

Diagnostic Agreement Between Primary Care Physician and Dermatologist and Reason for Referral to Skin Clinic

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Objectives: To assess the extent of diagnostic agreement between primary care physician and dermatologist among referred patients and to identify the reasons of referral.

Design: Prospective study.

Method: Two hundred and thirty-seven newly referred patients by primary care physicians to dermatology outpatient clinic during May 99 to August 99 were studied using the referral letters. Twenty-five cases were excluded because of incomplete data.

Results: The overall agreement of primary care physician with the dermatologist diagnosis was 67.5 percent.

Acne vulgaris and molluscum contagiosum were hundred percent, and nail infection was eighty-six percent while skin tumors were thirty-one point five percent. Fifty-two point seven percent of patients referred required hospital-based management while thirty-two percent were referred to establish the correct diagnoses by the dermatologist.

Conclusion: The diagnostic accuracy between primary care physician and dermatologist in this study was 67.5 percent. Over fifty-two percent needed hospital-based management.

Many cases referred for management purpose had the potential for management at general practice by improving primary care physicians training and providing appropriate facilities at the level of primary care.

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One of the major roles of the primary care physicians is to control the referral to specialists¹. Dermatology accounts for approximately 15% of consultation in general practice². Referral to skin clinic rank the third in the sequence of referral to specialist

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clinics³. A study by Tabenkin et al, assumed that the rate of referrals is associated with the level of knowledge, self confidence and experience of the primary care physicians¹. They found that family physician who is trained and experienced in primary care, is more prepared to cope with medical problems and refer more logically. They found a statistically significant association between low referral rate and certification in family medicine¹.

The aim of this study is to assess the extent of diagnostic agreement between primary care physician and dermatologist among referred patients and to identify the reasons of referral.

METHODS

A prospective study was conducted at dermatology department from 21st May 1999 to 15th August 1999. The study tool was the referral letters which were sent by the referring primary care physicians to dermatology clinic. The dermatologist running the clinic was asked to write his clinical impression (diagnosis) in the referred form after evaluating the referred patient. Data sheets were filled which included the following:

1. Name, age, and sex of the patient.
2. The clinical diagnosis by the primary care physician.
3. The dermatologist diagnosis.
4. Reasons for referring patient to skin clinic were classified into one or more of the following:
 - a) Diagnostic purpose: this category included referral by primary care physician who had difficulty in reaching specific diagnosis or was uncertain about it.
 - b) Hospital-based management, which included: Unavailability of certain medications at health centers, unresponsiveness of patient to conventional treatment in primary care practice, lack of certain instruments or therapeutic tools at some health centers, lack of experience by primary care physician to perform certain therapeutic procedures which does not require specialist experience, for example, cryotherapy of viral facial warts.
 - c) Patient request: this category included patient who insisted on referral to skin clinic for specialist opinion.
 - d) Unspecified: included all the referral forms in which the reasons of referral were not specified or did not meet the criteria of the above mentioned categories.

RESULTS

A total number of 262 referrals from health centers to the dermatology department were made by primary care physicians. Twenty-five cases were excluded from this study because of incomplete data in the referral forms. In thirty-three referral forms no

diagnosis was offered by the referring primary care physicians, thus these were considered as a failure to reach diagnosis.

One hundred and eight (45.6%) were males and one hundred and twenty-nine (54.4%) were females, their ages ranged from one year to ninety-one years. The mean age was 24.7 (SD 16.9).

The commonest condition referred from general practice was eczema forty-two cases (17.7%), vitiligo twenty-seven cases (11.4 %), warts twenty-five cases (10.5%), skin tumors nineteen cases (8 %), alopecia seventeen cases (7.1 %), acne vulgaris fifteen cases (6.3 %), and scabies fourteen cases (5.9 %) (Table2).

The overall agreement of primary care physician diagnosis with the dermatologist was found to be 67.5 % (Table 1).

Table 1. Diagnostic agreement between primary care physician and dermatologist

Agreement	No.	Percentage
Agreement	160	67.5%
No Agreement	77	32.5%
TOTAL	237	100%

Table 2. The accuracy of diagnosis of skin conditions by primary care physician

Disease	agree	% of agreement	Total
Acne vulgaris	15	100%	15
Molluscum contagiosum	8	100%	8
Onychomycosis -paronychia	6	86%	7
Vitiligo	23	85%	27
Alopecia areata	15	88.2%	17
Eczema	33	78.1%	42
Psoriasis	6	75%	8
Warts	20	80%	25
Pityriasis versicolor	5	62.5%	8
Scabies	10	71.4%	14
Urticaria	2	40%	5
Telagen effluvium	2	66%	3
Keratoderma	2	40%	5
Lichen planus	3	43%	7
Tinea infections	2	33.3%	6
Skin tumors	6	31.5%	19
Others	2	9.5%	21
Total	160		237

The reasons which required referring patients from local health centers to the skin clinic as shown in Tables 3 and 4.

Table 3. Reasons for referral to dermatologist by primary care physician

Reasons	Frequency	Percentage
Hospital based management	125	52.7%
For diagnosis	76	32%
Patient request	19	8%
Not specified	17	7.3%
Total	237	100%

Table 4. Classifications of Hospital based management

Reason	No.	Percentage
Not responding to medicine available at HC	59	47.2%
Non-availability of medicine at HC	35	28%
For more experience and skills	23	18.4%
Unavailability of instrument at HC	8	6.4%
Total	125	100%

*HC: Health Centre.

DISCUSSION

The selection of the primary care physician in this study is supposed to be representative because they didn't have the choice to select themselves unlike other studies. Moreover, general practitioners were not informed about the study.

The diagnostic accuracy between general practitioners and dermatologists in this study is 67.5 percent in comparison to lower rates in other studies, which showed concordance rates between forty-six to sixty percent. Overall the referral to skin clinic in Bahrain seems to be much lower than that in other countries, which was estimated to be nineteen percent, in comparison to a rate of four percent according to Bahrain health statistics in 1995^{3,4}. This low referral rate could probably be due to the hesitancy of some primary care physicians to refer cases for a second opinion due to feelings of in-competency and

inadequacy, or on the other hand due to the better experience that these physicians gained through the family practice residency programme. The identification of the diseases studied demonstrates that primary care physician is fairly adept at diagnosing very common conditions such as acne, eczema and psoriasis, but generally not familiar with other skin diseases such as tumors and infections caused by tinea. Identification rates compare very favorably with those reported by Ramzy and Fox⁵.

Twenty-eight percent of the referred patients for hospital-based management were merely referred because of the unavailability of some medications in the general practice for common skin disorder such as acne vulgaris, psoriasis and vitiligo.

Reduction of such referrals could potentially reduce the burden on secondary health care. Eighteen point four percent of patient referred for hospital management could have been managed in the general practice. These were referred due to lack of primary care physicians for certain surgical skills.

Seven percent of patients were referred to skin clinic without stating the reason of referral. Physicians are encouraged to state their reasons clearly, as this would be more helpful to dermatologist in identifying and responding to the needs of general practitioners. Providing feedback for the primary care physicians on their diagnostic accuracy would be helpful in the future.

CONCLUSION

The overall diagnostic agreement of primary care physicians' diagnoses with the definitive diagnoses of the dermatologists was 67.5 percent. Fifty-two point seven percent of patients referred required hospital-based management while thirty-two percent were referred to establish the correct diagnosis.

Many cases referred for management purpose had the potential for management at general practice by improving primary care physicians training and providing appropriate facilities at the level of primary care.

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