

Pattern of Inpatient Referrals to Dermatology OPD at a Tertiary Care Centre, VIMS, Ballari

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Abstract

Background: Dermatology is a department mainly concerned without patients examination and treatment. But sometimes dermatologists expertise is sought for by the inpatients who are admitted in wards of other specialities.

Aims: The aim of the study is to know from which departments the referrals are commonly sought for from department of dermatology and their cutaneous diagnosis and to analyse the knowledge of non-dermatologists on various common dermatoses.

Materials and Methods: The study included all in patients referred to dermatology department in a tertiary care centre between January 2018 to December 2018. **Results:** A total of 215 referrals with dermatological diagnosis were recorded. Internal medicine (70; 32.55%), topped the number of referrals to dermatologists department followed by paediatrics (56; 26.04%), obstetrics and gynaecology (20; 9.30%), ENT (20; 9.30%) and surgery (19; 8.83%). Infectious skin diseases were most common (42.79%) followed by eczema (5.58%) and drug reactions (5.11%). Before referral to the dermatology opd, a tentative dermatological diagnosis was made in 30% patients only by the referring department, and it was found to be correct in 20% of the patients, common skin conditions like scabies, psoriasis were missed.

Conclusion: Maximum referrals to Dermatology department were from department of internal medicine and infectious dermatoses were the most common cause. Prompt dermatology referral from other departments helps in better patient management and there is a need for better training of non-dermatologists to recognise and treat common skin disorders.

Key Words: Referral; Inpatients; Dermatology.

Introduction

Dermatology practice takes place mainly in the outpatient setting but a substantial part represents inpatients referrals from other specialists in a large hospital.¹ Patients admitted to non-dermatology departments may often have numerous skin lesions besides the systemic disease for which they are hospitalised.^{2,3} Several inpatient referrals are made to dermatology department by other specialities on a daily basis for proper patient management

in the hospital settings.¹ References from other departments to the dermatology department helps in better diagnosis and management of cutaneous condition of the patient and also helps in improving the clinical knowledge of the treating dermatologist and of the referring doctor.

This study was conducted to determine the pattern of inpatient referrals to dermatology department among patients admitted in other wards at a tertiary care teaching institute of VIMS, Ballari.

Materials and Methods

This observational study was undertaken at a tertiary care teaching institute, VIMS, Ballari, between January 2018 to December 2018. All the inpatients referred from non-dermatology wards to dermatology department were initially evaluated by a dermatology resident, the case was then discussed with the attending consultant to arrive at a clinical diagnosis. Whenever necessary, specific investigations such as KOH preparation, grams smear, Tzanck smear, slit skin smear, skin biopsy and blood and radiological investigations were done to substantiate the clinical diagnosis. Bed side referral services were also provided for non-ambulatory sick patients in intensive care units and other wards. Details of the referring department, patients demographic profile and diagnosis of the dermatoses by dermatologist were recorded in a proforma for analysis and interpretation. Institutional Ethics Committee approval was obtained for the study.

Results

During the 1 year period, a total of 215 referrals were received. The average number of patients seen per month was 18, with a range of 16–20. There were 132 males (61%) and 83 females (39%) with a M:F ratio of 1.59.

The department of internal medicine accounted for the highest dermatologic referrals (70 cases, 32.55%) followed by the department of paediatrics (56 cases, 26.04%), obstetrics and gynaecology and ENT (20 cases, 9.30%), and surgery (19 cases, 8.83%). The dental department accounted for the least number of referrals. The different specialities requesting Dermatology consultation have been shown in Table 1.

The different diagnosis made by the dermatologists after examining the referred patients has been tabulated in Table 2. Cutaneous infection was the most commonly diagnosed condition (42.79%), followed by eczemas/dermatitis (5.58%) and drug reactions (5.11%) (Fig. 1, Fig. 2, Fig. 3). Dermatophytosis was the most common diagnosis among the skin infections followed by cutaneous bacterial infection. Maculo-papular rash was the commonest type of reaction caused by drugs.

Before referral to the dermatology opd, a tentative dermatological diagnosis was made in 30% patients only by the referring department, and it was found to be correct in 20% of the

patients (Table 3). Woods lamp examination, skin biopsies, dermatoscopic examination, grams stain, potassium hydroxide examination etc, were some of the additional investigations done in 20% of

Table 1: Distribution of interdepartmental consultations

Department	Male	Female	Total No	%
Medicine	60	10	70	32.55
Paediatric	39	17	56	26.04
OBG	0	20	20	9.30
ENT	12	8	20	9.30
Surgery	16	3	19	8.83
Orthopaedic	5	3	8	3.72
Psychiatry	3	3	6	2.79
Oncology	2	3	5	2.32
Ophthalmology	3	2	5	2.32
Urology	3	2	5	2.32
Dental	0	1	1	0.46
Total	143	72	215	100

Table 2: Dermatological diagnosis made in referred patients (n = 215)

Dermatological diagnosis	n(%)
1. Infections and Infestations	92 (42.79)
a. Viral	37 (17.20)
b. Bacteria	20 (9.3)
c. Fungal	19 (8.83)
d. Parasitic	7 (3.25)
e. Mycobacterial	9 (4.18)
2. Eczema	12 (5.58)
3. Drug reactions	11 (5.11)
4. Hansen's disease	9 (4.18)
5. Oral lesions	9 (4.18)
6. Miliaria	8 (3.72)
7. Ichthyosis	6 (2.32)
8. Benign skin tumours	6 (2.32)
9. Psoriasis	5 (2.32)
10. Xerosis	5 (2.32)
11. Pregnancy related	5 (2.32)
12. Non specific dermatosis	5 (2.32)
13. STD's	4 (1.86)
14. Pruritus of systemic origin	4 (1.86)
15. Acute urticaria	3 (1.39)
16. Pigmentary disorders	3 (1.39)
17. Nutritional disorders	3 (1.39)
18. Psychocutaneous	3 (1.39)
19. Neoplasms	3 (1.39)
20. Papular urticaria	3 (1.39)
21. Ecchymosis/purpura	2 (0.93)
22. Vasculitis	2 (0.93)
23. Postherpetic neuralgia	2 (0.93)
24. Keratoderma	2 (0.93)
25. Immunobullous	2 (0.93)
26. Exfoliative dermatitis	2 (0.93)
27. Hair and nail disease	2 (0.93)
28. Acne /acneiform eruption	1 (0.46)
29. Subcutaneous necrosis of new born	1 (0.46)
Total	215

the cases referred, for confirmation of the clinical diagnosis. In 150 (70%) of cases referrals resulted in an alteration or additional treatment in the form of either stopping of the treatment for the cutaneous infection and/or addition of new oral or topical medication. For better management of some of the referred cases, they were asked to be transferred to dermatology ward for further management.

Table 3: Dermatological diagnosis wrongly diagnosed by referring doctors (n=52)

Dermatological diagnosis	n(%)
1. Infections and Infestations	30 (57.69)
a. Viral	16 (30.76)
b. Bacteria	6 (11.53)
c. Fungal	4 (7.69)
d. Parasitic	2 (3.84)
e. Mycobacterial	2 (3.84)
2. Eczema	4 (7.69)
3. Drug reactions	3 (5.76)
4. Hansen's disease	3 (5.76)
5. Oral lesions	3(5.76)
6. Miliaria	3(5.76)
7. Ichthyosis	2 (3.84)
8. Benign skin tumours	2 (3.84)
9. Psoriasis	2 (3.84)
Total	52(100)



Fig. 1: Purpura Fulminans



Fig. 2: Subcutaneous necrosis of newborn

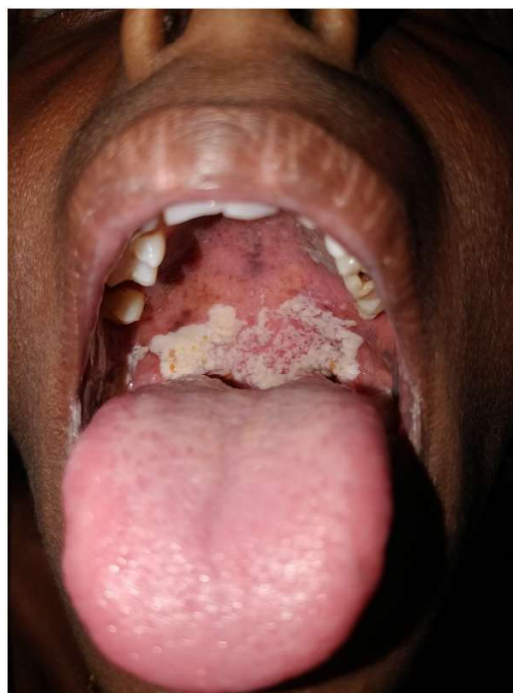


Fig. 3: Oral candidiasis in an immunosuppressed patient

Discussion

The knowledge of dermatology among non-dermatologists is believed to be very poor.⁴⁻⁶ At times, the dermatoses, for which referral to dermatologic department is sought by the other departments may be associated with significant morbidity and at times mortality.⁷ These dermatology lesions could be detected as a coincidental finding during examination or develop during their stay in the hospital.⁸ Often, expert dermatological opinion is required for the patient with coexisting cutaneous problem. Here in this study we analyse the various reasons for dermatology referrals and their impact on patient care. In our study, most of the dermatology consultations were sought for patients above 18 years. similar results were obtained in a study by Chowdhury SN et al.⁹ In most of the published works males have outnumbered females, and the same pattern of distribution was seen in this study as well.¹⁰

In the present study, internal medicine accounted for the highest proportion of dermatological consultations (32.55%), in concurrence with several other studies.¹¹⁻¹⁴ The reason for this could be due to increased number of admissions in medicine wards. Another reason could be that many medical disorders are associated with dermatological manifestations which may sometimes serve as

important clues for the diagnosis of the underlying medical conditions. Paediatrics (26.06%) referrals were more in our study as compared to other studies.^{15,16} The reason for this could be due to increase number of paediatric fevers associated with cutaneous rash. And also more number of children developed miliaria because of hot and humid conditions in the wards. From general surgery the percentage of referrals was 8.83%. Similar percentage was seen in other studies as well.^{15,16} Surgical references mainly consisted of stasis dermatitis and infective eczemas. Among the obstetrics and gynaecological referrals (9.30%), most of the patients had specific dermatoses of pregnancy. Other common conditions seen were dermatophytosis and patients with VDRL positivity to rule out syphilis.

The final diagnosis made by the dermatologists in this study revealed infections (42.79%), eczema/dermatitis (5.58%) and drug reactions accounting for (5.11%) cases. Similar findings were seen in the study by Chowdary et al.⁹ where in infections (35%), drug reactions (12.6%) and eczema/dermatitis (8.6%) constituted the referrals and also in studies by Davila et al.¹⁰ and Balai et al.¹⁵ Among the infections fungal cases dominated reflecting the general trend of increase in the incidence of fungal infections in this part of the world where hot and humid climate predominate. The common drugs causing drug rash in our study were phenytoin, carbamazepine and cotrimoxazole, mainly causing Stevens Johnsons syndrome and penicillins and non-steroidal anti-inflammatory drugs causing maculopapular rash.

Before referral to the dermatology opd, a tentative dermatological diagnosis was made in 30% patients only by the referring department, and it was found to be correct in 20% of the patients. This is in concurrence with a study by Balai et al.¹⁵ in which a dermatological diagnosis was made in 33% patients by the referring unit, and it was found to be correct in only 20% of the patients. Other studies from Portugal,¹ US,¹¹ and Brazil¹⁴ have reported that a correct diagnosis was made in 23.9%, 48%, and 33% of the patients, respectively.

In our study we also observed that some of the common dermatological conditions like scabies, dermatophytosis, herpes zoster, psoriasis, were either missed or misdiagnosed by the referral departments. Similar findings were noted in other studies as well.^{9,15} Hence, non-dermatologists should be trained and educated atleast about the common dermatoses and also should be impressed upon early dermatological referrals. This is

especially true in cases of adverse drug reactions as immediate suspicion and withdrawal of drug is of utmost importance.

Conclusion

Non-dermatologists often fail to recognise or misdiagnose common cutaneous disorders in our set up. This leads to unnecessary medications and complications in the patients. So the importance of prompt dermatological referrals should be impressed upon non-dermatological staff and basic training should be provided right from the undergraduate level to diagnose simple cutaneous disorders.

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