least one dermatologic lesion, being dermatophytosis the most common lesion. Of all dermatophytosis, 42.6 % were onychomycoses (n = 172) and 29.2 % were tinea pedis (n = 118). Skin lesions occurring in more than 10 % of the patients were actinic degeneration (62 %), skin xerosis (20.8 %), benign skin tumor (23.5 %), candidiasis (12.9 %) and scar (12.6 %) . this study not agree with our study because early-stage disorders, such as xerosis and callus, detection and management so reducing complications related to DM and the tropical weather increase the infectious in brazil (49).

## Conclusion:

Skin is involved in diabetes quite often and the manifestations are Noninfectious Skin lesions. High prevalence of diabetic ulcer in our diabetic population is perhaps due to poor control glycemic level and the patient may refuse to take treatment or visit the doctor until the diabetic complications started

## Recommendation

1. The patient should control the glycemic index
2. The patient should regular visit the diabetic center for check the blood glucose
3. Any patient note that he/she have cutaneous change like discoloration, injury should consult the doctor
4. Any parson with diabetic should have life style modified like decrease fat in meal, do more exercise and abstained smoking
5. Keep the area of skin manifestation clean and dry
6. The patient should take his/her drugs in proper time
7. Person who have family history or new symptom of diabetic should consult the doctor for check blood glucose

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ونقدم شكر خاص الى موظفي المركز السكري.  
الخلاصة

مرض السكري هو مرض شائع ومنهك يصيب مجموعة متنوعة من الأعضاء بما في ذلك الجلد. الاعراض الجلدية في مرض السكري هي علامات تصف الأعراض أو التغيرات الفسيولوجية. لاضطراب غير جلدي بسبب عدم السيطرة على مرض السكري. الهدف من الدراسة

لتقييم انتشار وأنماط المظاهر الجلدية لدى مرضى السكري و شملت هذه الدراسة المقطعية 237 مريضاً تم اختيارهم عشوائياً في مستشفى الغدد الصماء المركزي ومستشفى الناصرية التعليمي خلال (30 نوفمبر 2021 حتى 7 فبراير 2022)

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