Report

Dermatology practice in primary health care services:
where do we stand in the Middle East?

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Abstract

Background There has been a distinct expansion of the primary health care services in the Middle East over the past two decades. As a consequence, the exposure of primary care physicians (PCPs) to skin disorders has increased. However, information is lacking regarding the level of proficiency of PCPs in this field.

Objective The purpose of our study is to assess the ability of the primary care physicians, with or without training in dermatology, to identify, diagnose and manage skin disorders.

Material and methods Physicians at university-hospital primary-care clinics were asked to answer a multiple-choice questionnaire regarding various dermatoses. These were grouped into: common, infrequent and rare. Questions included identification of the correct description of the skin lesion, diagnosis, treatment and the desirability of referral. Demographic characteristics of the physicians were also assessed.

Results Nineteen PCPs were included. The eight PCPs who had had specific training in dermatology showed performance superior to that of the PCPs who did not (P = 0.04). Not surprisingly, PCPs were able to make the correct diagnosis more frequently for the common dermatoses than for the infrequent or rare dermatoses (P = 0.001). On the other hand, when asked to recognize a correct description of the skin lesion, the PCPs were most often correct with rare dermatoses, and least often correct with common dermatoses (P = 0.04).

Conclusion PCPs with a short period of specific clinical training in dermatology perform better in identifying, diagnosing and managing skin disorders than those without. Such training for PCPs should be considered to provide more effective delivery of health care.

Introduction

Primary care services have expanded dramatically in the Middle East, including Saudi Arabia, during the past two decades; however, evidence is lacking regarding the level of knowledge that primary care physicians (PCPs) in this part of the world have in recognizing and treating skin disorders.

In 1981, Ramsay and Fox \(^3\) conducted the first study that dealt with the ability of PCPs to recognize various dermatoses. In this study PCPs achieved a mean score of 57% compared with 96% and 91% for dermatology faculty and residents, respectively. Several later studies confirm that physicians other than dermatologists perform poorly in the diagnosis and treatment of skin diseases.\(^4-7\)

The aim of this study is to assess the proficiency of PCPs in their describing, diagnosing, treating and referring patients with skin complaints through a clinical assessment program in a university hospital.

Materials and methods

All physicians working in primary care clinics in King Khalid University Hospital (KKUH) were requested to attend a continuing medical education session in dermatology.

Through a cross sectional approach a self administered questionnaire was distributed to them before the lecture. The questionnaire was composed of two parts: the first for collection of demographic and characteristics and the second part for the assessment of their knowledge of skin disorders. This second part was in the form of an answer sheet containing 15 multiple-choice questions, each inquiring about identification of the correct description of the lesion, diagnosis, treatment and need for referral. Recognizing that multiple-choice methodology may artificially improve the apparent performance of the PCPs, we chose this because it offers ease in comparison with previous studies and in statistical analysis, and a relative lack of
potential for the introduction of bias. A team of board-certified dermatologists presented 15 color Kodachrome slides, with one slide for each skin disease. Subjects were asked to answer the questions according to the slides in order of their presentation. Slides addressed three classes of skin diseases: common, infrequent and rare. Common diseases included urticaria, psoriasis, impetigo, scabies and verruca vulgaris. Infrequent diseases included basal cell carcinoma, noninflammatory tinea capitis, idiopathic guttate hypomelanosis, pityriasis rubra pilaris and perioral dermatitis. Rare diseases included hidradenitis suppurativa, pompholyx, sarcoidosis, Paget's disease and tuberous sclerosis.

Data were analyzed by SPSS version 9. The Mann–Whitney test was used to test difference between two mean scores, while the Kruskal–Wallis one-way ANOVA was used to test difference between more than two means. The chosen level of significance was 95%.

Results

The study included 19 out of 22 primary health care physicians (86%) working in primary care clinics of King Khalid University Hospital. Of the 19 PCPs, nine were male (47%) and 10 female (53%). Their mean age was 39.4 ± 3.3 years. Their highest academic degrees included MBBS (5%), MS (42%), and MRCGP or MRCP (53%). Only eight (42%) had special training in dermatology (in the form of clinical courses of 6 weeks duration or less). The number of patients examined by each physician weekly ranged from 20 to 126 (mean 94 ± 30).

The percentage of physicians correctly identifying the correct lesion description ranged from 21% for verruca vulgaris to 100% for pompholyx (Table 1). Regarding diagnosis, only one physician (5%) diagnosed verruca vulgaris compared to 18 (95%) correctly diagnosing impetigo. The correct treatment for basal cell carcinoma was known by one physician (5%) compared to 18 (94%) for impetigo. All physicians referred cases of psoriasis and hidradenitis suppurativa to a dermatologist.

Table 2 shows that the mean score for identification of the pathologic lesion was highest for rare diseases (3.53 ± 1.02). The difference between mean scores of the three groups of diseases was statistically significant (P < 0.05). On the other hand, the highest score regarding diagnosis was for common diseases (3.47 ± 0.77) and the difference between mean scores of diagnosis of the three groups was also statistically significant (P < 0.05). With respect to treatment, the highest mean score was also for common diseases (2.78 ± 0.96), however, the difference between the mean scores for the three groups was not statistically significant (P > 0.05). There was not a statisti-
Discussion

Approximately 60% of all patients with dermatologic disorders are now treated by nondermatologists. Although this is a nonregional statistic, this proportion is expected to increase with the further restriction of the access to the dermatologists as a result of expansion of primary care services. For more than two decades serious questions have been raised regarding the capacity for diagnosis and therapy of nondermatologists of skin problems, considering the minimal education that medical students and residents in other specialities receive in this field. Subsequently there has been a debate in the literature over who should render primary care to patients with cutaneous disorders; however, there is an ample evidence to suggest that PCPs may be deficient in providing dermatologic care.5-6

In the present study we demonstrate almost the same figures, however, several issues should be addressed. The PCPs received their basic medical-school training in a range of countries in the Middle East with little consistency in their dermatology training. However, although there were no significant differences between highly qualified and less qualified PCPs, it should be emphasized that there is a significant difference in the overall performance of those who had had specific training in dermatology compared to those who did not. This emphasizes the importance of teaching PCPs to be able to recognize common and serious dermatoses. In our institution, where the PCPs are the first-line health-care providers, the validity of such activity has also recently been demonstrated in another discipline.9 Moreover, we feel that the education of PCPs should also include a definition of their limitations in dealing with skin problems. Recognizing this, it should be mentioned that who should teach dermatology to nondermatologists, and how this should be done, are issues that remain to be fully defined and are beyond the scope of this study.10-12

In this study we also noted that, while the PCPs ability to diagnose common skin diseases is more efficient than rare dermatoses, they more readily identify the correct lesion description of the rare dermatoses. We have no clear explanation for such a surprising result.

It is worthy of mention that the overall desire among PCPs to refer patients with skin problems in this study to a dermatologist is 72%, which is comparable to the actual current practice in the same institution of referring 77.5% of patients.13 However, not surprisingly, we found that the intent to refer was dependent on the commonness of the skin disease examined: 58%, 75% and 85% for the common, infrequent and rare dermatoses, respectively. With these intended referral rates it is prudent to enable dermatologists to provide the primary care for all patients with skin diseases to achieve high-quality and cost-effective health management5,6,7,8,9,10,11,12,13,14,15 at least until these figures are demonstrated to have been changed by more thorough training for PCPs in this field. We believe that future studies should be conducted to measure improvements in performance following the introduction of such such training.

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