

Frequency and types of skin disorders and associated diabetes mellitus in elderly Jordanians

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تواتر وأنماط الاضطرابات الجلدية ومرض السكرى المصاحب لها في الأردنيين المسنين
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الخلاصة: تم إجراء دراسة استعادة لمرضى مسنين عددهم 232 مريضاً في الفترة من تموز/يوليو 1998 إلى نيسان/أبريل 2000 في عيادة جلدية بمستشفى الأميرة هيا، في العقبة، وذلك للوقوف على مستوى انتشار الاضطرابات الجلدية، والاضطرابات الأكثر ارتباطاً بمرض السكرى بين المسنين. وكان عدد النساء المتزوجات على العيادة أكثر قليلاً من عدد الرجال. وكانت الإكزيمة/التهاب الجلد هي الاضطراب الجلدي الأكثر ظهوراً (25.9% من الحالات)، تليها الحكة بدون حدوث آفات جلدية (15.1%)، ثم العدوى الفيروسية (14.7%)، وأكثرها شيوعاً الهربس النطاقي، ثم العدوى الفطرية (13.8%)، ثم العدوى الجرثومية (10.3%). وكانت العدوى الجرثومية هي الاضطراب الجلدي الأكثر شيوعاً بين مرضى السكرى (62.5%)، تليها العدوى الفطرية (50%). وتسبب أمراض الجلد مراضة جسيمة بين المسنين؛ ويمكن للتثقيف الصحي وأنشطة تعزيز الصحة أن يؤثرتا تأثيراً إيجابياً في الحد من هذه الاضطرابات بين المسنين، ولاسيما المصابين بمرض السكرى.

ABSTRACT A retrospective study of 232 elderly patients seen between August 1998 and April 2000 at the skin clinic in Princess Haya hospital, Aqaba, was undertaken to determine the prevalence of skin disorders, and those most commonly associated with diabetes mellitus, in the elderly. Eczema/dermatitis was the commonest skin disorder seen (25.9% of cases), followed by pruritus without skin lesions (15.1%), viral infection (14.7%, most commonly herpes zoster), fungal infection (13.8%), and bacterial infection (10.3%). Bacterial infection was the commonest skin disorder in patients with diabetes mellitus (62.5%), followed by fungal infection (50.0%). Skin diseases cause considerable morbidity in elderly people; health promotion and education can do much to reduce the risks of these disorders in the elderly, especially those with diabetes.

Fréquence et nature des troubles cutanés et diabète sucré associé chez les personnes âgées en Jordanie

RESUME Une étude rétrospective de 232 patients âgés examinés entre août 1998 et avril 2000 à la consultation de dermatologie de l'Hôpital Princesse Haya à Aqaba a été réalisée pour déterminer la prévalence des troubles cutanés et identifier ceux qui sont les plus couramment associés au diabète sucré chez les personnes âgées. L'eczéma/la dermatite était le trouble cutané le plus fréquemment observé (25,9 % des cas), suivi par le prurit sans lésions cutanées (15,1 %), l'infection virale (14,7 %, le plus fréquemment la zona), la mycose (13,8 %) et l'infection bactérienne (10,3 %). L'infection bactérienne était le trouble cutané le plus fréquent chez les patients atteints de diabète sucré (62,5 %), suivie par la mycose (50,0 %). Les maladies cutanées causent une morbidité considérable chez les personnes âgées ; la promotion de la santé et l'éducation sanitaire permettent dans une large mesure de réduire les risques liés à ces maladies chez les personnes âgées, notamment celles qui sont diabétiques.

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Introduction

The medical problems of elderly people are set to become increasingly important in the practice of general medicine, because of continual changes in population size and age distribution. Our region is undergoing rapid development and urbanization, with an increase in the number of adults and elderly people [1]. Enhanced survival into old age is the result of changes in the socio-economic development within societies, and will inevitably affect the pattern of diseases [2].

Skin disorders can cause considerable morbidity in elderly people. Health promotion can help to prevent the development of such disorders and hence reduce the burden that they impose on the elderly.

Although there have been some studies on the pattern of skin diseases in the general population in the Middle East [3,4], there is a paucity of studies on the types of skin disorders affecting elderly people. This study therefore aimed to determine the pattern of skin disorders in elderly patients seen at one hospital clinic in the south of Jordan over a two-year period.

Methods

A retrospective study was carried out at the Princess Haya hospital, Aqaba, Jordan, between August 1998 and April 2000. The medical records of all patients visiting the skin clinic during the study period were reviewed. A total of 1195 files were examined. There were 232 patients aged 60 years or more with skin disorders.

The medical records of each elderly patient were reviewed, and the age, sex, diagnosis, results of investigations or histological records, and presence of associated diabetes mellitus, were recorded.

Results

The medical records of 232 elderly Jordanians (130 women and 102 men) were analysed. Slightly more women than men visited the skin clinic: the female:male ratio was about 4:3.

Table 1 shows the types of skin diseases recorded over the study period, and gives a breakdown of some of the commonest diseases. Dermatitis/eczema was the commonest skin disorder seen, affecting 25.9% of patients. Among these, contact dermatitis and hand eczema accounted for the majority of cases, with hand eczema being commoner in women.

Pruritus with no primary skin lesions accounted for 15.1% of all cases. It was mainly due to senile dry skin in patients without diabetes, and was slightly commoner in men; psychogenic itching, the next most common cause, was more common in women. Pruritus was associated with lymphoma in only one patient.

Viral skin infections accounted for 14.7% of all cases. Herpes zoster was the most common viral skin infection seen, followed by herpes simplex, then viral warts. These were not associated with internal malignancy or human immunodeficiency virus infection in any of the patients.

Fungal and bacterial infections accounted for 13.8% and 10.3% of cases respectively. Fungal infections, mainly *Candida*, were more common in women. Papulo-squamous and pigmentary disorders were seen in 4.7% and 4.3% of cases respectively, with a higher prevalence of pigmentary disorders in men than women. Parasitic infestations were seen in 3.0% of cases. It is noteworthy that only two cases of malignant skin tumours were seen: squamous cell carcinoma and basal cell carcinoma, both in male patients.

Sixty patients had diabetes mellitus, accounting for 25.9% of all cases. Table 2

Table 1 Prevalence of skin disorders in the study sample, with a breakdown of some of the more common disorders

Skin disease	Females No.	Males No.	Total No.	%
<i>Eczema/dermatitis</i>	34	26	60	25.9
Contact dermatitis	8	10	18	
Hand eczema	11	4	15	
Seborrhoeic eczema	3	4	7	
Lichen simplex	4	3	7	
Discoid eczema	4	3	7	
Stasis eczema	4	2	6	
<i>Pruritus</i>	20	15	35	15.1
Dry skin (senile)	5	7	12	
Diabetes	9	5	14	
Psychogenic	4	1	5	
Kidney diseases	1	1	2	
Liver diseases	1	0	1	
Lymphoma	0	1	1	
<i>Viral infections</i>	18	16	34	14.7
Herpes simplex	5	5	10	
Herpes zoster	9	7	16	
Viral warts	4	4	8	
<i>Fungal infections</i>	19	13	32	13.8
Candidal infection	10	6	16	
Dermatophytoses	7	6	13	
Pityriasis versicolor	2	1	3	
<i>Bacterial infections</i>	14	10	24	10.3
Pyoderma ulcers	8	7	14	
Folliculitis	4	3	7	
<i>Skin disease</i>	Females No.	Males No.	Total No.	%
Boils (furunculosis)	1	1	2	
Impetigo contagiosa	1	0	1	
<i>Pigmentary disorders</i>	4	6	10	4.3
Vitiligo	2	4	6	
Hypomelanosis	2	1	3	
Hyperpigmentation	0	1	1	
<i>Papulo-squamous disorders</i>	6	5	11	4.7
Lichen planus	1	3	4	
Psoriasis	5	2	7	
<i>Parasitic infestations</i>	4	3	7	3.0
Scabies	2	2	4	
Leishmaniasis	2	1	3	
<i>Skin tumours</i>	1	3	4	1.7
Benign	1	1	2	
Malignant	0	2	2	
<i>Other</i>	10	5	15	6.5
Urticaria	2	2	4	
Drug eruption	3	1	4	
Pemphigoid	1	1	2	
Purpura (senile)	2	0	2	
Rosacea	1	0	1	
Erythema nodosum	1	0	1	
Exfoliative dermatitis	0	1	1	
Total	130	102	232	100

shows the skin disorders seen in these patients. The most common skin disorders were bacterial infections (pyoderma/ulcers), seen in 62.5% of cases, followed by fungal infections in 50%, pruritus without skin lesions in 37.1%, viral infections in 29.4% and pigment disorders in 20%.

Discussion

The pattern and frequency of skin diseases seen in the elderly patients in this study

were similar to those found in other studies [5,6]. The results indicate that skin diseases in elderly Jordanians are more prevalent in women; this could be partly due to the greater awareness of Jordanian women of health issues in general. In contrast, studies from Saudi Arabia found skin disorders to be more prevalent in men, and attributed this to under-representation of women at skin clinics, as studies on hospital attendance show a preponderance of males at Saudi clinics [4,7].

Table 2 Prevalence of skin disorders in patients with diabetes mellitus

Skin disorder	Patients affected		Patients with diabetes mellitus (n = 60) %
	No.	No.	
Bacterial infections	24	15	62.5
Fungal infections	32	16	50.0
Pruritus	35	13	37.1
Viral infections	34	10	29.4
Pigmentary disorders	10	2	20.0
Parasitic infestations	7	1	14.3
Papulo-squamous disorders	11	1	9.1
Eczema/dermatitis	60	2	3.3

n = total no. of patients with diabetes mellitus.

Eczema/dermatitis—the most common skin disorder seen in our study—is also one of the commonest skin disorders worldwide, as shown by studies from industrialized countries [8,9]. Viral and bacterial skin infections and parasitic infestations, however, are more prevalent in some developing countries [10].

Herpes zoster was the commonest viral skin infection seen in our study, and acute herpetic pain was severe with long duration, necessitating hospital admission in three cases; these were successfully treated with aciclovir. In a previous study [11], the prevalence of severe herpes zoster skin lesions was higher in patients aged over 60 years and in those with trigeminal involvement, which suggests that the reason acute herpetic pain was severe and long-lasting in our patients was the severity of the herpes zoster infection and trigeminal involvement, rather than age alone.

The incidence of all forms of skin cancer among the white population is increas-

ing worldwide as a result of increased exposure to sun [12]. Basal cell and squamous cell carcinomas are the commonest skin cancers in elderly people, whereas malignant melanoma, which has the potential for early metastasis, appears in early adult life. In our study, malignant skin tumours were diagnosed in only 0.9% of cases. This is less than expected, when compared with other countries [6,8,12], and surprisingly low, given the year-round hot and sunny climate in Aqaba. It may be that the Islamic way of dressing, which discourages body exposure, especially in women, played a role in reducing the incidence of skin cancer.

Diabetes mellitus is one of the most common metabolic disorders predisposing to skin and soft tissue infection, particularly of the lower extremities. Often, a rapidly progressive infection will require urgent surgery and parenteral antimicrobial therapy. Improvement of metabolic function and strict hygiene measures in patients with diabetes help to prevent skin infections and reduce the risk of complications developing once infection has occurred [13]. The prevalence of diabetes mellitus found in this study was relatively high (25.9%, Table 2). Bacterial and fungal infections were the most common skin diseases associated with diabetes mellitus (62.5% and 50.0% respectively), and may lead to increased morbidity in the elderly. Most, if not all, patients with diabetes mellitus develop skin manifestations. There is little information available on the common pathophysiological pathway linking diabetes and skin infestation [14]. Despite the lack of controlled studies in this area, recognition of the skin manifestations, treatment options and prognosis for those affected will give patients and their carers a clearer understanding of the treatment alternatives.

Conclusions

Skin diseases cause considerable morbidity in the elderly, although the true burden is difficult to define. Health education and promotion, especially in patients with diabetes, can help prevent the development of skin disorders and their complications, and

assist patients in understanding the disease and treatment alternatives more clearly. Further studies in this field are needed, to help reduce the burden of skin disorders in elderly people, who are often at greater risk of such disorders because of advancing age, general health issues, drug therapy and chronic diseases.

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