

# Dermatology Inpatient Consultations: A One Year Experience from a Tertiary Care Centre in Northern India

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## ABSTRACT

**Introduction:** Hospital inpatient consultations are important for the smooth functioning of healthcare in tertiary hospitals. Dermatology inpatient consultations have gained significance due reduction in dermatology inpatient admissions and increase in the incidence of cutaneous findings being overlooked or misdiagnosed by non-dermatologists.

**Material and methods:** Our study was a prospective, hospital based study conducted in a tertiary care centre. All the dermatology inpatient consultations over a period of one year, were included in the study and their demographic and the clinical profile collected and recorded.

**Result:** Over a period of one year, 408 consultations with a wide age range and a mean of 43 years, were looked into. Majority were sought by medical specialities (74.01%) with general medicine (21.81%) the commonest. Most the patients had common dermatosis, with ezema (25.49%) and infection (21.56%) the most prevalent ones. Only a small percentage of consultations (10.53%) were sought on the first day. Treatment was altered in 77.94% of cases.

**Conclusion:** Dermatology inpatient consultations have significance both in terms of patient care and resident learning program.

**Keywords:** Consultation, Dermatitis, Inpatient.

## INTRODUCTION

Hospital inpatient consultations are important for the smooth functioning of healthcare in tertiary hospitals. Besides their importance in residency programs, they are critical for patient care in hospital settings. Dermatology consultations form a significant proportion of these consultations. Studies have shown that the dermatology consultations have a positive effect on quality of life of admitted patients.<sup>1,2</sup>

Dermatology in present times is progressively being confined to outpatient settings, dermatosurgery and cosmetology, with minimal inpatient admissions.<sup>3,4,5</sup> However, there is a significant need for dermatology expertise in inpatient settings. There is a high prevalence of dermatological disorders with significant morbidity in patients admitted in hospitals.<sup>6,7</sup> These diseases may require a prompt treatment or may be important for diagnosis and treatment of the systemic disease for which the patient has been admitted. In addition, studies have shown that skin diseases are overlooked or misdiagnosed by nondermatologists.<sup>7,8,9</sup> Furthermore a recent study has reported shorter hospital stays and decrease cost, by promoting earlier diagnosis and initiation of targeted treatment, following timely dermatological consultations when required.<sup>10</sup>

We conducted the study with the aim to evaluate the

demographic and clinical profile of these dermatological inpatient consultations and the effect of these consultations on patient care.

## MATERIAL AND METHODS

This study was a prospective hospital based study conducted over a period of one year from July 2016 - June 2017. Our department is placed in a medical college hospital, which is attached to a tertiary institution with all the superspecialities. All hospital inpatient dermatology consultations were noted down and looked into within first 24 hours.

Their demographic and clinical profile was noted. Diagnosis was made mostly clinically, after bedside examination. Patients who presented as diagnostic dilemma underwent skin biopsy and other investigations as required. The patients were followed up if required.

## STATISTICAL ANALYSIS

Data was collected on structured and pretested proforma and entered into excel. Percentages and proportions were calculated.

## RESULTS

A total of 408 hospital consultations were referred from various departments over a period of one year. All the consultations were done on the day of request and followed up if required.

The mean age of the patients was 43 years with age range of 0 - 89 years. Males predominated over females in numbers with a ratio of 1.2:1.

Consultations were most commonly sought by medical branches (74.01%). Among them consultations from the general medicine formed the largest group. (Table-1)

Only 10.53% (43) of cases were referred within 24hrs of manifestation of cutaneous findings.

132 (32.35%) cases had the problem prior to admission and 276 (67.65%) patients developed the dermatological disorder after admission.

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**How to cite this article:** Samia Aleem, Farah Sameem, Sheikh Manzoor. Dermatology inpatient consultations: a one year experience from a tertiary care centre in Northern India. International Journal of Contemporary Medical Research 2018;5(3):C1-C4.

Department	No	%	Department	No	%
Medical Specialities	302	74.01	Surgical Specialities	106	25.98
General medicine	89	21.81	Obstetrics and Gynaecology	37	9.06
Paediatrics	39	9.55	General surgery	19	4.65
Nephrology	31	7.59	Orthopaedics	18	4.41
Haematoncology	27	6.61	Ophthalmology	10	2.45
Gastroenterology	21	5.14	ENT	8	1.96
Endocrinology	20	4.90	Neurosurgery	7	1.71
Neurology	17	4.16	Gastrointestinal surgery	5	1.22
Pulmonary medicine	14	3.43	CVTS	2	0.49
Psychiatry	14	3.43			
Rheumatology	12	2.94			
Critical care	10	2.45			
Cardiology	8	1.96			

**Table-1:** Departments requesting the inpatient consultations

Dermatosis	No	%
Eczema	104	25.49
Infections	88	21.56
Acute cutaneous drug rash	54	13.23
Papulosquamous disorders	38	9.31
Connective tissue disorders	27	6.61
Neoplasms and paraneoplastic disorders	23	5.63
Hypersensitivity disorders	19	4.65
Acne/rocasea	16	3.92
Nail and hair disorders	8	1.96
Immunobullous disorders	8	1.96
Pigmentary disorders	4	0.9
Miscellaneous	19	4.65
Total	408	100

**Table-2:** Dermatological diagnosis of the inpatient consultations

Eczema (25.49%) was the most common diagnosis followed closely by cutaneous infections (21.56%) and acute cutaneous drug rash (13.23%) (Table -2)

In our study, 92 (22.54%) patients out of total 408 were already put on treatment before seeking the consultation. Treatment had to be changed in 21 (22.82%) patients. Treatment was started in 297 (93.98%) patients after consultations. Overall alteration in treatment was made in 77.94% of cases. Biopsy was required in 86 (21.07%) and follow up in 114 (27.94%) cases.

## DISCUSSION

Inpatient hospital dermatology consultations are fast gaining significance due to reduction in dermatology inpatient admissions<sup>3, 11,12</sup> and inability of non-dermatologists to treat dermatological diseases.<sup>7,8,9,13</sup>

We in our centre noted about 408 hospital dermatology consultations over a period of one year. Largest percentage of these cases were referred from medical branches mostly general medicine (21.81%). Paediatrics also contributed to a large number of consultations (9.55%). Similar findings have been reported by recent studies.

In a study done in Cleavland clinic by Galimberti et al, internal medicine sought the most number of dermatology consultations (45%), followed by surgery (12%),

haematoncology (9%) and pediatrics (7%).<sup>14</sup> A similar observation was reported by Fischer and colleagues. In their study, the service requesting the most dermatology consultations was internal medicine (42.8%), followed by pediatrics (11.7%) and neurology (9.9%).<sup>15</sup>

Penate et al and Mancusi et al also reported a similar observation.<sup>11,16</sup>

This similarity to other studies may relate to difference in number of hospitalized patients cared for by general medicine as compared to other medical superspecialities and surgical services. Longer duration of stay and deeper evaluation in general medicine may also contribute. Also cutaneous involvement is more of a component of medical disorders as compared to surgical ones and thus readily appreciated.

However in contrast to these studies, we observed a large proportion of consultations from Gynaecology and Obstetrics (9.06%).

Although we observed dermatosis varying from a simple echymosis to a rare Langerhans cell histiocytosis, majority of them were the common ones. The most common dermatosis noted were eczematous disorders followed by infections and acute cutaneous drug rash.

This was similar to an observation made in a study done in Singapore General hospital by Tay et al who found eczema (33.1%) and infections (23.4%) to be most common cause of consultations followed by acute cutaneous drug rash.<sup>17</sup>

Davila M et al in a study also observed that the most common dermatologic diagnoses for which dermatological consultation was sought were dermatitis (21%) followed by drug eruptions (10%).<sup>18</sup>

Similarly in a study by Storan et al consultations were requested most often for management of common skin diseases, like skin infections (18.5% of cases) and dermatitis (12.9%).<sup>19</sup>

However, in a study by Galimberti et al, drug rash (90 cases) was the most common dermatologic condition, followed by contact dermatitis (59 cases), and herpes simplex virus/varicella zoster virus infection (40 cases).<sup>14</sup>

This can be explained by higher prevalence of these dermatological disorders in general population also.<sup>20</sup> However, the complex or atypical presentations were also

observed, although in lesser numbers and can be attributed to concomitant comorbidities and varied internal milieu of the admitted patients.

Special attention was drawn by large amount of cases referred from nephrology. Most of the dermatosis could be attributed to the concomitant iatrogenic immune suppression. Post-transplant patients presented with large number of diverse cutaneous infections. A case of iatrogenic Kaposi was also seen.

Also the pregnancy dermatosis referred from Gynaecology and obstetrics, could be attributed to the concomitant hormonal change and increased genital infections to increased pelvic vascularity.

In our study, 92 (22.54%) patients out of total 408 were already put on treatment before seeking the consultation. Treatment had to be changed in 21 (22.82%) patients. Treatment was started in majority of the patients after consultations except for those who presented with a diagnostic dilemma and needed investigation. Overall addition in treatment was made in 77.94% of cases.

Biopsy was performed in 86 (21.07%) patients. It was done to confirm the diagnosis in certain atypical lesions or specifically asked by the admitting unit for documentation. Infact few consultations were sought, only for doing skin biopsy or other procedures like nail fold capillaroscopy.

The high percentage of treatment changes following a dermatology consult is consistent with a study by Galimberti et al, whose in-patient dermatology consultations resulted in change in treatment in 81.9% of cases and biopsy was performed in a third of patients.<sup>14</sup> Similarly other studies have also reported a change in management in more than 70% of the cases.<sup>7,18,21</sup>

Only 10.53% of consultations were sought on the first day of manifestation of cutaneous disease. This was similar to a study done by Galimberti et al in which only 6.5% of consultations were requested within the first 24 hours of manifestations of cutaneous disease, the majority (53.8%) of them was requested within 3 days.<sup>14</sup>

Although early dermatology consultations have been shown to alter the treatment of hospitalised patients and improve the patient care, the delay can be attributed to overlooking of cutaneous findings and failing to appreciate their importance by non dermatologists.

We in our study observed positive impact of dermatology consultations on patient care in terms of alterations in treatment, but we did not observe the impact of these consultations on other parameters of patient care like duration of hospital stay and its cost effectiveness. Another limitation of our study was that we could not evaluate the effect of these consultations on final diagnosis by the admitting department in all cases.

## CONCLUSION

To conclude dermatology inpatient consultations are vital for quality of patient care in hospital settings. Also they are important for dermatology residents to acquire the expertise required in management of complex and atypical presentations

of dermatosis in patients with systemic disorders and to re-establish their roots in medical dermatology.

## REFERENCES

1. Kurwa HA, Finlay AY. Dermatology in-patient management greatly improves life quality. *Br J Dermatol* 1995; 133: 575-578.
2. Hurwitz D, Kerdel FA, Kirsner RS. Hospitalisation for skin disease improves quality of life. *Arch Dermatol* 1997; 133:797-798.
3. Kirsner RS, Yang DG, Kerdel FA. The changing status of in-patient dermatology at American academic dermatology programs. *J Am Acad Dermatol* 1999; 40: 755-57.
4. Ayyalaraju RS, Finlay AY. Inpatient dermatology - United Kingdom and United States similarities - moving with the times or being relegated to the back bench? *Dermatol Clinic* 2000; 18; 397-404.
5. Lynch p. The future of medical dermatology. *Arch Dermatol* 1998; 134; 358-60.
6. Nahass GT, Meyer AJ, Campbell SF, Heany RM. Prevalence of cutaneous findings in hospitalised medical patients. *J Am Acad Dermatol* 1995; 33:207-211.
7. Falanga V, Schachner LA, Rae V, Ceballos PI, Gonzalez A, Liang G, et al. Dermatological consultations in the hospital setting. *Arch Dermatol* 1994;130: 1022-1025.
8. Nahass GT. In-patient dermatology consultation. *Dermatol Clinic* 2000; 18: 533- 542.
9. Federman D, Hogan D, Taylor JR, Caralis P, Kirsner RS. A comparison of diagnosis, evaluation and treatment of patients with dermatological disorders. *J Am Acad Dermatol* 1995; 32: 726-9.
10. el -Azahry R, Weenig RH, Gibson LE. The dermatology hospitalist: creating value by rapid clinical pathological correlation in a patient centered model. *Int J Dermatol* 2012; 51: 1461-1466.
11. Penate Y, Guillermo N, Melwani P, Martel R, Rorrego L. Dermatologists in hospital wards: an 8-year study of dermatology consultations. *Dermatol Basel Switz* 2009; 219: 225-231.
12. Stern RS. Managed care and the treatment of skin disease: dermatologists do it less often. *Arch Dermatol* 1996; 132: 1039-42.
13. Gerbert B, Maurer T, Berger T, Pantilat S, Macphee SJ, Wolff M, et al. Primary care physicians as gatekeepers in managed care. Primary care physicians' and dermatologists' skills at secondary prevention of skin cancer. *Arch Dermatol* 1996; 132: 1030-8.
14. Galimberti F, Guren L, Fernandez AP, Sood A. Dermatology consultations significantly contribute quality to care of hospitalised patients: a prospective study of dermatology inpatient consults in a tertiary care centre. *International journal of Dermatology* 2016; 55:547-551.
15. Fischer M, Bergert H, Marsch WC. The dermatologic consultation. *Hautazart Z Fur Dermatol Venerol Verwandte Geb* 2004; 55: 543- 548.
16. Mancusi S, Festa Neto C. In-patient dermatological consultations una University hospital. *Clinical Sao Paulo Braz* 2010; 65: 851-855.
17. Tay LK, Lee HY, Thirumoorthy T, Pang SM. Clinical and experimental Dermatology. 2010; 36: 129-134.

18. Davila M, Christenson LJ, Sontheimer RD. Epidemiology and outcomes of dermatology in-patient consultations in a Midwestern US university hospital. *Dermatol online J*. 2010; 16: 12.
19. Storan ER, McEvoy MT, Wetter DA, el-Alzhary RA, Camilleri MJ, Bridges AG, et al. *International journal of Dermatology* 2015; 54: 1150-1156.
20. Masood Q, Hassan I. Pattern of skin disorders in Kashmir valley. *Indian J Dermatol* 2002; 47: 147-148.
21. Connolly DM, Silverstein DI. Dermatology consultations in a tertiary care hospital: a retrospective study of 243 cases. *Dermatol online J* 2015; 21.

**Source of Support:** Nil; **Conflict of Interest:** None

**Submitted:** 20-02-2018; **Accepted:** 25-03-2018; **Published:** 07-04-2018