

Research Article

Profile of Dermatoses in North and Middle Andaman District of Andaman and Nicobar Islands

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A B S T R A C T

Background: The study pertaining to prevalence of diseases plays a valuable tool in planning and implementation of health care facilities. The prevalence of skin diseases in North & Middle Andaman has not been studied earlier.

Methodology: The newly registered out-patients who presented with skin diseases at the CHC during the period of study, that is, from May 2017 to April 2019 were included in the study. The patients who visited for follow-up were excluded. The patients aged 14 years or below were considered as children (paediatrics).

Result: The incidence of skin diseases among all the general out-patients at CHC, Rangat was found to be 03.956% in this study. In our study the most predominant skin infection was dermatophyte fungal infection of superficial skin, i.e. 38.05%; followed by Bacterial and viral infections, i.e., 09.76% and 06.58% respectively.

Conclusion: We performed this study to highlight the profile of dermatoses in the rural areas of Andaman group of islands which is not yet published in literature till date.

Keywords: Dermatoses, North & Middle Andaman

Introduction

North and Middle Andaman is one of the three districts of the Union Territory of Andaman and Nicobar islands. The district was created on 18th August, 2006 by bifurcating erstwhile Andaman district. Mayabunder is the district headquarters. The total area of the district is 3251.85 sq. kms. The climate is moist with moderate to heavy rainfall and very high relative humidity. The population of the district was 1,05,539 (Census-2011) and Sex ratio of 925 females for every 1000 males. Now the approximate population may be about 1,35,000 or more. Majority population of

the district is Bengali (> 95%). The Tamil, Malayali, Telegu and Ranchi community from Chhota Nagpur (Tribals- e.g. Munda, Dungdung, Kerketta, Kispotta, Ekka, etc.) also live in the district.

The socio-economic condition of the people in North and Middle Andaman district is poor. Most of the people in the district are cultivators, labourers, fishermen, small traders, etc. The education facilities are available in the district; but quality of education is very poor. However, the literacy rate is about 86%.

The pattern of diseases in a community depends on various factors: geography, climate, socio-economic status of the people, educational status, nutrition, food habits, genetic and other habits of the community. In addition, poor hygiene, lack of basic amenities and overcrowding also play significant role in occurrence of diseases. Same is true in case of skin diseases. Thus we performed a study to determine the profile of dermatoses in North and Middle Andaman.

Materials and Methods

The patients presented exclusively with skin diseases at Community Health Centre, Rangat, Middle Andaman were included in the study. The Community Health Centre, Rangat is situated at the centre of North and Middle Andaman district. The Chief Medical Officer In-charge, at Community Health Centre, Rangat was the only Dermatologist in the department of Health Services and the patients suffering from skin ailments attended to the CHC, Rangat from North and Middle Andaman district. The study period was from May 2017 to April 2019. All the skin patients under study were managed by the dermatologist only. The patient details, diagnosis and treatment provided by the dermatologist were documented. The newly registered out-patients who presented with skin diseases at the CHC during the period of study, that is, from May 2017 to April 2019 were included in the study. The patients who visited for follow-up were excluded. The patients aged 14 years or below were considered as children (paediatrics). The confirmation of the dermatoses was done by relevant laboratory investigations namely KOH, Gram's stain, Tzanck smear, skin biopsy and serology (HIV, HBsAg, anti-HCV, VDRL).

Result

Table 1. Total general patients versus total Skin patients

Total no of all out-patients	Total no of skin out-patients	Total no of male skin patients	Total no of female skin patients
147871	5850	2911	2937
Percentage (%)	03.956%	49.760%	50.205%

The patients with skin diseases were 3.956% (reporting for the first time) among all the patients attending out-patient department at CHC, Rangat, and Middle Andaman.

Table 2. Percentage of children amongst the skin patients

Total no, of Skin patients	Total no. of Male children	Total no. of Female children
5850	1165	1431
Percentage (%)	19.914%	24.461%

The incidences of skin diseases were almost equal in male and female population. However, the incidence of skin diseases was more in female children than in male children.

Table 3.No. of patients with various skin diseases

S. No.	Type of Skin Diseases	No. of patients	Percentage
1.	Dermatophytoses	2228	38.05128%
2.	Pityriasis versicolor	178	03.042%
3.	Viral Infections	385	06.5812
4.	Bacterial Infections	571	09.7606 %
5.	Eczemas	332	05.675%
6.	Infestations and Insect bite reactions	271	04.6324%
7.	Pigmentary Dermatoses	502	08.581%
8.	Sebaceous gland disorders	803	13.726%
9.	Urticaria	102	01.7435%
10.	Photodermatoses	42	0.7179%
11.	Ichthyosis	22	0.3760%
12.	Papulosquamous Dermatoses	138	02.3589%
13.	Hair disorders	108	01.846%
14.	Bullous Diseases	08	0.13675%
15.	Others	160	02.735%
Total		5850	

Table 4.Details of Fungal Infections

S. No.	Type of Fungal infection	Total no. of patients	Percentage of patients
1.	Tinea corporis	1099	18.786%
2.	Tinea corporis et cruris cruris	600	10.256%
3,	Tinea cruris	415	7.094%
3.	Tinea incognito	77	01.316%
4.	Tinea pedis	12	0.205%
5.	Tinea unguium	12	0.205%
6.	Tinea manum	09	0.1538%
7.	Tinea barbie	03	0.05128%
8.	Tinea capitis	01	0.01709%
9.	Pityriasis versicolor	178	03.0427%
Total		2406	41.1282%

Table 5. Details of Bacterial skin infections

S. No.	Type of Bacterial infection	Total no. of patients	Percentage of patients
1.	Pyodermas	492	08.4102%
2.	Intertriginous infections and Intertrigo	41	0.7008%
3.	Furunculosis & Carbuncles	17	0.2905%
4.	Erysipelas and Cellulitis	19	0.3247%
5.	Leprosy	02	0.0342%
Total		571	09.7606%

Table 6. Details of Viral infections

S. No.	Type of viral infection	Total no. of patients	Percentage of patients
1.	Chicken pox (varicella)	157	02.6837%
2.	Herpes zoster	23	0.3931%
3.	Herpes genitalis	25	0.4273%
4.	Herpes labialis and others (Herpes simplex-I)	13	0.2222%
5.	Measles	09	0.1538%
6.	Verruca vulgaris	123	02.1025%
7.	Molluscum contagiosum	28	0.4786%
8.	Mumps	06	0.1025%
9.	Human Immunodeficiency Virus (HIV)	01	0.0171%
Total		385	06.5812%

The incidence of infective dermatoses was 57.47%. Most common infection was fungal, that is, 41.128%; followed by Bacterial (9.76%) and Viral infections (6.58%).

Table 7. Details of Infestations and Insect bite reaction

S. No.	Type of infestation	Total no. of patients	Percentage of patients
1.	Scabies	239	04.0854%
2.	Pediculosis capitis	17	0.2906%
3.	Insect Bite Reaction	15	0.2564%
Total		271	04.6324%

The patients with Scabies was highest (04.0854%), followed by Pediculosis capitis and insect bite reactions.

Table 8. Details of Eczemas

S. No.	Type of Eczema	Total no. of patients	Percentage of patients
1.	Nummular Eczema and dermatitis	137	02.3418%
2.	Hand and Finger eczema	71	01.2136%
3.	Seborrheic dermatitis	29	0.4957%
4.	Lichen Simplex Chronicus (LSC)	29	0.4957%
5.	Allergic Contact Dermatitis (ACD)	38	0.6495%
6.	Irritant Contact Dermatitis (ICD)	14	0.2393%
7.	Atopic dermatitis	09	0.1538%
8.	Asteatotic dermatitis	05	0.0854%
Total		332	05.6752%

Nummular eczema was the predominant eczematous skin diseases (02.3418%); followed by Hand and Finger eczemas (01.2136%), Allergic Contact Dermatitis (0.6495%), Seborrheic Dermatitis (0.4957%), Lichen Simplex Chronicus (0.4957%), Irritant Contact Dermatitis (0.2393%), Atopic Dermatitis and Asteatotic Dermatoses (0.0854%) in that order.

Table 9. Details of Pigmentation dermatitis

S. No.	Type of pigmentary disease	Total no. of patients	Percentage of patients
1.	Melasma	280	04.786%
2.	Vitiligo	189	03.231%
3.	Freckles	17	0.290%
4.	Post-inflammatory hyperpigmentation	14	0.2393%
5.	Post-inflammatory hypopigmentation	02	0.0341%
Total		502	08.581%

Table 10. Details of disorders of Sebaceous gland

S. No.	Type of disease	Total no. of patients	Percentage of patients
1.	Acne vulgaris	801	13.692%
2.	Rosacea	02	0.03418%
Total		803	13.7264%

Table 11. Details of Urticaria

S. No.	Type of disease	Total no. of patients	Percentage of patients
1.	Chronic Urticaria	58	0.99145%
2.	Dermographism, acute popular urticari, etc.	44	0.7521%
Total		102	1.7435%

Table 12. Details of Photodermatitis

S. No.	Type of disease	Total no. of patients	Percentage of patients
1.	PMLE	27	0.4615%
2.	Acute Sun-burn and tanning	09	0.1538%
3.	Solar Keratosis	06	0.10256%
Total		42	1.7435%

Table 13. Details of Ichthyosis and other disorders

S. No.	Type of pigmentary disease	Total no. of patient	Percentage of patients
1.	Ichthyosis vulgaris	07	0.1196%
2.	Lamellar Ichthyosis	03	0.05128%
3.	Acanthosis nigricans	11	0.1880%
4.	Darier`s Disease	01	0.01709%
Total		22	0.3760%

Table 14. Details of Papulosquamous disorders

S. No.	Type of disorder	Total No. of patients	Percentage of patients
1.	Psoriasis vulgaris	50	0.8547%
2.	Palmo-planter Keratoderma	62	01.0598%
3.	Parapsoriasis	13	0.2222%
4.	Lichen planus	13	0.2222%
Total		138	02.5812%

Table 15. Details of Bullous disorders

S. No.	Type of Bullous disease	Total no. of patient	Percentage of patients
1.	Pemphigous vulgaris	02	0.03418%
2.	Bullous pemphygoid	03	0.05128%
3.	Chronic Bullous Disease of Childhood (CBDC)	03	0.05128%
Total		08	0.13675%

Incidence of Melasma was highest among the patients with Pigmentation skin diseases; followed by Vitiligo and other pigmentation skin diseases.

Table 16. Details of Hair disorders

S. No.	Type of Hair disease	Total no. of patients	Percentage of patients
1.	Androgenic Alopecia (MPA)	39	0.6666%
2.	Alopecia areata	42	0.7179%
3.	Alopecia totalis	03	0.05128%
4.	Other hair disorders	24	0.41025%
Total		108	01.8461%

The second most common skin disease in our study was Acne vulgaris (13.692%), followed by Pigmentation dermatoses (08.581%), Eczema (05.675%), Scabies (04.0854%), Papulosquamous dermatoses (02.3589%), Hair disorder (01.846%), Urticaria (01.7435%), Photodermatitis (0.7179%), Ichthyosis (0.3760%) and Bullous Diseases (0.13675%) in the order of decreasing frequency.

Table 17. Miscellaneous skin diseases

S. No.	Skin diseases	Total no. of patients	Percentage of patients
1.	Wounds and ulcers	38	0.6495%
2.	Ingrowing toe nails	13	0.2222%
3.	Schamburg`s disease	11	0.18803%
4.	Aphthus ulcers	09	0.1538%
5.	Fibrosis of oral mucosa	08	0.1367%
6.	Non-specific pruritis	05	0.08547%
7.	Malaria	02	0.03418%
8.	Keloid and hypertrophic scars	04	0.06837%
8.	Senile purpura	04	0.06837%
9.	Senile keratosis	06	0.10256%
10.	Henoch Schonlein purpura	03	0.05128%
11.	Neurofibroma	04	0.06837%
12.	Epidermal Naevus	04	0.06837%
13.	Chronic pastular folliculitis	03	0.05128%
14.	Acrochordon (skin tag)	06	0.10256%

15.	Epidermoid cyst	10	0.1709%
16.	Lipoma	03	0.05128%
17	Erythroderma	01	0.0171%
18	SLE	01	0.0171%
19	Progressive Systemic Sclerosis (PSS)	02	0.03418%
20.	Hyperhidrosis of palms and soles	02	0.03418%
21.	Poikiloderma	03	0.05128%
22.	Toxic Epidermal Necrolysis	01	0.0171%
23.	Perioral dermatitis	04	0.06837%
Total		147	2.5128%

Wounds and Ulcers (superficial and sub-cutaneous) were the maximum cases (0.6495%) in the miscellaneous group with 38 cases out of 147 patients

Discussion

Our study outlines the spectrum of skin diseases that presented to the Community Health Centre, Rangat, situated almost in the centre of the district, during the period from May, 2017 to April, 2019. This is a unique study of skin diseases in the rural areas of remote Andaman Islands. No published work on skin diseases in the rural areas of North and Middle Andaman is available in any indexed journal. The prevalence of skin diseases in the general population varied from 07.86% to 11.16% in various studies.^{1,2} In our study only the newly registered skin patients were considered. Therefore, only the incidence of the skin diseases during the period of study was known. The incidence of the patients with newly diagnosed skin diseases among all the general out-patients at CHC, Rangat was found to be 03.956% in the study. Skin patients comprised 4.5% of all the cases in another study conducted in unreached Hilly Areas of North India.³ These results of the study corroborate with those of our study. The results of the present study showed that the incidences of skin diseases were almost equal in male and female population. However, the incidence of skin diseases was more in female children than in male children.

The results of the present study showed that majority of the newly diagnosed skin diseases were infective dermatoses (57.47%), the disorder of skin appendages, pigmentation skin diseases, eczemas, infestations and other disorders of skin. Among the infections of the skin the most common was fungal infections. Similarly, another study conducted in unreached Hilly Areas of North India found infective dermatoses to be the most common diagnosis (32.6%), followed by the disorders of skin appendages (19.8%),

Dermatitis and Eczema (18.8%), etc.⁴ A study was conducted on a small group of Nicobarie tribes numbering 375 at a community medical camp held at Kamorta of Nicobar group of islands revealed that the incidence of infective dermatoses was the highest, i.e. 46.90% in the study.⁴

Studies conducted in Bundelkhand showed the prevalence of infections to be 53.18%;⁵ 41.9% in the North Eastern state of Assam,⁶ 42.68% in Bantwal which is a coastal area in Karnataka,⁷ 41.2% in Pune,⁸ 39.54% in Kolkata,⁹ 34.1% in the Kashmir valley,¹⁰ 32.6% in Unreached Hilly Area of Uttarakhand.³ The highest incidences of infections amongst the skin diseases at Kamorta, Assam, coastal area of Karnataka and in Pune could be attributed to the similar climatic conditions of high humidity and moderately high temperatures in all these regions. Moderate to high temperature, high humidity, the poor socio-economic condition of the people, lack of awareness and quality education could be attributed to high incidence of infection in the rural populace of North and Middle Andaman district.

In our study the most predominant skin infection was dermatophyte fungal infection of superficial skin, i.e. 38.05%; followed by Bacterial and viral infections, i.e., 09.76% and 06.58% respectively.

Conclusion

We performed this study to highlight the profile of dermatoses in the rural areas of Andaman group of islands which is not yet published in literature till date.

Conflict of Interest: None

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