

DERMATOLOGY REFERRALS IN A NEUROLOGICAL SET UPDeeptara Pathak Thapa¹, Amit Thapa²¹Department of Dermatology, Nepal Medical College and Teaching Hospital, Kathmandu Nepal²Unit of Neurological Surgery, Kathmandu Medical College Teaching Hospital, Kathmandu, Nepal**Source of Support:**

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None

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Abstract

Introduction: Dermatology is a specialty, which not only deals with dermatological problems with outpatient but also inpatients referrals. The importances of Dermatologist in hospital setting are rising due to changing condition of medical care. Since no peer-reviewed articles are available for dermatological problems in a neurological set up, we conducted this study to know about pattern of skin disorders in neurological patients.

Material and Methods: The present study was a prospective study in a neurological setup, which included data from hospital dermatology consultation request forms over a period of one year. The data included demographic profile of the patient investigation where needed, neurological diagnosis and final dermatological diagnosis. The data was analyzed using SPSS.

Results: A total of 285 patients who were requested for consultation were included in the study. Face was the commonest site of involvement (19.6%). Laboratory examination of referred patients revealed abnormal blood counts in 2% cases, renal function tests in 0.7% and urine in 0.4% cases. CT scan showed abnormal findings in 65.6% patients. The most common drug used in these patients was phenytoin (29.1%). The most common dermatological diagnosis was Infection and Infestation (34.7%) followed by eczema (46.6%). Drug rash was seen in 3.9% cases. Out of which one had phenytoin induced Steven Johnson syndrome. Skin biopsy was done in 5 patients. Topicals was advised in 80%. Upon discharge 10% of inpatients didn't require any follow-up. The patients who were followed up after 4 weeks, about 48% had their symptoms resolved with topicals and oral treatment as required. About 38% required more than two follow ups due to chronic course of the diseases.

Conclusions: This present study discussed about various manifestations of skin disorders in a neurological set up and emphasizes the role of dermatologist in treating skin problems both in outpatient as well as inpatient scenarios.

Key words: Dermatology; Infection; Eczema**Cite this article:**Thapa DP, Thapa A. Dermatology referrals in a neurological set up. *Our Dermatol Online*. 2014; 5(3):254-257.**Introduction**

Dermatology is a specialty with both medical and surgical aspects. It not only covers outpatient setting but also involve in inpatients referrals from other specialties [1]. Due to changing condition of medical care the value of dermatologist as consultants within the hospital setting is scaling high [2]. The reason for dermatology consultations and its impact on diagnosis and treatment would be of interest to doctors and health care delivery workers [3]. Lack of medical literature on dermatological problems in a neurological set up motivated us to work on this issue to find out the pattern of the dermatological diseases in neurological patients.

Materials and Methods

The present study was a prospectively conducted in a neurological setup, which included data collection from hospital dermatology consultation request forms over a period of one year (January 2011- January 2012). The data included demographic profile of the patient including name, age, sex, onset of lesion, type of lesion, provisional dermatological diagnosis, laboratory investigation including skin biopsy when required, CT scan, neurological diagnosis and final dermatological diagnosis. Patients with acute disorders or if admitted were followed up after 1 week. If they have chronic disorder, they were followed after 4 weeks.

The data was analyzed using SPSS software.

Results

A total of 285 neurological patients were evaluated who were requested for dermatological consultation during one-year study period. 62.1% patients among them were males. Patients' age ranged from a newborn to 84 years. Mean age of presentation was 37.48 years. Lesions were distributed commonly on face (19.6%) followed by generalized distribution (16.5%), trunk and lower limbs involvement (13.7% each), scalp (9.8%), upper limbs (7%), soles (5.6%) and nails, genital, palms (<5%). Common morphological lesions were plaque (43.1%), scaling (10.2%), papular (8.8%), macules (7.7%), pustular (4.9%) and comedones (4.9%), nails (3.2%), maculopapular (2.8%), lump (2.8%), hyperkeratotic (2.5%), vesicular on an erythematous base (1.4%), petechiae, vesicular and thickened nerve (0.7% each) and hair loss (5.6%). Onset of rash occurred for > 1 year in 13% cases, for 8 weeks to 1 year in 28.4% patients, between 4- 8 weeks in 23.9%, between 2-4 weeks in 20.7% and <2 week in 14% patients. Laboratory examination of these patients revealed abnormal complete blood count in 2%, abnormal kidney function tests in 0.7% and abnormal urine tests in 0.4%. CT scan head was found to be abnormal in 65.6% cases. Neurological drugs used in these patients were phenytoin 29.1%, steroids 20.4%, and Valproic acid 12.6%, augmentin 0.4%, combination of epileptic drugs in 10% and other miscellaneous drugs in 24%. The most common dermatological diagnosis (pattern depicted in Table I) was Infection and Infestation 34.7% followed by eczema 46.6%. Among infections, wart was found to be more common and constituted about 27% followed by Hansen's disease about 14%, Impetigo 13%, folliculitis 13%, T. infection

13%. Scabies was found in 20%. Eczema was seen in 24.2%. Xerosis and pilosebaceous disorder was seen in 5.6%. Skin Biopsy was done in 5 patients and was suggestive of Hansen's (2 patients), urticarial vasculitis, psoriasis, traumatic alopecia, and Melanocytic nevus (1 patient each). Drug rash was seen in 3.9%. Out of which one had phenytoin induced Steven Johnson syndrome, nine patients had phenytoin induced maculopapular rash and one had augmentin induced maculopapular rash. Topicals was advised in 80%, which included steroids, antifungal, antibiotics, scabidicals and immune-modulators. Patients who required dermatosurgical procedures were treated accordingly.

Patients who had dermatological diseases were either admitted or seen in outpatient department with neurosurgical diagnosis; of which commonest was RTA (road traffic accidents) in 20% patients followed by brain tumors (17.5%) and seizure disorders (14%) (Details provided in Table II).

Of the total inpatients, 55% did not require follow up, as they were symptom free before discharge, however 48% of out patients were symptom free after second visit. Patients were followed up in 1 week, for inpatients and acute disorder, which constituted about 18% and in 4 weeks for chronic disorder and later depending upon type of skin diseases constituted about 68%. 14% cases did not require follow up. Out of 18% inpatients and with acute disorder, upon discharge 10% cases didn't require follow-ups. The remaining 68% who was followed up after 4 weeks, about 48% had their symptoms resolved with topicals and oral treatment as required. About 38% required follow up even after 1 month due to chronic course of the diseases.

Diseases	Frequency	Percentage (%)
Drug rash Phenytoin induced –Steven-Jhonson syndrome-1 Phenytoin induced –maculopapular rash-9 Augmentin induced- urticarial rash- 1	11	3.9
Eczema Seborrheic dermatitis-30 Photodermatitis-14 Hand eczema-8 Neurodermatitis-7 Pedrus dermatitis-6 Heal eczema-4	69	24.2
Hair disorder	10	3.5
Vasculitis	7	2.5
Infection and Infestation	99	34.7
Xerosis	16	5.6
Tumors	9	3.2
Pruritus	7	2.5
Pigmented purpuric dermatoses	5	1.8
Papulosquamous disorder	2	.7
Pilosebaceous disorder	16	5.6
Others	34	11.9

Table I. Dermatological diagnoses of patients.

Diseases	Frequency	Percentage (%)
Road traffic accidents	57	20
Arteriovenous malformations	5	1.8
Meningitis	3	1.1
Spondylosis	7	2.5
Neurocysticercosis	7	2.5
Sub occupying lesions	2	0.7
Brain Tumour	51	17.9
Tuberous sclerosis	1	0.4
Hemorrhagic Stroke	22	7.7
Seizure disorder	40	14
Ischemic Stroke	6	2.1
Hydrocephalus	4	1.4
Others	23	8.1
No organic neurological problem	57	20

Table II. Neurological diagnoses of patients.

Discussion

Dermatology is emerging as a specialty, which not only deals with outpatient but also inpatients referrals. In literature there are studies that give information about importance of dermatology referrals in hospital settings. In view of referrals most of the studies had multispecialty referrals. Internal medicine had the highest referrals followed by pediatrics, neurology and psychiatry but none like our study was done in a neurosurgical setup. Though few studies had referrals from Neurology as Mancusi et al 12%, Fisher 9.9%, and Penate 8.3% [2,4,7]. The most common diagnosis in these studies was infections [2-8]. The present study also has found infection as the most common diagnosis about 34.7% however in a higher proportion. In outpatient setting infection is commonly seen [9] but also can be seen in inpatient as in the present study. We saw 20% of inpatients had RTA and they were susceptible to infection. Immunosuppression in some patients and presentation of cutaneous infection are a reason for hospital admission [4]. Eczema was found in 24.2% cases, which is slightly higher than reported by Mancusi et al (16.6%) and Antic et al (12.6 % cases) [4,10]. Eczema is also one of the common diagnoses in dermatology outpatients and also seen in inpatients due to exposure to sweat, antiseptics, dressing occlusion, diapers and monitoring with catheters and or pressures tubes as per Mancusi et al [4]. In our study we found Drug rash in 3.9%. In literature there are higher incidence of drug reaction found in studies by Mancusi et al 14%, Hardwick et al 10.5%, Itin et al 9.8%, sherertz 9.2%, Arora 9.1%, Penate 7.4% [2,4,6,7,11,12]. The lower incidence of drug rash in our study may be due to only one referral specialty i.e. Neurosurgery as in other studies it was multispecialty referrals dealing with more medications. In our study we found one patient as Stevens Johnson syndrome,

which is a fatal skin reaction if not diagnosed early and treated. This condition was recognized early and treated which shows a dermatologist role in patient care. Early diagnosis is of utmost importance for some life threatening dermatological condition and should motivate non-dermatologist to request for dermatology consultation [2].

In the present study patients were followed up at regular intervals depending upon the nature of the disease and chronicity. 55% of the inpatients were symptom free before discharge and 48% of out patients were symptom free after second visit. 38% patients required follow up of more than two visits due to their chronic problems. In literature there are few studies that had follow up their patients and found 85.7%, 71.8% and 58% of the patients complaints were resolved in single visit by Fisher et al [8], Penate et al [2] and Mancusi et al [4] respectively. Fernandes et al [5] found that in 88.7% patients did not require any follow up. About in 65% cases preliminary diagnosis was changed after dermatology consultation and 3.3% dermatologist diagnosis was important as it modified the initial admission diagnosis and had an impact on final prognosis the the dermatological condition [5].

Conclusion

This present study describes dermatological problems in neurological patients and emphasis the role of a dermatologist in managing them. Dermatology referral improves interdisciplinary treatment and thus have an impact on the quality of treatment and facilitate management of the diseases that lead to admission or treat a potentially life threatening dermatological disease. In any health care system there is a role of dermatologist and training for doctors to treat common dermatological problems and its management is justified [13].

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