

The pattern of dermatological disorders among patients attending OPD of dermatology department At a Tertiary Care Hospital, Mathura

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Abstract

It is a well known fact the magnitude of skin disorders has been rising in our country, India. Various data showing pattern of skin diseases in different countries and within the various regions of a country have been reported so far. The pattern of skin diseases varies with different countries and with different zones of a country due to socio-economic, racial and environmental factors. So far none of the study has been done in our country for the Mathura region, so we take the privilege to undertake a retrospective study based on our hospital data i.e K.D Medical College and hospital, Akbarpur Mathura. Our study will include all the newly diagnosed OPD cases attending the Dermatology and Venereology department in K.D Medical college and hospital from the period starting from 1st January 2018 to 31st December 2018. Diagnosis was based on the clinical expertise and laboratory investigations wherever it was required like KOH preparation, slit skin smear for AFB, Tzank smear, wood's lamp examination, VDRL test, skin biopsy, culture etc. Analysis of the clinical data records of the patients attended the OPD of dermatology and venereology department of our college during the period of 1st January 2018 to 31st December 2018 shows that Eczema (21.8%), fungal infections-dermatophytosis (19.37%) were among the most common skin diseases followed by scabies (17.51%) and pyoderma (7.62%). (0.73%) accounts for herpes progenitalis (STD). Genodermatoses formed the least number of cases in our study.

Keywords: Eczema, Pyoderma, Dermatophytosis.

Introduction

Dermatology is the branch of medicine that deals with diagnosis and treatment of skin, hair and nail related disorders. It is a vast growing branch as large number of skin related pathological conditions are emerging these days. Skin is also the largest and most visible organ of the body which acts as the first barrier against injury and bacterial infestation therefore reflecting the health status of the body. Almost all individuals at one or the other point in their lifetime encounters skin diseases either minute like simple acne or serious one such as Stevens-Johnson syndrome, toxic epidermal necrolysis and purpura fulminans (These diseases range from simple acne and scabies to various serious disorders). Most oftenly some dermatological disorders are also manifestations of some underlying systemic disorders. Therefore timely diagnosis and management plays crucial role both in the acute and chronic cases. The magnitude of skin related disorders are increasing day by day. Various factors plays important role in determining the type and pattern of skin diseases in different parts of the country and these factors also determine the severity of the some of the skin related disorders like socio-economic development, literacy level, environmental conditions, industrialization, access to medical health care, religious, ritual and cultural factors.

Skin disorders are the most widespread in the world and impose great loss to the healthy life. From genetic to the environmental factors it includes various parameters that determines its distribution and severity. The International Classification of Disease enlists more than 1,000 skin or skin related illnesses which accounts for most of the skin disease burden.

As mentioned earlier, skin diseases are most common health problems worldwide and it continues so because of difference in the availability of health care access, type of health care and most important awareness of the common man to the importance of early diagnosis and treatment of skin diseases. As per the survey report almost 73% people affected with skin disorders do not seek medical advice.¹⁻³

Skin diseases have innumerable causes which can be either an infectious one (bacterial, fungal or viral) or non-infectious such as allergy, hypersensitivity, physical or chemical damage. Skin diseases are very much prevalent in the developing countries.¹ These diseases range from simple acne and scabies to various serious disorders such as Stevens-Johnson syndrome, toxic epidermal necrolysis and purpura fulminans.^{2,3} Skin diseases impose high morbidity but apparently less mortality.³⁻⁵ Skin manifestations also give clue to the internal underlying systemic disease so it is henceforth become essential for timely diagnosis and management of skin disorders. This not only helps to reduce morbidity and mortality but also prevents spread of some communicable skin disorders.¹ Improved environmental sanitation, personnel hygiene, education of the general public and good nutrition can help to reduce the incidence of skin disorders in any community.^{1,2,4,6} Although enough studies has been done to understand the pattern of skin diseases in the general global population, but there is considerable lack of such studies in developing countries.^{4,7,8} The present study was planned to give an insight regarding the frequency and types of skin disorders that are most frequently encountered in a tertiary care hospital like ours to understand the burden of these diseases in our set up.

Materials and Methods

This was a retrospective cross sectional epidemiological hospital based case record study carried out from 1st January 2017 to 31st December 2018 with help of hospital patient record data. All the new patients who attended the OPD of Dermatology and Venereology, KD Medical College Hospital, Mathura, during the period of one year starting from 1st January, 2017 to 31st December 2018 were included in this study. Dermatological diagnosis was done by qualified dermatologists by thorough and detailed medical examination and cutaneous examination on each of these patients. Some of the cases which were difficult were subjected for other important investigations like KOH preparation for fungus, slit skin smear for AFB, Tzank smear, smear for LD bodies, wood's lamp examination, VDRL test, skin biopsy, culture etc. for confirmation of the initial diagnoses. The skin diseases were grouped into infective skin diseases and non-infective skin diseases. Patients suffering from HIV infection and patients in whom the diagnosis was difficult to make those which required complex diagnostic techniques were taken to be exclusion criteria. Ethical Clearance for Study was taken from Human Resource Ethics Committee, KDMCHRC, Mathura. Data entry and analysis was done using SPSS software.

Results

The total number of patients who attended outpatient department of Dermatology of KD Medical College Hospital, Mathura during the study period from January 2017 to 31st December 2018 were 14047. Numbers of new dermatological cases were 11238 thus forming 80% of the total number of cases. The number of newly diagnosed cases and percentage of infective and non-infective diseases are given in [Table 1 & 2]. The analysis of medical data record of the patients those who had attended the dermatology outpatient department of KDMC and research center showed that Eczema was most commonest group of disorders (21.8%) followed by scabies (17.51%), fungal infections (19.37%), and pyodermas (7.62%). Among fungal infections dermatophytosis (14.26%) was the commonest infection followed by pityriasis versicolor (3.55%), and candidiasis (1.78%). In the present study, the high prevalence rate of fungal infections can be attributed to the warm and humid climatic conditions prevailing in this part of region as well overcrowding, poor environmental hygiene, relative ignorance and poverty and resistance to antifungal drugs may account for higher incidence.

Higher prevalence of scabies caused by the mite *Sarcoptes scabiei* and transmitted through person-to-person contact was also reported. It was most common in children and was present in 17.51% out of total studied patients. The preponderance of scabies may be attributed to overcrowded hostels, close contact, and poor hygiene and socioeconomic status of patients. Lack of timely medical intervention reported by symptomatic students was unexpectedly high. Therefore, it is important to monitor epidemiology of skin problems in children to initiate appropriate skin health

education programs and preventive measures can be planned and implemented effectively. *Bacterial skin diseases were the third from all infections with a rate of 7.62% of the total. Pyodermas had a high prevalence rate due to poor socio-economic conditions, poor personnel hygiene and it was most common in children who belonged to rural areas, lack of new drugs, and bacterial resistance to the available antibiotics. Hence it is clear from the above data that fungal and parasitic infections form the major bulk of skin diseases in our hospital. By comparing different reports from various studies conducted in this field we found that almost all studies showed comparable results to our various reports,^{9,10} i.e., the commonest skin disease is of infective origin, followed by allergic diseases.

Among allergic disorders contact dermatitis was the most common owing to occupational exposure to allergens and chemicals. Hand eczema was more common in construction workers and house maids using detergents whereas seborrhoeic eczema, pityriasis alba and atopic eczema were seen mostly in children. Most offending drugs leading to drug eruptions include sulfonamides (14% of total drug reaction), followed by NSAIDs (12%), only anti-amebic drugs (11%), combination of anti-amebic and quinolones (10%), griseofulvin (9%) fluconazole (8%), anti-convulsant (6%), only doxycycline, amoxycilline, quinolones, homoeopathic medicine (each 3.5%). Most common drug causing FDE was combination form of anti-amebic and quinolones (10%).

Urticaria (6.69%), acne vulgaris (5.39%), viral infections (1.73%) were the other major disorders. Both acute and chronic urticaria were majorly associated with food and drugs.¹¹⁻¹³ Hansen's disease formed 0.05%. The low incidence of Hansen's disease in this study is due to the fact that such patients mainly attend leprosy centers where the medicines (MDT) are given free of cost. Tuberculosis of skin formed 0.06% of the total newly diagnosed cases. Chronic bullous diseases formed only 0.10% of the cases; out of which pemphigus vulgaris (0.07%) was commonest followed by bullous pemphigoid (0.03%). Life stresses particularly during child bearing periods and physical and other mental stress and nutritional deficiency were most common causes of diffuse hair loss both among males and females. Androgenic alopecia is more commonly seen in males.

Acne is a most common skin disease that affects pilosebaceous follicles mainly among adolescents. It most commonly affects females. Factors like pubertal hormonal changes, excessive use of cosmetics, steroid preparations, psychological aspects and emotional stress contribute mostly to acne. The major culprit was steroid induced acne due to widespread use of the same.^{11,14}

Pigmentary disorders such as melasma (3.1%) were the ninth most common skin disorder of all cases.¹⁵

For better visualization and understanding, the study results on the pattern of skin diseases have been shown in Tables

Table 1: Infective skin diseases

| Diagnosis | No of patients | | | Percentage |
|-----------------------|----------------|--------|-------|------------|
| | Male | Female | Total | |
| Scabies | 1534 | 434 | 1968 | 17.51 |
| Tinea Infection | 1156 | 447 | 1603 | 14.26 |
| Pityriasis Versicolor | 298 | 101 | 399 | 03.55 |
| Candidiasis | 52 | 146 | 198 | 01.76 |
| Pyoderma | 490 | 367 | 857 | 07.62 |
| Herpes Zoster | 62 | 29 | 91 | 0.80 |
| Chicken Pox | 11 | 12 | 23 | 0.20 |
| Herpes Simplex | 12 | 6 | 18 | 0.16 |
| Warts | 80 | 74 | 154 | 01.37 |
| Hansen's Disease | 4 | 2 | 6 | 0.053 |
| TB Skin | 4 | 3 | 7 | 0.06 |
| STD | 91 | 11 | 102 | 0.90 |
| Total | 3794 | 1632 | 5426 | 48.28 |

Table 2: Non-Infective skin diseases

| Diagnosis | No of patients | | | Percentage |
|--------------------------|----------------|--------|-------|------------|
| | Male | Female | Total | |
| Eczema | 1049 | 1402 | 2451 | 21.80 |
| Vitiligo | 29 | 35 | 64 | 0.56 |
| Melasma | 23 | 84 | 107 | 0.95 |
| Psoriasis | 72 | 16 | 88 | 0.78 |
| Lichen Planus | 8 | 21 | 29 | 0.25 |
| Alopecia | 50 | 14 | 64 | 0.56 |
| Acne Vulgaris | 276 | 330 | 606 | 05.39 |
| Urticaria | 326 | 426 | 752 | 6.69 |
| Photosensitivity | 3 | 0 | 3 | 0.02 |
| Drug Eruptions | 26 | 14 | 40 | 0.35 |
| Chronic Bullous Diseases | 8 | 4 | 12 | 0.10 |
| Collagen Diseases | 15 | 10 | 25 | 0.22 |
| Icthyosis | 14 | 11 | 25 | 0.22 |
| Naevoid Disorders | 6 | 5 | 11 | 0.09 |
| Miscellaneous | 945 | 590 | 1535 | 13.65 |
| Total | 2850 | 2962 | 5812 | 51.71 |

Discussion

The rise of skin related problems are high specially in our country. This can be attributed to hot- humid climatic condition, low socio-economic status, religions, lack of access to primary health care, poor educational status.^{1,2,4,6}

The pattern of skin disorders varies from country to country but also within the same country in different parts it varies considerably.¹ So frequency of different skin disorders in different parts of the same country should be studied. We took this initiative to cover maximum number of skin related diseases in our mathura region to determine an overall occurrence of various dermatological conditions so as to give a collective view of the type and frequency of various skin diseases common in this zone and to also give an idea of the age group most commonly affected why which skin related conditions. The most predominant patients attended the skin OPD belongs to low socio-economic status which comprise of basically farmers, construction workers and others from rural areas.

Other than that we have allso encountered mostly student population coming from different engineering and medical college nearby staying in close contact in hostels. Therefore contact dermatitis emerge as most common among the non-infectious skin diseases. Skin diseases pose a huge financial, psychological burden for the patients and also for their families. Improvement education, personnel hygiene, the standard of living, environmental sanitation, and good nutritious food may help us to bring down the skin diseases in this area. Hence the aim of this study was to enforce the necessity of education, good health care system, environmental sanitation, good nutrition and maintenance of personnel hygiene as a whole can bring down the percentage of skin related diseases and improvement in the quality of life, hence more studies in this field is required which can give deeper insight on the pattern and their extent of effect on the quality of life.

Conflict of Interest: None.

References

1. Rook A, Savin JA, Wilkinson DS. The Prevalence, incidence and ecology of diseases of skin, In: Rook A, Wilkinson DS, Ebling FJ, Champion RH, Burton JL, editors, Text book of Dermatology. Oxford University Press: Mumbai 1987:39-53.
2. Mehta TK. Pattern of skin diseases in India. *Indian J Dermatol Venereol Leprol* 1962;28:134-9.
3. Gangadharan C, Joseph A, Sarojini PA. Pattern of skin diseases in Kerala. *Indian J Dermatol Venereol Leprol* 1976;42:49-51.
4. Dayal SG, Gupta GP. A cross section of skin diseases in Bundelkhand region, UP. *Indian J Dermatol Venereol Leprol* 1977;43:258-61.
5. Jaiswal AK, Singh Gurmail. Pattern of skin diseases in Kashmir region of India. *Indian J Dermatol Venereol Leprol* 1999;65:258-60.
6. Nair S Pradeep, Nair TV, Gopala Krishnan. Pattern of dermatological diseases in Trivandrum. *Indian J Dermatol Venereol Leprol* 1999;65:261-3.
7. Kuruvilla M, Sridhar KS, Kumar P, Rao SG. Pattern of skin diseases in Bantwal Taluq, Dakshina Kannada. *Indian J Dermatol Venereol Leprol* 2000;66:247-8.
8. Karanti BK. Pattern of skin diseases in a semi-urban community of Delhi. *Indian J Dermatol Venereol Leprol* 1984;50:213-4.
9. Das KK. Pattern of dermatological diseases in Gauhati medical college and hospital Guahati. *Indian J Dermatol Venereol Leprol* 2003;69:16-8.
10. Agarwal S, Sharma P, Gupta S, Ojha A. Pattern of skin diseases in Kumaun region of Uttarakhand. *Indian J Dermatol Venereol Leprol* 2011;77:603-4.
11. M.T. Noorbala, P. Kafaie. Pattern of skin diseases in the Central Iran, *Yazd Province J Pak Assoc Dermatol* 2010;20:137-141.
12. S. Agarwal, P. Sharma, S. Gupta, A. Ojha. Pattern of skin diseases in Kumaoun region of Uttarkhand, *Ind J Dermatol Venereol Leprol* 2011;77(5):603-4.
13. C.E.H. Grattan, A.M. Marsland. *Urticaria* (9th ed.) C.E.M. Griffiths, J. Barker, T. Bleiker, R. Chalmers, D. Creamer (Eds.), Rook's text book of Dermatology, vol. 2, Wiley-Blackwell, Oxford 2016:42.1-42.18.
14. A.Y. Al-Zoman, A.K. Al-Asmari. Pattern of skin disease at Riyadh Military Hospital Egypt. *Dermatol Online J* 2008;4(2):4-14.
15. K. Mehmood, M. Nadeem, S. Aman, A. Hameed, A.H. Kazmi. Role of Estrogen, Progesterone & Prolactin hormones in the etiopathogenesis of Melasma in females. *J Pak Assoc Dermatol* 2011;21(4):241-7.

How to cite this article: Sharma H, Chawla RK, Pruthi S, The pattern of dermatological disorders among patients attending OPD of dermatology department At a Tertiary Care Hospital, Mathura. *Indian J Clin Exp Dermatol* 2019;5(2):154-157.