Patients seen at the Dermatology ambulatory office in a tertiary care center in Qassim region, Saudi Arabia

Muhammad Shahzad, FCPS[1] Abdullateef A. Alzolibani, MD[1] Ahmad A. Al Robaee, MD[1] Hani A. Al Shobaili, MD[1] Mohammad H. Alsharkasy, MD[2] Abdullah A. Al Marshood, MBBS[3] Abdulhakeem Al Mutiari, MBBS[3] Abdulrahman Aldukhayel, MBBS[3]

Departments:

[1]Department of Dermatology, College of Medicine, Qassim University, Saudi Arabia
[2]Department of Anaesthesia and Intensive Care, College of Medicine, Qassim University, Saudi Arabia
[3]College of Medicine, Qassim University, Saudi Arabia

Abstract:

Background: In Saudi Arabia where there is lack of dermatologists in primary health care centers, patients with simple or minor skin conditions have to attend to hospitals to be treated. We analyzed the data of patients with cutaneous disorders attending the tertiary referral hospital in Qassim region of Saudi Arabia, with the aim to identify the most common conditions that patients complain of, in order to define the areas where the education of General Practitioners in Dermatology must focus.

Methodology: All patients seen at the Dermatology ambulatory office in the Emergency Department of Qassim University affiliated hospital from January 2011 to December 2011 were included in this retrospective analysis. The medical records of the patients (history, physical examination and laboratory investigations) were analyzed to ascertain the diagnosis and the management of cases. All patients were evaluated by qualified dermatologists.

Results: A total of 1147 patients attended the Dermatology ambulatory office. Most patients were young adults in the age group 21–30 years (34.4%). Allergic skin diseases (65.2%), mostly dermatitis (48.8%) and urticaria (10.5%) were the most common for attendance, followed by infectious diseases (25.8%) and inflammatory and autoimmune disorders (5.3%). The management of the vast majority of cases (94.1%) consisted of systemic treatment and 58.2% patients required topical treatment. A re-evaluation plan as outpatients was planned in 9.0% patients while only 0.3% of patients required admission in the hospital.

Conclusion: Allergic and infectious skin diseases were the most common cutaneous diseases in patients attending this tertiary University hospital, while the management of most patients did not require specialized care. On the basis of the present data, the training of primary health care providers in Dermatology should emphasize these common conditions, with the aim of improving primary care and alleviating the burden on hospital care.

Key words: Dermatology, ambulatory office, Saudi Arabia

Correspondence:

Dr. Muhammad Shahzad
Assistant Professor
Department of Dermatology
College of Medicine, Qassim University,
P.O. Box 30109, Buraidah 51477
Qassim, Saudi Arabia.
Tel Office: +966 6 3800050 Ext. 2105
Cell phone: +966 554016283
Fax: +966 6 3801228
E-mail: shahzad.derm@gmail.com

Introduction:

During the last three decades, dramatic changes have occurred in health care provision in Saudi Arabia. Managed care plans attempt to reduce costs by encouraging primary health care providers to handle a greater and wider range of conditions. [1] In the United States, approximately 6% of outpatient visits are for dermatological diseases and non-dermatologists treat a high percentage of these patients. [2, 3] In Saudi Arabia, primary health services are still developing, in particular in cities, where there is a lack of Dermatologists in primary health care centers. In Qassim region, there are very few Dermatologists working as private practitioners in order to provide care to patients who would refer, self-pay, themselves directly to a specialist. Therefore, most patients with any type of skin disorder attend the Dermatology ambulatory office in the Emergency Department of Qassim University affiliated hospital in order to be diagnosed and treated. The aim of this study is to determine the type (diagnosis and classification) of skin disorders that patients present with and to ascertain how they are managed. The rationale of this study is to improve the education of primary health care providers [4] by focusing on diagnosis and treatment of the most common of cutaneous diseases.

Patients and Methods:

All patients seen at the Dermatology ambulatory care clinic in the Emergency Department of Qassim University affiliated hospital from January 2011 to December 2011 were included in this retrospective analysis. From the medical records, history, physical examination and whenever necessary, laboratory investigations were analyzed. All patients were evaluated by qualified dermatologists. Sex, age and clinical diagnoses of the most common skin problems were recorded. The management of the patients was also studied. Descriptive statistics were carried out. The study protocol was approved by the Ethics Committee of College of Medicine, Qassim University. Data were analyzed in computer software programme SPSS version 16 (Statistical Package for Social Science, version 16).

Results:

The monthly distribution of all patients and skin cases attending the Emergency Department of Qassim University affiliated hospital during 2011 is shown in Table 1. A total of 143136 cases during the year 2011 attended the Emergency Department of Qassim University affiliated hospital for different emergency situations. The number of skin cases were 1147 (0.8%) out of which 609 (53.1%) were males and 538 (46.9%) were females. Age distribution of cases is shown in Table 2. The age range of skin cases was 1 to 95 years with the mean age of 28.19 ± 13.48 years. Percentage of patients in the age group 21–30 years (34.4%) was highest.

Table 1: Monthly distribution of all patients and skin cases attending Emergency Department of Qassim University affiliated hospital during 2011

Month	Total ER visit	No. of skin cases	% of skin cases/ total visit
Jan	10633	131	1.23
Feb	10611	88	0.83
Mar	12061	107	0.89
Apr	11625	89	0.77
May	11830	89	0.75
Jun	10637	99	0.93
Jul	10891	95	0.87
Aug	11667	103	0.88
Sep	11321	116	1.02
Oct	14851	67	0.45
Nov	13131	101	0.77
Dec	13878	62	0.45
Total	**143136**	**1147**	**0.80**

Table 2: Age distribution of patients with skin problem attending Emergency Department of Qassim University affiliated hospital

Age groups	Cases (n)	Percentage (%)
0 – 10	28	2.4
11– 20	294	25.8
21– 30	395	34.4
31– 40	215	18.6
41– 50	119	10.4
51– 60	59	5.1
61– 70	19	1.7
71– 80	10	0.9
81– 95	8	0.7
Total	**1147**	**100.0**

Table 3: Distribution of cases in relation to the type of skin disorder

Type of skin disorder	Cases (n)	Percentage (%)
Allergic skin disorders	**748**	**65.2**
Dermatitis	560	48.8
Urticaria	121	10.5
Drug eruptions	35	3.1
Erythema multiforme	32	2.8
Infectious skin disorders	**296**	**25.8**
Viral infections	**244**	**21.2**
Chickenpox	215	18.7
Herpes zoster	20	1.7
Herpes simplex	7	0.6
Warts	2	0.2
Bacterial infections	**45**	**3.9**
Furunculosis	31	2.7
Cellulitis	11	1.0
Acute paronychia	3	0.3
Fungal infections	**3**	**0.3**
Tinea corporis	3	0.3
Parasitic infestations	**4**	**0.3**
Cutaneous leishmaniasis	3	0.3
Scabies	1	0.1
Inflammatory and autoimmune skin disorders	**61**	**5.3**
Acne	22	1.9
Pityriasis rosea	16	1.4
Psoriasis	8	0.7
Bullous diseases	8	0.7
Lichen planus	7	0.6
Miscellaneous group	**42**	**3.6**
Burns	21	1.8
Aphthous ulcers	8	0.7
Skin abrasion	5	0.4
Insect bite	4	0.3
Alopecia	2	0.2
Decubitus ulcers	1	0.1
Skin dryness	1	0.1
Total	**1147**	**100.0**

The pattern and the relative frequency of skin diseases are shown in Tables 3. More than sixty percent of the patients (65.2%) attended the hospital with a cutaneous manifestation of an allergic disorder [Table 3]. The most common were dermatitis and eczematous disorders that accounted for 48.8% (560 patients), followed by acute urticaria or exacerbations of chronic urticaria (10.5%, 121 patients) and drug eruptions (35 patients, 3.1%), whereas erythema multiforme accounted for 2.8% (32 patients). A breakdown of dermatitis subtypes showed that contact dermatitis is the most common (33.9%, 190 of contact dermatitis cases), followed by atopic dermatitis (21.4%, 120 of cases). Dyshidrotic and seborrheic dermatitis were observed in 10.9% (61 cases) and 7.1% (40 cases) respectively. Unclassified dermatitis was seen in 26.6% (149 patients). Infectious diseases with cutaneous manifestations were observed in 296 (25.8%) patients. Among the infectious skin disorders, viral infections were most common (21.2%, 244 patients). Bacterial infectious diseases accounted for 3.9% (45 patients), followed by parasitic infestations (0.3%, 4 patients) whereas fungal infections were seen in only 3 (0.3%) patients [Table 3].

Exacerbations of mostly chronic autoimmune and inflammatory skin disorders

were the reason of the consultation in 5.3% of the patients [Table 3]. Acne accounted for 1.9% of them. Pityriasis rosea, an acute onset disease of unknown origin, was diagnosed in 1.4% of the patients. Psoriasis was seen in 8 (0.7%) patients, bullous diseases in 8 (0.7%) patients and lichen planus in 7 (0.6%) patients. Several other causes accounted for 3.6% of outpatient visits at the emergency department [Table 3]. Among these, 21 (1.8%) patients reported with burns, 8 (0.7%) patients with aphthous ulcers, 5 (0.4%) patients with skin abrasions and 4 (0.3%) patients with insect bites. Alopecia was seen in 2 (0.2%) patients and only one (0.1%) patient reported with decubitus ulcers and one (0.1%) patient with skin dryness.

Table 4 shows management of all patients who attended the Dermatology ambulatory office. Out of 1147 total skin cases, 1079 patients (94.1%) received systemic treatment and 668 (58.2%) patients received topical treatment. A re-evaluation plan as outpatients was planned in 103 patients (9.0%). Four patients (0.3%) were admitted in the hospital for further diagnostic procedures and management. For 12 cases (1.0%) referral to an internist for further was necessary.

Table 4: Management of all patients who attended the Dermatology ambulatory office

Type of management	Cases (n)	Percentage (%)
Systemic treatment	1079	94.1
Topical treatment	668	58.2
Outpatient plan consultation	103	9.0
Hospitalization	4	0.3
Internal medicine specialist's consultation	12	1.0

Discussion:

The Department of Dermatology in Qassim University affiliated hospital is one of the two tertiary referral departments in Qassim region of Saudi Arabia (population 600 000). In addition, there is a lack of dermatologists in primary health care centers and the number of dermatologists providing first contact care is limited. First manifestation or acute exacerbation of a chronic existing skin disease is therefore a common reason for patients to seek care at the Emergency Department of Qassim University affiliated hospital. This study was therefore conducted to describe the pattern of those dermatological diseases that could be managed by primary care physicians if they had received appropriate training.

The highest number of cases observed was allergic skin disorders. Among the allergic skin disorders, the highest percentage of cases was dermatitis followed by acute urticaria, which are both skin diseases based on a background of immediate or delayed hypersensitivity [Table 3]. This observation correlates well with other studies that report allergic skin diseases as the most common cause to seek care from a health provider. [4-7] Among the allergic skin diseases observed, dermatitis was predominant. The breakdown of dermatitis subtypes has revealed a high frequency of contact dermatitis (33.9%). Shenefelt reports contact dermatitis as the first among the types of dermatitis, seen in a similar percentage of 30%. [8] This was followed by atopic dermatitis while dyshidrotic dermatitis was found third, in contrast with other studies that report a low frequency of dyshidrotic dermatitis. [5] Urticaria represents a disease with a wide spectrum of causes. The patients attending our hospital suffered from either acute urticaria or exacerbations of chronic urticaria. Patients with a clear cause for their urticaria, who were mostly acute urticaria patients, were advised to avoid the causative agent, i.e. the suspected food or drug. Patients with chronic urticaria, however, after treatment of the relapse episode were referred to a specialist for clarification of the complex aetiology of the disease and for further follow up. Drug eruptions and erythema multiforme represented only a small percentage of patients seeking for care. Several of these cases represented undiagnosed or insufficiently treated patients with more severe course that necessitated hospitalization for identification of the causative agent and further treatment. However the total hospitalization rate of all cases was only 0.3%.

Infectious skin disorders were the second most common disease group in this study. Viral skin infections ranked higher among cutaneous infections. Chickenpox (18.7%) was highest among the viral infections followed by herpes zoster and herpes simplex. Bacterial infections were the second most common reason for patients with infections seeking care, followed by parasitic infestations and fungal diseases. Furunculosis (2.7%) was the highest among the bacterial skin infections. Parasitic diseases i.e. scabies was observed in a very low frequency (0.1%) and this might be due to misdiagnosis and /or an overlap with unclassified dermatitis that was detected in a relatively high percentage (26.6%) among the dermatitis cases. Infectious and parasitic diseases are less common in relation to the findings of other studies in Africa where the socio-economic conditions are different. [5, 6]

Inflammatory and autoimmune disorders represent mostly diseases with a chronic and relapsing course. Acne cases were seen highest (1.9%) among the inflammatory and autoimmune disorders. Acne is a common skin disorder that affects susceptible pilosebaceous follicles of mainly teenagers and young adults. [9, 10] The majority of acne patients had already attended a prior consultation. Acne is found worldwide and is more severe in males, with clinical evidence indicating a familial trait. [11] Psychologic and emotional stress may accompany this skin condition. [12] Pityriasis rosea was the leading cause of dermatological consultation for papulosquamous diseases, seen in 1.4% of the total cases examined (16 cases). This finding is similar to the finding of Symvoulakis et al who reported pityriasis rosea in 1.8% of their study cases. [13] Psoriasis was reported in 0.7% (8 cases) of all skin cases in our study. Julian reports psoriasis in a percentage of 2.6% and other studies suggest psoriasis as the chronic dermatological disorder that affects 1 to 2% of the population. [14, 15]

A breakdown of care management showed that 94.1% patients required systemic treatment while 58.2% patients required topical treatment. Nine percent patients required further dermatological consultation as outpatients and only 0.3% patients needed hospitalization to manage their skin complaint [Table 4]. Although some of the patients managed by doctors in ambulatory office might still require referral to a specialist, we believe that our results support the hypothesis that first contact care could be provided by a General Practitioner or other primary health care provider.

Conclusion:

Primary care physicians should have the working knowledge to handle the most common skin diseases in order to facilitate the management of common dermatological problems and to recognize those cases that require further referral. This may decrease the rate of hospital visits and reduce costs. Studies similar to ours will help confirm the most common conditions seen in dermatology and will provide the guidelines for the type of skin disorders that should be incorporated into the training program of General Practitioners. [4] Despite the fact that skin disease is often associated with less expensive diagnostic and therapeutic procedures and limited mortality, skin disorders are a leading cause of disability in the society. [16] The pattern of skin diseases is, among other parameters, an index of community development and of quality of the provided care. An effort to improve primary care and alleviate the burden on hospital care should be the target of a health policy.

References:

1. Federman DG, Concato J, Kirsner RS. Comparison of Dermatologic diagnoses by Primary Care Practitioners and Dermatologists. A review of the literature. Arch Fam Med. 1999; 8(2):170-2.
2. Schappert SM: National Ambulatory Medical Care Survey: 1990 Summary. In Advance Data from Vital and Health Statistics, No. 213 Hyattsville, Md: National Center for Health Statistics; 1992.
3. Stern RS, Nelson C: The diminishing role of the dermatologist in the office-based care of cutaneous diseases. J Am Acad Dermat. 1993; 29:773-777.
4. Fleischer AB Jr, Feldman SR, McConnell RC: The most common dermatologic problems identified by family physicians, 1990–1994. Fam Med. 1997:648-52.
5. Dagnatchew Shibeshi: Pattern of skin diseases at the University Teaching Hospital, Addis Ababa, Ethiopia. Int J of Dermatol. 2000; 39:822-825.

6. Sochor H, Seboxa T, Maru M: Pattern of skin diseases in Gondor Administrative Region. Ethiop Med J. 1986; 24:192.
7. Al Shobaili HA. The pattern of skin diseases in the Qassim region of Saudi Arabia: What the primary care physician should know. Ann Saudi Med. 2010 Nov-Dec; 30(6): 448-53.
8. Shenefelt PD: Descriptive epidemiology of contact dermatitis in a university student population. Am J Contact Dermat. 1996; 7(2):88-93.
9. Stathakis V, Kilkenny M, Marks R: Descriptive epidemiology of acne vulgaris in the community. Australas J Dermatol. 1997; 38:115-123.
10. Chan JJ, Rohr JB: Acne vulgaris: yesterday, today and tomorrow. Australas J Dermatol. 2000; 41(Suppl):S69-S72.
11. Goulden V, Mc Geown CH, Cunliffe WJ: The familial risk of adult acne: a comparision between first- degree relatives of affected and unaffected individuals. Br J Dermatol. 1999; 141:297-300.
12. Mallon E, Newton JN, Klassen A, Stewart-Brown SL, Ryan TJ, Finlay AY: The quality of life in acne: a comparision with general medical conditions using genericquestionaires. Br J Dermatol. 1999; 140(4):672-676.
13. Symvoulakis EK, Krasagakis K, Komninos ID, Kastrinakis I, Lyronis I, Philalithis A, et al. Primary care and pattern of skin diseases in a Mediterranean island. BMC Fam Pract. 2006; Jan 31:7:6.
14. Julian CG: Dermatology in general practice. Br J of Dermatol. 1999; 141:518-520.
15. Bonifati C, Carducci M, Mussi A, D' Auria L, Ameglio F: Recognition and treatment of psoriasis. Special considerations in elderly patients. Drugs Aging. 1998; 12(3):177-190.
16. Finlay AY, Coles EC: The effect of severe psoriasis on the quality of life of 369 patients. Br J Dermatol. 1995; 132:236-244.