

Content available at: <https://www.ipinnovative.com/open-access-journals>

IP Indian Journal of Clinical and Experimental Dermatology

Journal homepage: [www.ijced.org/](http://www.ijced.org/)

## Original Research Article

## Pattern of Dermatoses in a tertiary care hospital in Konkan Region, Maharashtra

Hanamant G Bobade<sup>1</sup>, U Ketan Raju<sup>1,\*</sup>, Anil Mishra<sup>1</sup><sup>1</sup>Dept. of Dermatology, Venereology & Leprosy, B.K.L. Walawalkar Rural Medical College, Sawarde, Maharashtra, India

## ARTICLE INFO

## Article history:

Received 12-09-2021

Accepted 04-10-2021

Available online 11-12-2021

## Keywords:

Konkan

Skin diseases

Dermatoses

## ABSTRACT

**Introduction:** Skin diseases can manifest in various ways. Sometimes it can be secondary to underlying systemic disease. In developing countries including India skin diseases are very common but they are being neglected with the thought that they are always benign.

**Materials and Methods:** Our study is a cross sectional one done to determine the pattern and magnitude of skin diseases. All newly registered patients reporting to Skin OPD of B.K.L. Walawalkar Rural Medical College, Dervan during the period from 1<sup>st</sup> January 2018 to 31<sup>st</sup> December 2019 were enlisted in the study.

**Result:** Out of 5090 patients included in our study, 52.62% were female patients and 47.38% were males with female to male ratio of 1.11:1. Majority of the patients (21.47%) was from the age group 21-30 years followed by the age group of 11-20 years (19.58%), followed by the age group of 31-40 years (18.52%). Fungal infections constituted the maximum number of the cases (51.53%), followed by Eczema (17.44%). The Acne comprised of (7.19%).

**Conclusion:** Fungal infections comprised majority of cases followed by eczema and allergic disorders in Konkan region of Maharashtra which has a tropical and humid climate. Thus an extensive study may be needed to have a holistic approach to the problem establish a correlation between the variables.

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: [reprint@ipinnovative.com](mailto:reprint@ipinnovative.com)

## 1. Introduction

Skin diseases are prevalent in developing countries, especially infections and can manifest in various ways. Sometimes it can be secondary to underlying systemic disease. In developing countries including India skin diseases are very common but they are being neglected with the thought that they are always benign.<sup>1</sup> Also mortality is less in skin diseases though morbidity is present. There is never a specific pattern for occurrence of skin diseases and it varies due to a wide range of factors such as climatic condition, geographical location, genetic makeover, hygienic standards, age, gender, level of health care, overcrowding, illiteracy and social backwardness in

many parts of India. These diseases are also known to cause significant deprivation in patients health related quality of life.<sup>2</sup> Early detection is important to prevent complications and also to prevent spread to others.

The evaluation for skin disorders forms an important component of primary health care practice and the prevalence of certain skin diseases can reflect status of health, hygiene and personal cleanliness of a community.<sup>3</sup>

Maharashtra is one of the largest state in India and has a population of 11.24crores with sex ratio 929 per 1000 males with literacy rate of 82.34%.<sup>4</sup> This region has a hot and humid climate with heavy rainfall and abundant coastal area. B.K.L.W.R.M.C. is a tertiary care hospital and medical college in the Western region of Maharashtra. Very few Indian studies are available to find out what exactly is the pattern of skin disease amongst patients reporting regularly

\* Corresponding author.

E-mail address: [koolguyketan03@gmail.com](mailto:koolguyketan03@gmail.com) (U. K. Raju).

to the skin OPD in this region.

## 2. Material and Methods

Our study is a cross sectional one done to determine the pattern and magnitude of skin diseases. All newly registered patients reporting to Skin OPD of B.K.L.Walawalkar Rural Medical College, Dervan during the period from 1<sup>st</sup> January 2018 to 31<sup>st</sup> December 2019 were enlisted in the study. The controversial and doubtful cases were excluded from the study. Other variables such as sex and age were taken into consideration. A total of 5090 patients were included as study material. A detailed general examination, systemic examination and cutaneous examination were done. Relevant investigations were carried out whenever deemed necessary. The findings were recorded in a performa for analysis and interpretation of data done by using Microsoft Excel.

### 2.1. Initiative/Type of study

MOOSE/Meta-analyses of observational studies in epidemiology

## 3. Results

### Age Distribution

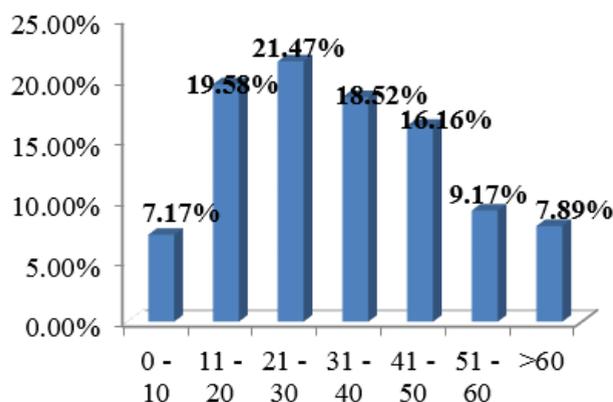


Fig. 1: Age distribution

Out of 5090 patients included in our study, 52.62% were female patients and male were 47.38% with female male ratio of 1.11:1.[Figure 2]

Majority of patients (21.47%) was from age group 21-30 years followed by age group 11-20 years (19.58%)[Figure 1].

51.53% of the total OPD patients were with Fungal infections. Under this group, Tinea Cruris comprised the highest percentage (49.79%) followed by Tinea Corporis (32.20%) respectively [Figure 3].

### Sex Distribution

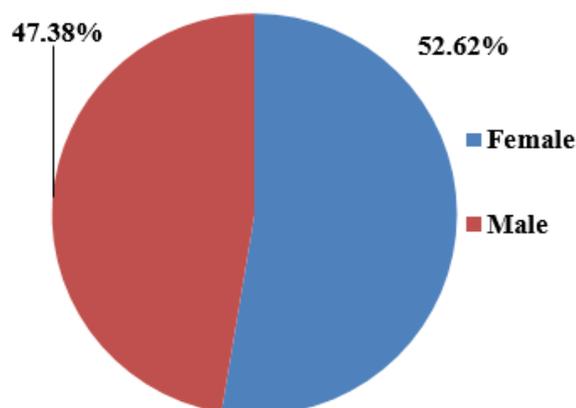


Fig. 2: Sex distribution

Eczema and allergic disorders were 17.44% of total cases, out of which Urticaria (30.29%) was the most common infection followed by Contact Dermatitis (21.50%).

Acne cases were 7.19% of total number of cases where acne vulgaris was the majority (89.89%).

Pigmentary disorders comprised of 4.73% of total number of cases. Skin Diseases like Polymorphic Light Eruptions (20.74%) was seen in maximum cases followed by Melasma (18.67%) of total pigmentary disorders.

Papulosquamous disorders comprised of 3.28% of total number of cases, out of which Lichen planus lead the group with (52.69%) followed by psoriasis (37.12%).

Parasitic infestations were observed in 4.40% of cases where scabies accounted for majority of cases followed by pediculosis.

Bacterial Infections comprised of 2.29% of the total cases, out of which Furunculosis (35.88%) was most common bacterial infection followed by Folliculitis (22.89%).

Viral infections comprised of 1.90% of total cases. The following pattern among viral infections was observed. Maximum cases were Herpes Zoster (44.32%) followed by Verruca vulgaris and Varicella which comprised of 29.89% and 0.97% respectively of total viral infections.

Alopecia was seen in 0.96% of cases with Alopecia areata being the major variant (91.83%).

The Autoimmune diseases (0.80%), Malignancy (0.41%), Nutritional Deficiencies(0.41%) and Vesicobullous disorders (0.25%) were found in a significant less number of patients.

Total number of 14(0.27%) patients reported as new case of Leprosy

The diseases like Acanthosis Nigricans, Insect bite, Xerosis, Drug rash, Keloid, Mole, Ichthyosis, Skin tag, Vasculitis were grouped under miscellaneous category which comprised 2.91% of total cases.

#### 4. Discussion

Skin diseases are common and pose a significant burden to health resources in many developing countries.<sup>5</sup>

The pattern of skin diseases in India is influenced by the developing economy, level of literacy, social backwardness, varied climate, industrialization, access to primary health care, and different religious, ritual and cultural factors.<sup>6</sup>

52.62% were female patients and 47.38% were males with female:male ratio of 1.11:1. It was similar to study in Haryana in terms of sex distribution where male comprised of 46.6% and females 53.4%.<sup>7</sup> Our finding of 21.47% of patients in age group 21-30 years differ from the study in Nepal where the majority of patients 44% belonged to age group of 10-19 years.<sup>5</sup>

51.53% of the total OPD patients were fungal infections similar to study done in Rajasthan constituting 40.60% followed by eczemas 34.86%. This could be accounted due to the fact that Maharashtra has a hot and humid climate more so the konkan area.

55.72% of total infective dermatoses was seen with Fungal Infections (51.53%), Viral infections (1.90%) and bacterial infections (2.29%) similar to findings of the study done in Rajasthan, where infective dermatoses comprised of 13.72% of total cases out of which Impetigo was the most common infective dermatoses followed by Pyoderma and different from the study done in Nepal where Infective dermatosis comprised of 22.5% of total cases out of which Pyoderma was the most common infective dermtoses.<sup>3,5</sup>

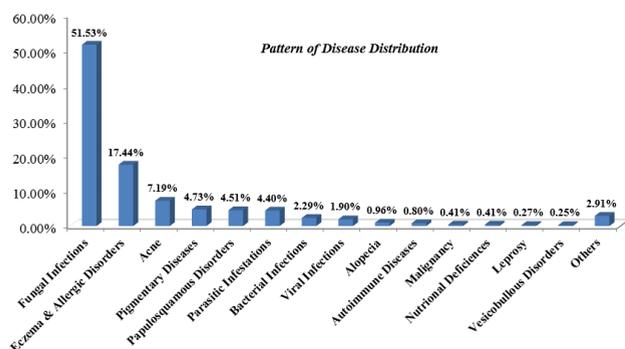


Fig. 3: Pattern of skin diseases

Due to prevailing hot and damp climate, irregular bath habits, poor hygiene could be the predisposing factors for the infective pattern of Dermatoses seen in this area.

In our study, Parasitic infestations were observed in 4.40% of cases where scabies accounted for majority of cases. Our findings were quite different from a study done

in Rajasthan on Pediatric Dermatoses where the infection and infestation group, bacterial infection (13.72%) was the most common entity followed by scabies (10.42%), fungal (6.52%) and viral infections.<sup>3</sup> This may be attributed due to different climatic conditions and infestations being more common in pediatric age group. Only 0.27% of total patients were new cases of Leprosy which is strikingly lower than the study done in West Bengal where New cases of leprosy accounted for 5.64%.<sup>8</sup> Being a tertiary referral hospital with a research center and District hospital near by, the number of reported leprosy cases were less. Prevalence rate of leprosy in India at present is 0.67 per 10000 population while that of Maharashtra is 0.79 per 10000 (below elimination level) which is higher than the current PR in this study (NLEP Annual Data 2017-18).<sup>9</sup>

Pigmentary disorders comprised of 4.73% of total number of cases. Skin diseases like Vitiligo were 0.03% differ to findings done in South Bengal comprising of 3.6% of Vitiligo cases. Acne cases were 7.19% of total number of cases which was more than the study done in Andhra Pradesh where it was seen 4.97% of cases.<sup>10</sup> Alopecia was observed on 0.96% cases with Alopecia Areata being the major variant (91.83%) was lower than the study done in Gujarat(9%).<sup>11</sup> Our findings showed that polymorphic light eruptions constituted 0.98% of total cases which differed from the study in Andaman and Nicobar islands where polymorphic light eruptions was seen in 1.77% of cases.<sup>12</sup> Papulosquamous disorders comprised of 4.51% of total number of cases, out of which psoriasis comprised of 1.21% which was quite lower than the study in Gujarat where Psoriasis consisted of 6% cases.<sup>11</sup> In a similar study<sup>13</sup> eczema is largest group and second is fungal infections.

#### 5. Conclusion

From the above study we concluded that fungal infections comprised majority of cases followed by eczema and allergic disorders in Konkan region of Maharashtra which has a tropical and humid climate. The limitations of the study was a cross sectional one. Thus an extensive study may be needed to have a holistic approach to the problem establish a correlation between the variables.

#### 6. Acknowledgment

We are very much thankful to B.K.L.Walawalkar Rural Medical College and Hospital, Dervan for providing full library support.

#### 7. Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

## 8. Source of Funding

None.

## References

1. Epidemiology and Management of Common Skin Diseases in children in Developing countries WHO/FCH/CAH/05.12.
2. Jagannadh CA, Kumar DRS, Swaroopa MM, Kirubakaran J. Pattern of skin diseases in South India and their effect on patients quality of life. *Int J Pharm Technol*;7(1):8155-65.
3. Balai M, Khare AK, Gupta LK, Mittal A, Kuldeep CM. Pattern of Pediatric Dermatoses in a Tertiary Care Centre of South West Rajasthan. *Indian J Dermatol*. 2012;57(4):275-8.
4. Available from: <https://www.census2011.co.in/census/state/maharashtra>. Accessed on 22.1.2021.
5. Shrestha R, Lama L, Gurung D, Shrestha DP, Rosdahl I. Pattern Of Skin Diseases In A Rural Village Development Community Of Nepal. *NJDVL*. 2014;12(1):41-4.
6. Joel JJ, Jose N, Shastry CS. Patterns of skin disease and prescribing trends in rural India. *Sch Acad J Pharm*. 2013;2(4):304-9.
7. Gupta V. Pattern of Skin Diseases in Rural India: A Hospital Based Study. *Intl J Scientific Study*. 1017354/ijss/2015/153;3(1):44-7.
8. Das S, Chatterjee T. Pattern of skin diseases in a peripheral hospital's skin OPD: A study of 2550 patients. *Indian J Dermatol*. 2007;52(2):93-5. doi:10.4103/0019-5154.33286.
9. Anand V, Kunte, Jathar, Patrikar. Evaluation of National Leprosy Eradication Programme in Pune city of Maharashtra from 2008 to 2019 - A Record Based Study. *Indian J Lepr*. 2020;92(Jul - Sep 2020):211-9.
10. Rao MKP. A Study Of Pattern Of Various Skin Diseases In Patients Attending To SKIN OPD, RIMS General Hospital, Srikakulam, Andhrapradesh. *IOSR J Dent Med Sci (IOSR-JDMS)*. 2018;17(9):38-45.
11. Nailesh G, Patel NJ, Patel. Epidemiological study of skin (Dermatologica) disease and its treatment in North Gujarat. *Asian J Pharm Clin Res*. 2010;3(4):40-2.
12. Subramaniyan R. Pattern of dermatoses among nicobarese in a community health camp at Nancowry, Andaman and Nicobar Islands. *Indian J Dermatol*. 2016;61(2):187-9. doi:10.4103/0019-5154.177766.
13. Devi TB, Zamzachin G. G Zamzachin Pattern of skin diseases in Imphal. *Indian J Dermatol*. 2006;51(2):149-50. doi:10.4103/0019-5154.26943.

## Author biography

**Hanamant G Bobade**, Assistant Professor

**U Ketan Raju**, Senior Resident

**Anil Mishra**, Associate Professor

**Cite this article:** Bobade HG, Raju UK, Mishra A. Pattern of Dermatoses in a tertiary care hospital in Konkan Region, Maharashtra. *IP Indian J Clin Exp Dermatol* 2021;7(4):311-314.