

## Original Research Article

# Inpatient dermatological referrals in a tertiary care hospital

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## ABSTRACT

**Background:** It is not surprising that patients hospitalized on nondermatology inpatient services are frequently found to have skin problems and present as a source of confusion for their admitting physicians. **Aims and Objective:** To analyse the reasons for dermatology referrals and its frequency, departments sending the referral and the impact on health care management.

**Methods:** We conducted a study on 464 patient referrals over a 4-year period. The demographic details, specialties requesting consultation, cause of referral, and dermatological advice have been recorded and analyzed.

**Results:** Unspecified "skin rash" was the most common dermatologic condition for which skin referral was sought. The final diagnoses made by dermatologists revealed infections as most common skin disorder. Almost 48% of the patients referred as "skin rash" were diagnosed to be suffering from infectious disorders. The referring doctors could provide an accurate dermatological diagnosis only in 32% of cases.

**Conclusions:** Most of the nondermatologists fail to diagnose common skin disorders. This reveals need for more trained dermatologists to combat this problem and more extensive dermatological training for the medical students.

**Keywords:** Referrals, Dermatology care, Health care

## INTRODUCTION

Dermatology is primarily thought as an outpatient specialty, but many inpatient referrals from other specialties are made to dermatology to improve patient care.<sup>1-3</sup> There has traditionally been minimal emphasis on education in skin diseases in Indian medical college curricula. Many colleges at the most have one month clinical posting. Thus, it is not surprising that patients hospitalized on non-dermatology inpatient services are frequently found to have skin problems and present as a source of confusion for their admitting physicians.

With the advent of effective and more cosmetically acceptable creams and phototherapy, the patterns of inpatient care are undergoing changes; in addition, the

introduction of oral immunosuppressive agents has broadened the scope of outpatient therapy.<sup>3</sup> As a result of these changes the inpatient admission in dermatology is decreasing and the value of dermatologist as consultants is increasing.<sup>4</sup> We undertook this study to analyse the reasons for dermatology referrals and its frequency, departments sending the referral and the impact on health care management.

## METHODS

We conducted a study on 464 patient referrals requested to a single unit of the dermatology department of a teaching hospital in southern India by analyzing the records of a period of 4 years (November 2012–December 2016). Prior ethics committee approval was obtained from institutional ethics committee. Patients

were evaluated within 24 hours from the time the consultation was requested, most commonly within a few hours. Details of the patient demographics, presumptive diagnosis of requesting department, final diagnoses and its impact on patient care were collected.

## RESULTS

### Demographics

The mean age of patients was 35.6 years. 54% were male patients. Most of the patients were in the age group of 20 to 40 years.

### Departments requesting dermatology referral

Most of the referrals came from the general medicine department and least was from ophthalmology and ENT department. The details are provided in Table 1.

**Table 1: Departments requesting dermatology consultation.**

Referring department	Number of patients
General medicine	283
Orthopedics	54
General surgery	33
Pediatrics	32
Pulmonary medicine	21
OBG	17
Psychiatry	15
Ophthalmology and ENT	9

**Table 2: Dermatological diagnoses by the referring departments.**

Skin disorders (as diagnosed by referring departments)	Number of patients
Skin rash	119
Skin infections	82
Eczema/dermatitis	79
Drug reaction	37
Connective tissue disease	24
Immunobullous disorders	22
Oral lesions	19
Purpuric rash	16
Chronic skin ulcer	11
Urticaria	10
Skin pigmentation	10
Acneiform eruptions	9
Skin swelling	9
Leprosy	8
Gangrene	5
Others	4

### Dermatological diagnoses by the referring departments

Unspecified "skin rash" was the most common dermatologic condition for which skin referral was

sought. Only few referrals actually mentioned the specific diagnoses. The details are provided in Table 2.

### Final diagnosis made by the dermatologists

The different diagnoses made by the dermatologists after examining the referred patients have been tabulated in Table 3. Cutaneous infection was the most common dermatological diagnoses.

**Table 3: Final diagnoses made by dermatologists.**

Final diagnoses made by dermatologists	Number of patients
Cutaneous infections	160
Cutaneous adverse drug reaction	55
Eczema/dermatitis	41
Connective tissue disorder	29
Vasculitis	20
Oral lesions	19
Miliaria	19
Psoriasis	18
Ichthyosis/xerosis	11
Urticaria	11
Acne	9
Panniculitis (erythema nodosum)	8
Leg ulcer	7
Peripheral gangrene	7
Prurigo	6
others	44

### Precision of diagnosis by the referring doctors

Referring doctors could mention the category of skin disorders in 52% of cases and in remaining cases only vague diagnosis was made. However, a precise diagnosis was provided only in 32% of the referred cases.

### Impact of dermatologic consultation on patient management

Dermatology consultation resulted in revised diagnosis in about 68% of referrals. An additional investigation (skin biopsy) was performed in 12.4% of the referred cases to confirm the diagnosis.

Dermatologic consultation also resulted in a change and/or additional treatment in 74% patients in the form of discontinuation of previous treatment and/or addition of a new topical or oral medication.

## DISCUSSION

Dermatology consultation plays an important role within the hospital setting. In this study, we analyzed the reasons for dermatologic consultation and the impact of dermatologic evaluation on the inpatient care. In this study, most of the dermatology referrals were sought for

patients >20 years, which was similar to previous study.<sup>5</sup> Most of the dermatology referrals were sought for male patients which was similar to a study conducted in USA.<sup>5</sup> But in another study females outnumbered males.<sup>4</sup>

All the departments sent dermatology referral for inpatients, however general medicine department sent the maximum number of referrals which is in accordance to the literature.<sup>5-7</sup> This might have occurred as many medical disorders are associated with dermatological manifestations which may serve as important clues for diagnosis of the underlying medical conditions.

Maximum number of dermatology referrals was of unspecified skin rash which was similar to observations made by Walia et al.<sup>8</sup> This indicates that referring doctor is not confident on diagnoses and hence only mentioning the symptoms. In contrast, the final diagnoses made by dermatologists revealed infections as most common skin disorder. Almost 48% of the patients referred as “skin rash” were diagnosed to be suffering from infectious disorders. The misdiagnosis of infectious disorders by the referring doctor is a matter of concern as most of these conditions are contagious without proper treatment. In this study, the referring doctors could provide an accurate dermatological diagnosis only in 32% of cases. This rate is high when compared to another study done by Davila and slightly low when compared to another study done by Chandalavada.<sup>5,6</sup> Dermatological consultation resulted in skin biopsy in 12.4% of the referred cases to aid in diagnosis and change/additional treatment in 74% cases, which was similar to observations made in USA.<sup>5</sup>

## CONCLUSION

Most of the non-dermatologists fail to diagnose common skin disorders. This reveals need for more trained dermatologists to combat this problem and more extensive dermatological training for the medical students.

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