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Original Research Paper

Dermatology

EPIDEMIOLOGY AND DEMOGRAPHIC PATTERN OF SKIN DISEASES AMONG PATIENTS ATTENDING IN SKIN OPD IN A PRIVATE HOSPITAL IN BAREILLY

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ABSTRACT Pattern of skin diseases may vary across the different parts within the country and have an effect on every age from neonate to the elderly. The pattern of skin diseases serves as a guide of community development and quality of care provision. A hospital-based study was carried out in dermatological outpatient department of Rohilkhand medical college and hospital, Bareilly India to find out pattern of skin diseases and its socio-demographic correlates. The majority of the cases were in 16-30 years of age group (52.60%) and female gender (57.52%). Fungal infections (51.2%) was the most common skin disease seen during the study. Socioeconomic status and educational status of the patients were significantly associated with the pattern skin diseases.

KEYWORDS : Community, socio-demographic, fungal, female, educational

INTRODUCTION

Skin ailments have an effect on every age from neonate to the elderly1. It reflects in numerous ways and can have a profound effect on both the person and the community. Although Mortality and morbidity is less in dermatology, still it has great impact on quality of life i.e. disfigurement of self-image, symptoms such as intractable itch and social isolation (as in leprosy and vitiligo) and financial burden2. Many systemic diseases may have some dermatological manifestations that indicate to the presence of the skin diseases in individuals. Despite the excessive frequency of skin diseases in growing countries, they have so far not been appeared asa significant problem in the improvement of public health strategy[3].

We have less data concerning the incidence and prevalence of varied skin diseases in our country and that we principally have faith in information obtained from western countries. information assortment would be very important for effective designing and correct management of those diseases. Demographic study may be a herculean task by itself since it needs an honest quantity of funding and trained work force for door-to-door survey. Sometimes in countries like India ground scenario could also be difficult: while conducting comprehensive survey, residents might be out for work throughout day time and people within the house might be reluctant to reveal something. Hence, hospital-based study is additional convenient[4].

The plan of this study was to induce an insight into the frequency and therefore the sorts of skin diseases that are common at a dermatological OPD and therefore the implication of those diseases in our system. This pattern (of skin diseases) serves as a guide of community development and quality of care provision

METHODOLOGY

This was a retrospective hospital based cross-sectional study conducted in out-patient department of Dermatology, Venereology and Leprosy in Rohilkhand Medical College and Hospital, Bareilly, UP from 1st January 2019 to 31st December 2019.

In this epidemiological study patients of all age group of both the gender who attended in the OPD of hospital were selected as study population. The study population is comprised of newly diagnosed cases and follow-up during the study period. Outpatient registers of the department were analysed and the total no. of males, females of all age group according to the skin diseases were tabulated. The diagnosis reported on the records were based on clinical features and were confirmed by laboratory tests or skin biopsy, when indicated.

The socio-demographic profiles and diseases pattern were recorded in data sheet. The results of quantitative data were expressed in form of percentage, mean and range.

RESULT

A total number of 60112 prescriptions were registered with skin diseases who attended the OPD of Rohilkhand medical college and hospital in Bareilly, U.P in year 2019 from 1st January to 31st December. Out of 60112 patients 33925 patients were newly diagnosed cases and the remaining 26187 patients were follow-up [Table 1], and out of which majority were from rural region (75.52%) [figure 1]. Out of 33925 patients 19513(57.52%) cases were female and 14412 (42.48%) cases were male [figure 2].

This study shows that majority of the cases were in 16-30 years of age group which was 17844 (52.60%) [figure 3]. It has been also found that majority of the patients were from lower middle class which was 15897 (46.90%) according to Kuppuswamy classification of socioeconomic status followed by upper lower 8652 (25.50%) [figure 4].

Educational status of most of the patients was secondary education which was 10211 (30.1%) cases followed by primary and higher secondary which were 7260 (21.4%) and 7112 (20.96%) cases respectively [figure 5].

This study shows that out of 33925 cases highest were fungal infections which was 17369 (51.2%) out of which majority were tinea cruris which was 9796 (56.4% of all fungal infections) followed by tinea corporis which was 7712 (44.4% of all fungal infection). Dermatitis and Eczema are second most common disease coming to skin opd according to this study which was 6443 (19% of all cases) in which majority are of contact dermatitis that was 2033 (31.5% of all dermatitis cases). The pilosebaceous disease were the third common disease after fungal infection and dermatitis which was 5764 (17% of all

cases) where majority was acne that was 3210 (55.7% of all pilosebaceous diseases).[figure 6 and 7] [Table 4]

Among all skin diseases coming to OPD in 2019 the bacterial and viral skin diseases were 4686 (13.8%) and 4342 (12.8%) respectively. Folliculitis and Furunculosis were the majority of bacterial skin disease that was 1529 (32.62% 0f all bacterial cases) and 1218 (26.0% of all bacterial cases) respectively. Herpes zoster and warts were the majority in viral diseases which was 1258 (29.0% of all viral cases) and 1004 (23.1% of all viral cases). Out of 5081 cases of infestations in skin, the majority was of scabies cases which was 3014 (59.3% of all infestations).

Drug reaction were the least common category of all skin diseases which was 645 (1.9% of all cases) followed by autoimmune disorder 1227 (3.61% of all cases).

TABLE – 1 GENERAL DETAILS

Total no. of all patients attending OPD in Hospital	482282
Total no. of patients attending skin OPD	60112
Total no. of new pt. attending skin OPD	33925
Total no. of male pt.	14412 (42.48%)
Total no. of female pt.	19513 (57.52%)
Total no. of pt. from urban area	8305 (24.48%)
Total no. of pt. from rural area	25620 (75.52%)
Pt. directly coming to OPD	27703 (81.66%)
Pt. referred from lower centre	6222 (18.34%)

TABLE – 2 DISTRIBUTION OF PATIENTS ACCORDING TO AGE

AGE GROUP	NUMBER OF PATIENTS
0-15 years	2842 (8.37%)
16-30 years	17844 (52.60%)
31-45 years	8546 (25.20%)
46-60 ears	3720 (10.96%)
>60 years	973 (2.87%)

TABLE – 3 DISTRIBUTION OF STUDY SUBJECTS ACCORDIING TO SOCIOECONOMIC STATUS

SOCIOECONOMIC CLASS	NUMBER OF PATIENTS
Upper	1129 (3.3%)
Upper Middle	4512(13.3%)
Lower Middle	15897(46.9%)
Upper Lower	8652(25.5%)
Lower	3735(11%)

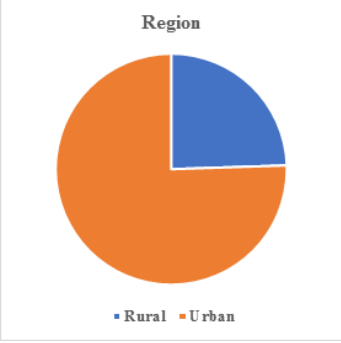

FIGURE –1: PIE CHART OF PATEINTS ACCOURDING TO REGION

TABLE – 4 DISTRIBUTION OF PATIENTS ACCORDING TO TYPE OF SKIN DISEASES

SKIN DISEASES	NUMBER OF PATIENTS	PERCENTAGE
FUNGAL INFECTIONS	**17369**	**51.2%**
D1. Tinea cruris	9796	56.4%
D2. Tinea corporis	7712	44.4%
D3. Tinea faciei	2640	15.2%
D4. Tinea capitis	1494	8.6%
D5. Onychomycosis	1875	10.8%
D6. Tinea versicolor	1563	9.0%
D7. Candidiasis	747	4.3%
VIRAL INFECTIONS	**4342**	**12.8%**
D1. Herpes zoster	1258	29.0%
D2. HSV-1 & HSV-2	603	13.9%
D3. Chicken pox	655	15.1%
D4. Cutaneous warts	1004	23.1%
D5. Molluscum contagiosum	822	18.9%
BACTERIAL INFECTIONS	**4686**	**13.8%**
D1. Hansen's disease	350	4.8%
D2. Folliculitis	1529	32.62%
D3.Furuncle	1218	26.0%
D4. Cellulitis	294	16.3%
D5. Impetigo	433	10.01%
D6. Other	862	14.5%
INFESTATIONS	**5081**	**14.9%**
D1. Scabies	3014	59.3%
D2. Pediculosis	2114	41.6%
PAPULOSQUAMOUS DISEASE	**2643**	**7.8%**
D1. Psoriasis	1541	58.4%
D2. Lichen planus	742	28.0%
D3. Pityriasis rosea	360	13.6%
Dermatitis	**6443**	**19.0%**
D1. Contact dermatitis	2033	31.5%
D2. Seborrheic dermatitis	1875	29.1%
D3. Atopic dermatitis	648	10.1%
D4. Lichen simplex chronicus	1580	24.5%
D5. Other	307	4.8%
PILOSEBACEOUS DISEASES	**5764**	**17.0%**
D1. Rosacea (including steroid induced)	3210	55.7%
D2. Acne vulgaris	2800	48.6%
PIGMENTRY DISORDERS	**2021**	**5.96%**
D1. Vitiligo	679	33.6%
D1. Hypopigmention	221	10.9%
D2. Hyperpigmentation	432	21.4%
D3. Post-inflammatory hypo/hyper pigmentation	1011	50.0%
AUTOIMMUNE DISORDERS	**1227**	**3.61%**
D1. Alopecia areata	431	35.1%
D2. Systemic sclerosis	**221**	**18.0%**
D3. Pemphigus	344	28.1%
D4. Bullous pemphigoid	122	9.9%
D5. SLE/DLE	109	8.9%
HAIR DISORDERS	2345	6.9%
DRUG REACTIONS	645	1.9%
URTICARIA	2205	6.5%
OTHERS	2437	7.2%

TABLE – 5 EDUCATONAL STATUS OF THE STUDY SUBJECTS

EDUCATIONAL ATTAINMENT	NUMBER OF PATIENTS	PERCENTAGE
Not Literate	6704	19.76%%
Primary	7260	21.40%
Secondary	10211	30.1%
Higher Secondary/Diploma	7112	20.96%
Graduation	2015	5.94%
Post Graduation	623	1.84%

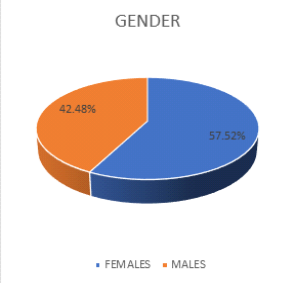

FIGURE – 2: PIE CHART OF PATEINTS ACCOURDING TO GENDER

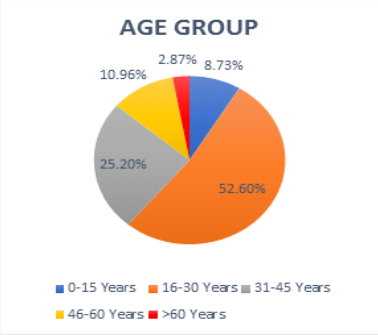

FIGURE –3: PIE CHART OF PATEINTS ACCOURDING TO AGE GROUP

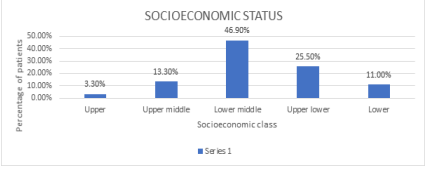

FIGURE –4: BAR DIGRAM SHOWING SOCIOECONOMICAL STATUS OF PATENTS

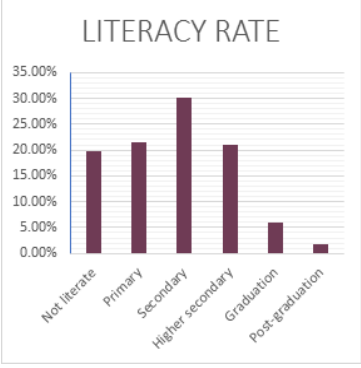

FIGURE – 5: BAR DIAGRAM ACCOURDING TO EDUCATIONAL STATUS OF PATIENTS

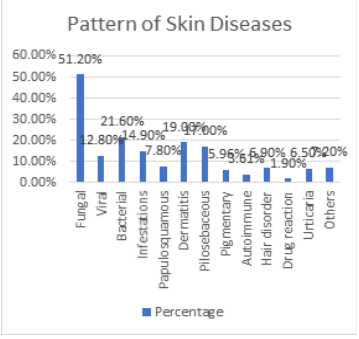

FIGURE - 6: BAR DIAGRAM OF PATIENTS ACCOURDING TO TYPE OF SKIN DISEASES

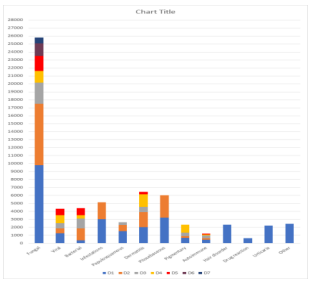

FIGURE – 7: STACKED BAR DIAGRAM OF PATIENTS ACCOURDING TO TYPE OF SKIN DISEASES

DISCUSSION

The pattern of skin diseases is influenced by environmental factors, socio-economic status, age of the patients, level of literacy, varied climate and different religious, ritual and cultural factors.

In this study total number of dermatoses exceeded the number of patients as some had more than one skin disease. Out of 33925 patients 19513(57.52%) cases were female and 14412 (42.48%) cases were male and majority of the patients are from the age group 16 years to 30 years followed by 31-45 years of age group which was 17844 (52.60%) and 8652(25.5%) respectively. Similar results were foundin a study conducted by Md. NiamatAlahi et al among OPD patients in a tertiary care hospital in Kishanganj the prevalence of skin disorders was found more among females and more among the 19-40 years age group.5Although some study have reported male preponderance.[1,6,7]

As per education of the patients, majority had completed secondary education (30.10%) followed by primary (21.40%) higher secondary (20.96%). Similar results were also found in study done in Kishanganj as mentioned above. Although in a study conducted by Bommakanti J et al in Telangana shows that prevalence is more in population who only completed their primary education (38.31%) than secondary (25.51%).8 According to this study the skin disorders are more common in rural population which was 25620 (75.52%) than urban population that was 8305 (24.48%). The socioeconomic status of the patient also plays important role in prevalence of skin disorder. As per this study majority of the patients belongs to class III (lower middle) of kuppuswamy classification which was 15897 (46.9%) and class IV (upper lower) which was 8652 (25.5%). These results are similar to a study which was conducted by Monika Kohli et al in school going children of urban and rural Jaipur where majority were from rural population (58.1%) and from class IV of socioeconomic status (55.7%).[9]

In present study, among all patients, fungal infections were maximum 17369 (51.2%) followed by dermatitis which was found in 6443 (19%) and pilosebaceous disorders was found in 5764 (17%) patients. Among fungal infections T.Cruris was the most common and present in 9796 (56.4% of all fungal infections) patients followed by T.Corporis(44.4% of all fungal infection). Many patients of T.corporis present with multiple lesions over the body, it is because the patients resorting to faith healers, injectable and topical steroids provided by quacks and religious belief such as holy bath.10 In a cross sectional study conducted by Sanjiv Grover et al in rural Allahabad shows similar findings as present study where fungal infection were the most common skin disorder (54.52%) among infective cause and Eczema were the most common disorder (39.2%) in non-infective cases.7 The higher prevalence of fungal infections is attributed to hot and humid climatic condition of the geographical region of the study region.

The other infective causes of skin disorders are bacterial, viral and parasitic. The study shows that patients with skin infestation which was 5081 (14.9%) outnumbered the bacterial and viral infection that was 4686 (13.8%) and 4342 (12.8%) respectively. Prevalence of Scabies is higher in our study population which was 3014 (59.3% of all infestations). Few studies mentioned about scabies being more prevalent than other infections.8 Herpes zoster and warts are the common viral infections in our study population which was 29% and 23.1% (of all viral infections) respectively. Folliculitis and furunculosis were being the most common bacterial infection with 32.62% and 26% (of all bacterial infections).

Among pilosebaceous skin disorders, Rosacea (mainly steroid induced) is most common involving 3210 (55.7% of all pilosebaceous disorders) and its prevalence is increasing due to increase use of topical steroidal creams, use of irritant in cosmetic products and medical malpractice. Other skin disorders like Papulosquamous diseases (7.8%), autoimmune disorders (3.6%), hair disorders (6.9%), urticaria (6.5%), pigmentary disorders (5.96%) and drug reactions (1.9%) are less prevalent in our study populations.

CONCLUSION

The frequency of skin diseases is increasing day by day. This present study was undertaken to determine the epidemiology and pattern of skin diseases. Fungal infection was the most common skin disease whose prevalence is increasing rapidly now days followed by dermatitis. We also concluded that the socioeconomic status, literacy and age of the patient were also associated with occurrence of skin diseases.

Since increasing skin diseases are huge burden over quality of health care, A detailed knowledge about the epidemiology and pattern of skin disease will help us employing essential changes in health education, control of disease, possible preventing methods and proper treatment.

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