

Original Research Article

Pattern of skin diseases in rural population: a cross sectional study at Medchal mandal, Rangareddy district, Telangana, India

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Received: 30 November 2016

Accepted: 05 December 2016

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ABSTRACT

Background: The skin diseases are affected by various factors. The rural population is more vulnerable because of illiteracy. Therefore an attempt has been made to screen the population of five villages to know pattern of skin diseases. Aims of the study were to assess the prevalence of skin diseases, determine the pattern of skin diseases in the study population in rural community of Medchal mandal and compare previous studies so that inferences can be drawn for the benefit of society.

Methods: The study was aimed to include the total population of 5930 consisting of 5 villages. The present study was carried out during a period of one and half year in 5 villages of Medchal mandal. The total population of all the 5 villages comprises of 7726, out of which 5930 persons participated in the present study. In all villages house to house survey was done. A complete dermatological assessment of the study population was done and findings were recorded on the standard study proforma.

Results: The total number of 5930 persons was screened during the period of study. Among which 1172 (19.76%) persons were noted to have skin diseases. out of which 533 (45.48%) were males and 639 (54.52%) were females. The majority of population with skin disease was in the age group of 31-40 years with 289 cases (24.65%) and least in 71-80 age groups with 7 cases (0.59%). The prevalence of Non-infectious diseases (705 cases, 60.15%) was more than that of Infectious diseases (467 cases, 39.85%). Among non-infectious conditions Eczema / Allergy was the common disease followed by Pigmentary disorders other conditions like alopecia areata, seborrheic dermatitis and senile xerosis, Papulosquamous disorders, acne and acneiform dermatoses, polymorphous light eruptions and bite and stings, Eczemas followed by lichen simplex chronicus and allergic contact dermatitis. Among infectious conditions, bacterial infections were most common diseases followed by parasitic infestations, fungal infections and viral infections. Among Bacterial infections, secondary Pyodermas followed by folliculitis, impetigo and furunculosis. Based on occupation the majority of population was in the students followed by farmers, labour other than agriculture, housewives and petty business. Based on education, the majority of population was in the primary group (class 1 to 5) followed by secondary (class 6 to 8) and high school and above.

Conclusions: Based on the outcome of this study, the common skin problems existing in this area are to be carefully looked for and health education regarding the hygiene, nutrition and healthy life styles is to be stressed for better standard of living by the rural population.

Keywords: Cross sectional study, Pattern, Skin diseases

INTRODUCTION

The Pattern of skin diseases in India is affected by various factors like environmental, economic background, literacy level and socio cultural factors.^{1,2} Most of the people living in rural areas generally do not get treated for skin problems because of less suffering. The present study is an attempt to know pattern of skin diseases in Medchal mandal, Rangareddy dist, Telangana state, since there are very few studies representing rural population in India and none so far in this region.

Aims and objectives

To assess the prevalence of skin diseases, determine the pattern of skin diseases in the study population in rural community of Medchal Mandal and compare previous studies so that inferences can be drawn for the benefit of society. The study was aimed to include the total population of 5930 consisting of 5 villages.

METHODS

The present study was carried out during a period of one and half year from 1st June, 2010 to 31st December, 2011

in following 5 villages of Medchal Mandal: Arkalguda, (428) Ravalkole, (928) Gowdavelly, (2820) Kistapur, (1618) and Yellampet (1932).

The total population of all the 5 villages comprises of 7726 out of which 5930, persons participated in the present study. In all villages house to house survey was done. A complete dermatological assessment of the study population was done and findings were recorded on the standard study proforma.

The instruments used in the study are magnifying glass, glass slides, pins, feather spirit swabs (for testing sensations), measuring tape, torch and disposable gloves. All residents examined were included in the study. 1796 residents were either unavailable / unwilling for examination and hence excluded from the present study.

RESULTS

The total number of 5930 persons was screened during the period of study. Among which 1172 (19.76%) persons were noted to have skin diseases (Table 1). Out of which 533 (45.48%) were males and 639 (54.52%) were females (Table 2).

Table 1: Statistics for total affected population (infectious or non- infectious).

Village	Sex	Initial Diagnosis (No. of People Affected)		Infectious - Non Infectious (Inf) (Non- Inf)	
Arkalguda	Male	40	65	Inf- 17	Non- Inf- 23
	Female	25		Inf- 13	Non- Inf- 12
Gowdavelly	Male	207	439	Inf- 85	Non- Inf- 122
	Female	232		Inf- 83	Non- Inf- 149
Kistapur	Male	96	246	Inf- 40	Non- Inf- 56
	Female	150		Inf- 62	Non- Inf- 88
Ravalkole thanda	Male	50	115	Inf- 18	Non- Inf- 32
	Female	65		Inf- 25	Non- Inf- 40
Yellampet	Male	140	307	Inf- 60	Non- Inf- 80
	Female	167		Inf- 64	Non- Inf- 103
Total			1172	1172	

Total 5 Villages * Total Population= 7726 * Total Participated= 5930 * Total Affected= 1172.

Table 2: Gender wise distribution.

Population	Frequency	Percentage
Female	639	54.52
Male	533	45.48
Total	1172	100

The majority of population with skin disease was in the age group of 31-40 years with 289 cases (24.65%) followed by 0-10 years age group with 242 cases (20.64%), 11-20 years age group with 205 cases (17.49%), 21-30 age group with 149 cases (12.71%), 41-50 years age group with 116 cases (9.89%), 51-60 age group with 102 cases (8.70%), 61-70 age group with 62 cases (5.29%) and 71-80 age group - 7 cases (0.59%) (Table 3). The prevalence of Non-infectious diseases (705 cases, 60.15%) was more than that of Infectious

diseases (467 cases, 39.85%). The study done in pediatric group in five villages by Sayal et al observed that infectious conditions more than noninfectious.^{3,18}

Table 3: Based on age group.

Age group	No. of people	Percentage
0-10	242	20.64
11-20	205	17.49
21-30	149	12.71
31-40	289	24.65
41-50	116	9.89
51-60	102	8.70
61-70	62	5.29
71-80	07	0.59
Total	1172	100

Table 4: Details of different skin diseases in tabular form.

Type	Disease	Frequency	Percentage	
Infectious	Bacterial	Balanitis	8	0.68
		Balanoposthitis	3	0.26
		Folliculitis	33	2.82
		Furunculosis	16	1.37
		Impetigo	18	1.54
		Pyoderma	104	8.87
	Fungal	Tinea capitis	6	0.51
		Tinea corporis	47	4.01
		Tinea faciei	1	0
		Tinea unguium	8	0.7
		Tinea versicolor	33	2.82
	Parasitic	Scabies	158	13.48
		Viral	Genital warts	6
	Herpes zoster		26	2.22
Non- infectious	Acne & acnei form dermatosis	Acne	54	4.61
		Eczema/allergies	Acute urticaria	10
	Allergic contact dermatitis		37	3.16
	Chronic urticaria		17	1.45
	Eczema		58	4.95
	Lichen simplex chronicus		41	3.5
	Bites & stings	Pityriasis alba	19	1.62
		Insect bite history	26	2.22
	Neo plasm	Acrochordons	9	0.8
		Sebaceous cyst	1	0
	Papulosquamous	Chronic plaque psoriasis	41	3.5
		Palmo plantar psoriasis	68	5.8
	Physical agents	Polymorphus light eruption	50	4.3
		Pigmentory	Melasma	81
	Post inflamatory hyperpigment		27	2.3
	Vitiligo		30	2.6
	Others	Alopecia areata	43	3.7
		Seborrheicdermatitis	54	4.61
		Senile xerosis	39	3.33
		Total	1172	100

Among Non-infectious conditions eczema (Figure 1) was the common disease with (182 cases, 15.53%), followed by Pigmentary disorders with (138 cases, 11.77%), other conditions like alopecia areata, seborrheic dermatitis and senile xerosis in (136 cases, 11.60%), Papulosquamous disorders in (109 cases, 9.30%), acne and acneiform dermatoses in (54 cases, 4.61%), polymorphous light eruptions in (50 cases, 4.27%) and bite and stings in (26 cases, 2.22%). Eczemas were found in (58 cases, 4.95%) followed by lichen simplex chronicus in (41 cases, 3.5%) and allergic contact dermatitis in (37 cases, 3.16%). Das et al observed Eczema common in his study followed by pyodermas.²⁰



Figure 1: Eczema.



Figure 2: Scabies.



Figure 3: Herpes Zoster.

Among infectious conditions, bacterial infections were most common diseases with (182 cases, 15.53%),

followed by parasitic infestations (Figure 2) with (158 cases, 13.48%), fungal infections in (95 cases, 8.11%) and viral infections (Figure 3) in (32 cases, 2.73%). Among Bacterial infections, secondary Pyodermas were found in (104 cases, 8.87%), followed by folliculitis in (33 cases, 2.82%), Impetigo (Figure 4) in (18 cases, 1.54%) and furunculosis in (16 cases, 1.37%) (Table 4).



Figure 4: Impetigo.

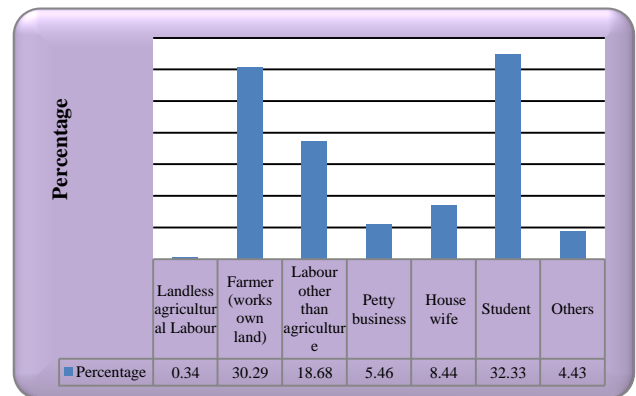


Figure 5: Occupation.

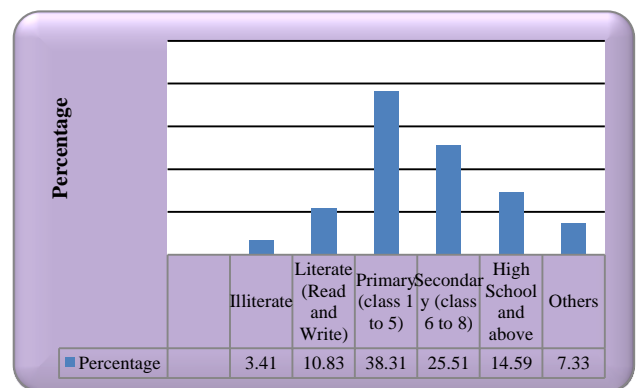


Figure 6: Education.

Based on occupation the majority of population was in the students with 379 cases, (32.33%), followed by farmers with 355 cases (30.29%), followed by labour other than agriculture with (219 cases, 18.68%), housewives with (99 cases, 8.44%) and petty business

with (64 cases, 5.46%) (Figure 5). Based on education, the majority of population was in the primary group (class 1 to 5) with (449 cases, 38.31%), followed by secondary (class 6 to 8) with (299 cases, 25.51%) and high school and above with (171 cases, 14.59%) (Figure 6).

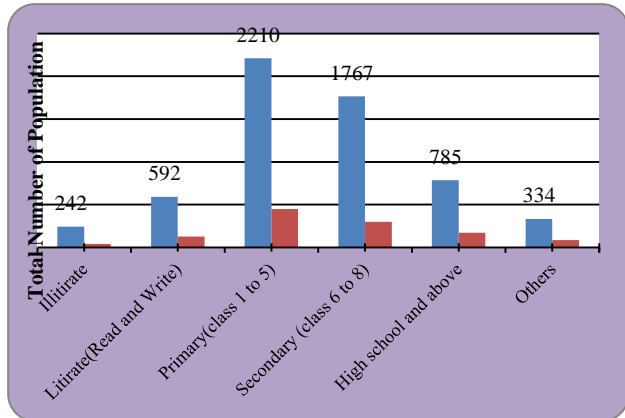


Figure 7: Occupation wise distribution total vs affected population.

DISCUSSION

The pattern of skin diseases in India is influenced by the developing economy, level of literacy, social backwardness, varied health care and different religion, ritual and cultural factors. The prevalence of skin diseases in the general population has varied from 6.16% to 51.90% in various studies. Our finding of prevalence 19.76% fell within this range. Although some studies have reported male preponderance, but in our study female preponderance is observed. Patients in their first and fourth decade formed the largest group of population in our study (45.29%).

The prevalence of infective disorders is reported to be more than that of Non Infective disorders in some studies varying from 42.68% to 63.65%.^{1,4,5,8,11} However, other studies have reported higher prevalence of NonInfective disorders varying from 21.21% to 64.81%.^{2,7,9,10,12} Similar trend was also noticed in present study showing (60.15%). This variance could possibly be due to differing susceptibilities in different population group in diverse geographical region depending upon exposure to environment, occupation, dietary practices etc.

Among the infective conditions, while fungal infections was the most common disorder in most studies, varying in prevalence from 10.77% to 54.51%.^{4,5,7,9,11,12} Pediculosis capitis was reported as the largest group in few studies with prevalence ranging from 20.41% to 74.1%.^{1,2} Higher prevalence of fungal infections is attributed to hot and humid climate condition in some geographical regions. Present study reported bacterial infections as the largest group with prevalence of 15.53% followed by parasitic infestations with prevalence of

13.48%. This is probably due to poor socioeconomic condition and crowding in dwelling units. Among the NonInfective conditions eczema has been reported the largest group, with prevalence varying from 17.48% to 39.21%.^{4,7-12} Present study found allergies and eczema with prevalence of 15.53% as compared to other studies, followed by Pigmentary disorders with a prevalence of 11.77%. Occupation wise, students comprised as the largest group, with a prevalence of 32.33%, followed by agriculture labour with prevalence of 30.29%, which is broadly commensurate with their proportion in total population studied.

Educationally, those who studied up to primary level (class 1 to 5) contributed a higher prevalence of 38.31% followed by secondary level (class 6 to 8) with a prevalence of 25.51%. which is commensurate with their proportion in total population. Thus, education status and occupation does not appear to have had a significant effect on pattern of dermatological conditions with population studied. The pattern of skin diseases in this area appears to be an expression of geographical, climatic status and socioeconomic condition of the population (Figure 6 and 7).

CONCLUSION

To conclude, present study noted a higher prevalence of Non-Infective dermatoses than infective dermatoses. A relatively higher prevalence of allergies and eczema and Pigmentary disorders were observed, which probably reflects the minor regional variance in our study group. Our study was conducted on a large sample of population in a community setting; hence it may not suffer from referral bias and therefore promises to be a true representation of point prevalence of dermatological disorder in the local population at regional location.

ACKNOWLEDGEMENTS

Authors would like to thank all the participant, village guides of five villages for their assistance in carrying out this study and Statistician.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Bommakanti J, Pendyala P. Pattern of skin diseases in rural population: a cross sectional study at Medchal mandal, Rangareddy district, Telangana, India. *Int J Res Med Sci* 2017;5: 50-5.