

The Prevalence of Scrotal Lesions Among A Sample of Iraqi Patients with Skin Disorders

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Abstract

A total of 664 patients with scrotal lesions were included in this study with ages ranged from one day to 75 years and a mean age of 32.3 years , 284 (42.7%) of all patients were within the 3rd and the 4th decades of life . This work showed that 112 (16.9 %) of all patients had lichen simplex chronicus followed by scabies which was seen in 74 (11.2 %) of the patients .

The group of the common skin disorders was the largest group in which 254 (38.2 %) of the patients lied followed by the group of the infectious diseases [including SAD^s (Sexually Acquired Diseases)] in which 205 (30.9 %) of the patients lied , the study also showed that the most common skin disorder which affects adult scrotum was lichen simplex chronicus while candidiasis was the commonest in pediatrics.

This two years study showed that the prevalence rate in the out patient clinic regarding scrotal lesions in different skin disorders 6.3 % (664 from 10500 male patients).

To the best of our knowledge, this is the first study in Iraq which dealt with this subject.

Key words :Prevalence ,scrotum, skin disorders

Introduction:

The scrotum is a pouch of skin that contains many important structures like the testicles. The scrotal skin has numerous pilosebaceous, eccrine and apocrine glands^[1]. The relative thinness of the scrotal epidermis , the rugose surface of the scrotum and its continually humid state allow concentration, penetration and absorption of topically applied chemicals(including carcinogens).^[2,3]

The scrotal skin usually contaminated easily by urinary and urethral discharges, contact with female genitalia allows cross

infection of viral or venereal diseases,the proximity of deep skin folds encourage moisture and maceration and the influence of social customs as tight clothes add another hazard to the scrotum.^[2,4]

The scrotum seems to be relatively spared in many skin problems , however , it may be involved by other different dermatoses and in a different frequencies as what's seen in table (1) ^[1,5-9] This study was designed to show the prevalence of the scrotal lesions among a sample of Iraqi males with different skin disorders.

Table (1):The frequency of scrotal involvement in different skin diseases

No.	Group of diseases	Scrotal involvement		
		Common	Uncommon	Rare
1.	Common skin diseases	-Angioedema -Contact dermatitis -Lichen simplex chronicus	-Annular lichen planus -Hidradenitis suppurativa -Flexural psoriasis -Pemphigus -Seborrheic dermatitis	-Lichen planus -Lichen nitidus -Psoriasis vulgaris -Steven-Johnsen syndrome -Vitiligo
2.	Infection (+SAD^o)	-Candidiasis -Folliculitis -Fournier's gangrene -Tinea cruris ((previously rare involvement))	-Boils -Cellulitis -Molluscum contagiosum -Secondary syphilis -Warts	-Erythrasma -Herpes genitalis -Primary syphilis
3.	Infestations	-Filariasis -Scabies -Post scabietic nodules	Schistosomal granuloma -Phthirus pubis	
4.	Benign tumors and cysts	-Fordyce angiokeratoma -Genital leiomyoma -Epidermal cysts	-Common moles (nevi)	-Hemangioma -Seborrheic keratosis -Skin tags
	Premalignant and malignant skin conditions	- Extramammary Paget's disease -HIV related Kaposi's sarcoma	-Porokeratosis of Mibelli -Squamous cell carcinoma (SCC) -Verrucous carcinoma	-Basal cell carcinoma -Bowen's disease -Cutaneous horn - Kaposi's sarcoma - Malignant melanoma -Metastatic CA -Sarcoma
6.	Genodermatoses	-----	- Darrier's disease -Hailey-Hailey disease	- Neuro fibromatosis
7.	Metabolic and nutritional diseases	- Fabry's disease - Idiopathic scrotal calcinosis	- Lipoid proteinosis	- Acrodermatitis enteropathica
8.	Drug reactions	-----	- Fixed drug eruption - Warfarin necrosis	
9.	Systemic diseases	- Behcet's syndrome	- Acanthosis (pseudo acanthosis) nigricans - Leukemia cutis -Reiter's disease	- Crohn's disease - Henoch- schonlein purpura -Lymphocytoma cutis
10.	Others	-----	- Juvenile xanthogranuloma	- Verrucous xanthoma

			- Cold panniculitis	
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Patients & methods :

A total of 664 male patients with ages between one day and 75 years and a mean age of 32.3 years were enrolled in this study which was conducted in the department of Dermatology and Venereology of the University hospital of Saddam college of Medicine during the period from May 2000 till the end of April 2002 .

All patients were assessed fully by (to reach an accurate clinical diagnosis):

- 1 - History which includes: age , occupation , residence , chief complaint (and duration) , onset of the disease , history of topical and or systemic drug in take, symptoms (like pain , tenderness , itching , burning ----), history of recurrent attacks of the present problem , family history of similar or related conditions.
- 2 - Clinical examination , which includes : site , size , number , morphology , symmetry and distribution of the lesions with a full general examination searching for any associated dermatological feature .

The diagnosis is primarily clinical but relevant investigations like skin biopsy , Wood's light examination , KOH examination , Gram stain , Culture and sensitivity test , serological tests for syphilis (VDRL + TPHA) , CBP , differential count , ESR , blood sugar ----- were done (to settle down the clinical diagnosis in suspicious cases)0

Results:

Six hundred sixty four male patients with scrotal lesions were included in this work , 284 (42.7 %) of all patients were in the third and the fourth decades of life . (Table 2) .

- Lichen simplex chronicus was the commonest skin disease which had scrotal involvement as 112 (16.9 %) of all patients had this problem followed by scabies in 74 (11.2 %) patients and candidiasis in 56 (8.4%) of them . (Table 2) .

- The group of common skin diseases comprises the largest group of disorders in which 254 (38.2 %) of the patients lied followed by the infectious (+ SAD^s) group in which 205 (30.9 %) of the patients lied and the infestation group in which 116 (17.5 %) of the patients lied . (Table 3).

- In adults , it seemed that the disorders more commonly involved the scrotum (in order of frequency) were :

Lichen simplex chronicus , scabies , mollusum contagiosum and tinea cruris .

While in children the commonest disorders which involved the scrotum were (in order of frequency) :

Candidiasis , Contact dermatitis , scabies and seborrhic dermatitis .

About 10500 males were attending the O-P clinic of Dermatology within a two years period so the prevalence rate of scrotal lesions among a sample of Iraqi males with different skin disorders is about (6.3 %) .

2): The pattern of scrotal involvement in a sample of Iraqi males in relation to age

Disease	Age by years								Total	%
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79		
Lichen simplex chronicus	-	9	18	25	23	16	13	8	112	16.9
Scabies	15	15	15	12	7	3	4	3	74	11.2
Candidiasis	30	3	3	5	5	4	3	3	56	8.4
Contact dermatitis	22	5	3	5	4	3	3	3	48	7.2
Seborrheic dermatitis	17	3	5	3	4	3	3	-	38	5.7
Molluscum contagiosum	-	9	15	9	3	-	-	-	36	5.4
Tinea cruris	-	4	7	5	5	7	4	4	36	5.4
Post scabetic nodules	3	6	9	3	4	3	3	3	34	5.1
Warts	-	5	11	10	2	-	-	-	28	4.2
Fordyce angiokeratoma	-	-	12	8	4	-	-	-	24	3.6
Epidermal cyst	-	-	5	7	6	2	2	-	22	3.3
Behcet's syndromes	-	-	6	8	6	-	-	-	20	3
Flexural psoriasis	2	2	3	5	4	2	-	-	18	2.7
Secondary syphilis	-	-	7	5	2	-	-	-	14	2.1
Angioedema	1	1	2	2	2	2	1	1	12	1.8
Erythrasma	-	-	4	1	5	1	1	-	12	1.8
Folliculitis	-	-	3	3	2	2	-	-	10	1.5
Nevi	-	-	4	4	2	-	-	-	10	1.5
Psoriasis vulgaris	1	2	2	2	2	1	-	-	10	1.5
Boils	-	-	1	2	1	2	1	1	8	1.2
Phthirus pubis	-	-	3	2	3	-	-	-	8	1.2
Vitiligo	1	3	1	3	-	-	-	-	8	1.2
Hidradenitis suppurativa	-	1	2	1	-	-	-	-	4	0.6
Primary syphilis	-	-	2	2	-	-	-	-	4	0.6
Fixed drug eruption	-	-	1	1	1	-	-	-	3	0.45
Hailey – Hailey disease	-	-	-	1	1	-	-	-	2	0.3
Leukemia cutis	-	-	-	-	2	-	-	-	2	0.3
Lichen planus	-	-	-	1	-	1	-	-	2	0.3
Acrodermatitis enteropathica	1	-	-	-	-	-	-	-	1	0.15
Darrier's disease	-	-	1	-	-	-	-	-	1	0.15
Herpes genitales	-	-	1	-	-	-	-	-	1	0.15
Lichen nitidus	-	-	-	1	-	-	-	-	1	0.15
Pemphigus vegetans	-	-	-	1	-	-	-	-	1	0.15
Acanthosis nigricans	-	-	1	-	-	-	-	-	1	0.15
Seborrheic keratosis	-	-	-	-	-	1	-	-	1	0.15
S.C.C.	-	-	-	-	-	-	1	-	1	0.15
Verrusous CA.	-	-	-	-	-	-	-	1	1	0.15
Total	93	68	147	137	100	53	39	27	664	100

Table (3) : The distribution of scrotal involvement according to groups of disorders

Group of disorders	No.	%
Common skin disorders	254	38.2
Infections (+SAD ^s)	205	30.9
Infestations	116	17.5
Benign skin tumors and cysts	57	8.6
Systemic disorders	22	3.3
Drug reactions	3	0.45
Genodermatoses	3	0.45
Metabolic and nutritional disorders	2	0.3
Premalignant and malignant skin tumors	2	0.3
Total	664	100

Discussion:

Many skin problems have a preferential areas of involvement and the scrotum is considered as one of the preferential areas for many skin disorders .

In our study, scrotal involvement seemed to be quite common in many dermatoses like lichen simplex chronicus , scabies , candidiasis and dermatophytosis (which is considered previously as a disease of unusual or rare scrotal involvement) , also the scrotum may be the only site of many skin problems like scrotal idiopathic calcinosis , epidermal scrotal cysts and Fordyce scrotal angiokeratoma and these points are in agreement with the literature^{1,2} , however , many other dermatoses like seborrheic dermatitis , molluscum contagiosum and warts seemed also to be fairly commonly involve the scrotum and this point is inconsistent with other studies and this difference is may be due to the presence of different regional involvements for the same disease in different geographical areas or it may be due to the higher

incidence and prevalence of these disorders in our country .^{1,3}

The predominant scrotal involvement by many infectious disorders and STD^s at the late 2nd , at the 3rd and the 4th decades of life is suspected because these ages are the ages of the active sexual life and this point is not mentioned in the previous studies .

This recent work showed also that adults had more involvement by lichen simplex chronicus than by other dermatoses while children had more involvement with candidiasis and this point is consistent with other studies.^{1,2,3}

Finally, the scrotum can be a site of involvement of many benign , premalignant and malignant skin conditions and this point is similar to the literature .^{1,2,5}

Conclusions:

The involvement of scrotum is fairly common in many skin and other systemic disorders, many dermatoses may involve the scrotum only with no other regional involvement, also many different

types of skins tumors may affect the scrotum as the only or the preferential site of involvement, so to achieve a good and an accurate diagnosis and treatment of many skin problems, the scrotum is preferably to be examined in all related conditions and even in disorders with rare scrotal involvement.

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