

Dermatologic Consultation in the Hospital Setting to Make the Correct Diagnosis of Skin Diseases

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Abstract

Background: Cutaneous findings can image an underlying systemic disease or a primary cutaneous disorder. A few study has been done about in-patient dermatologic consultations.

Objective: We prospectively aimed to record the data of the inpatient dermatology consultation request forms over a period of one and a half year.

Methods: Complete skin examination done to all requested dermatology consultations. Cutaneous diagnoses were based on characteristic clinical findings or dermatologic tools such as skin biopsy in patients in whom a diagnosis could not be made definitely by clinical.

Results: During a period of one and a half year, dermatologic consultation was requested and delivered to 282 patients who were hospitalized. The most frequent requesting services were Internal medicine(34.7%), Pediatrics(29.8%), Neurology(8.9%), Orthopedics(5.7%), Gynecology & Obstetrics(3.5%). In 33.7% of consultations, the patients were over the age of 60 years. The most frequent diagnostic groups were drug eruptions(10.99%), and fungal infections(8.16%).

Conclusion: Dermatologic consultation is a very important branch in the hospital setting to make the correct diagnosis of skin diseases and appropriate treatment.

Keywords: Consultation; Cutaneous findings; Dermatology; Hospital; Patient

Dermatology In-Patients in a University Teaching Hospital

Dermatology is mainly an outpatient clinic although it is necessary in the care of in-patients. Skin disorders can show an underlying systemic disease or a primary cutaneous disorder. More than 20% of the general population have a skin disease, so it seems dermatology consultation may play an important role in in-patients. The number of patients admitted in the hospital by dermatologists has been decreasing, whereas more nondermatologists are admitting patients to hospitals with primary skin disease or with cutaneous findings of systemic disease.[1-3]

Materials and Methods

This prospective study had been done at a University teaching hospital. The department of dermatology in this university is responsible for all dermatologic consultations for in-patients and for those evaluated in either emergency or urgent care setting. All patients were evaluated by specialist dermatologists. Data were recorded from dermatology consultation requests between June 2010 and December 2011. These data included the patient's age and sex, diagnosis and treatment, the requesting service, the diagnostic tests performed, the provisional dermatological diagnosis of the referring service, the final dermatological diagnosis. These data were entered to the computer program for further analysis. Statistical evaluation was performed using a chi square test, with $p < 0.05$ indicating statistical significance.

Results

During a period of one and a half year, we evaluated 282 requests for consultation. The patient group comprised 55.3% females and 44.7% males; and demonstrated an average age of 42.49 ± 27.50 years Table 1.

For 269 consultations(95.2%), complaints were resolved with one visit, 11 consultations(4%), required two visits, and 2 consultations(0.8%) required three or more visits. The average hour between the consultation and the consultation visit was 1.36 ± 0.79 hours.

Age Range(years)	Number of patients	%
< 1	15	5.3
1-6	23	8.2
7-18	42	14.9
19-45	62	22.0
46-60	45	16.0
>60	95	33.7

Table 1: Demographics of patients.

The most frequent requesting services were Internal medicine (34.7%), Pediatrics (29.8%), Neurology (8.9%), Orthopedy (5.7%), Gynecology & Obstetrics (3.5%), General surgery (3.2%) and other clinics (14.2%) Table 2. Intensive care unit services contributed about 2.2% of all evaluations. Emergency care patients made up a substantial 2.9% of consultations. Infectious diseases were the most common primary systemic diagnoses in patients whom we consulted. A total of 38 skin biopsies were performed. Wound culture, Potassium hydroxide preparations, Tzanck smears, Nail procedure and Viral culture were the other most commonly performed dermatologic tests Table 3. Topical steroids, Systemic antibiotics and Antihistamines were the most common treatment modalities in the dermatologic consultations. Drug eruption was the most common reason for consultation, followed by Fungal infections and Contact dermatitis. The physicians who requested the consultations, 45% made correct diagnosis. Correct diagnosis was done mostly from the internal medicine service (34.6%).

Service	Number of consultations (%)
Internal medicine	98(34.7)
Pediatrics	84(29.8)
Neurology	25(8.9)
Orthopedics	16(5.7)
Gynecology & Obstetrics	10(3.5)
General surgery	9(3.2)
Urology	7(2.5)
Intensive care units	6(2.2)
Pediatric emergency department	5(1.8)
Neurosurgery	5(1.8)
Physical therapy	5(1.8)
Others	12(4.2)

Table 2: Hospital Services Requesting Consultations.

Tests	Number of tests performed
Skin biopsy	38
KOH	6
Bacterial culture	9
Viral culture	1
Tzanck	1
Nail procedure	2

Table 3: Diagnostic tests performed during dermatologic consultation.

Discussion

Our review of inpatient dermatology consultations had difference from the study made by Bauer et al.[4] The age of the patients requested consultation were over the age of 60 years(33.7%) in our study, similar results determined as in theirs(35%).

Our most common diagnosis was drug eruption, however their's was dermatitis. In both, skin biopsies and skin cultures were the most common diagnostic tests. We found that 55% of dermatologic diagnoses were incorrect by the nondermatologists, whereas Bauer et al found that 78% of dermatological consultations were misdiagnosed.

In this study, internal medicine was the most frequent requesting service like in other studies[3-5] followed by pediatrics and neurology.

Drug eruption(10.99%) was the most common diagnosis, followed by fungal infections (8.16%), contact dermatitis (7.8%), herpes simplex infections (6.03%), decubitus (3.9%) and intertrigo (3.9%) Table 4. Drug eruptions are mostly due to the in-patients taking lots of drugs when they are hospitalized. Also, decubitus ulcers can be explained by the patient's long term hospitalization and immobility.

Diagnosis (n = 282)	Number(%)
Drug eruption	31(10.99)
Superficial Dermatophyte Infection	23(8.16)
Contact dermatitis	22(7.8)
Herpes simplex	17(6.03)
Decubitus	11(3.9)
Intertrigo	11(3.9)
Psoriasis	11(3.9)
Urticaria	8(2.84)
Cellulitis	6(2.13)
Herpes zoster	5(1.77)
Candidiasis	5(1.77)
Stasis dermatitis	5(1.77)
Seborrheic dermatitis	4(1.42)
Vasculitis	4(1.42)
Artefact dermatitis	4(1.42)
Other diagnoses	115(40.7)

Table 4: Most common dermatologic conditions made by dermatology service.

Consultations were made within 24h because of the importance of early treatment for the diseases.

More than 20% of population had a skin disorder with an important effect on their quality of life. So, this shows that the patients who are hospitalized by nondermatologists will have many skin problems as an additional medical problem besides the disease which caused hospitalization.[1]

In summary, dermatology is an important branch in the hospital setting because of large amount of misdiagnoses done by nondermatologists in skin diseases. Thus wrong treatment can be given to the patients. To prevent this situation, postgraduate training programs in dermatology should be arranged for nondermatologists periodically in the hospitals.

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