



# International Journal of Medical Research & Health Sciences

[www.ijmrhs.com](http://www.ijmrhs.com)

Volume 3 Issue 4

Coden: IJMRHS

Copyright@2014

ISSN: 2319-5886

Received: 12<sup>th</sup> Aug 2014

Revised: 15<sup>th</sup> Sep 2014

Accepted: 29<sup>th</sup> Sep 2014

## Research article

### CLINICO-EPIDEMIOLOGICAL PROFILE OF INFLAMMATORY AND INFECTIVE SKIN DISEASES IN A TERTIARY CARE CENTRE IN EAST INDIA

\*Vishal Prakash Giri<sup>1</sup>, Om Prakash Giri<sup>2</sup>, Sudhir Kumar Gupta<sup>3</sup>, Shubhra Kanodia<sup>4</sup>

<sup>1</sup>Assistant Professor, Department of Pharmacology, Teerthanker Mahaveer Medical College and Research Centre, Moradabad, Uttar Pradesh, India

<sup>2</sup>Professor and Head, Department of Pulmonary Medicine, Darbhanga Medical College and Hospital, Darbhanga, Bihar, India

<sup>3</sup>Senior Resident, Department of Dermatology and STD, Darbhanga Medical College and Hospital, Darbhanga, Bihar, India

<sup>4</sup>Post Graduate Student, Department of Oral Medicine and Radiology, Teerthanker Mahaveer Dental College and Research Centre, Moradabad, Uttar Pradesh, India

\*Corresponding author email: [drvpgiri@gmail.com](mailto:drvpgiri@gmail.com)

## ABSTRACT

**Background:** Darbhanga is a municipal corporation and town of the old Darbhanga Raj, it has a humid subtropical climate. Several studies have reported about pattern of skin diseases in different districts of India, but there is no such report from Darbhanga. This prompted us to conduct the present study. **Aim:** To observe the clinical and epidemiological profile of inflammatory and infectious skin diseases at Darbhanga. **Methodology :** The present retrospective study was conducted from medical records of Dermatology out-patient department of Darbhanga Medical College and Hospital, Darbhanga. Total 1134 patients of inflammatory and infective skin diseases were selected for study. Their demographic data (age and gender) and disease data (type of skin infection) were recorded for analysis. **Results:** Analysis revealed that majority (597; 52.65%) of skin diseases belonged to inflammatory group followed by infective group (537; 47.35%). Of the inflammatory group, allergic contact dermatitis (209; 18.43%) was the most common entity followed by irritant contact dermatitis (180; 15.87%), seborrheic dermatitis (120; 10.58%), atopic dermatitis (50; 4.41%), psoriasis (20; 1.76%) and pompholyx (18; 1.59%). Of the infective group, bacterial infection was the most common disease (349; 30.78%). Followed by parasitic infection (127; 11.20%), fungal infection (58; 5.11%) and viral infection (3; 0.26%). **Conclusion:** Skin disorders are common in Darbhanga and incidence of inflammatory skin diseases is slightly higher than that of infective skin diseases.

**Keywords:** Inflammatory skin diseases, Infective skin diseases, Skin disease pattern.

## INTRODUCTION

Skin disease is very common. The skin disease can be as disabling as a disease of other organ systems. The disability consists of physical,

emotional and social components. Each geographical region has its own spectrum of skin diseases due to the local fauna. Although some diseases are same

all over the world, the pattern differs markedly from place to place.<sup>1</sup> Inflammatory and infective skin diseases are the commonest skin diseases. Inflammatory skin diseases include allergic contact dermatitis, irritant contact dermatitis, seborrheic dermatitis, atopic dermatitis, psoriasis and pompholyx (vesiculobullous hand eczema). Infective skin diseases include bacterial infections (impetigo contagiosa, ecthyma, folliculitis, furunculosis, pyogenic paronychia), parasitic infections (scabies, pediculosis), superficial fungal infections (tinea infections, pityriasis versicolor) and viral infection (molluscum contagiosum).<sup>2</sup> The aim of present study was to observe pattern of inflammatory and infective skin diseases at Darbhanga (Bihar), India.

## MATERIALS AND METHODS

The relevant data available from medical case records of the Dermatology out-patient department (OPD) of Darbhanga Medical College and Hospital were collected during the period July 2012 to January 2014. Total 1134 (one thousand one hundred thirty four) patients with inflammatory and infective skin diseases were selected for the present retrospective study. Demographic data (age and gender) and Disease data (type of disease) were noted to study the clinico-epidemiological profile.

## RESULTS

Total 1134 cases were analyzed and out of them 597 (52.65%) cases had inflammatory skin diseases and 537 (47.35%) infective skin diseases. Among the inflammatory skin diseases, allergic contact dermatitis was the most common 209 (18.43%) disease followed by irritant contact dermatitis 180 (15.87%), seborrheic dermatitis 120 (10.58%), atopic dermatitis 50 (4.41%), psoriasis 20 (1.76%) and pompholyx 18 (1.59%). [Table1] Among the infective skin diseases bacterial infections affected 349 (30.78%) patients and out of them 158 (13.58%) had impetigo contagiosa while remaining had ecthyma 133 (11.73%), folliculitis 25 (2.20%), furunculosis 20 (1.76%) and pyogenic paronychia 13 (1.15%). Parasitic infections were the next most common group 127 (11.20%), out of which scabies contributed to 122

(10.76%) and Pediculosis 5 (0.44%). Fungal diseases were observed in total 58 (5.11%) cases comprising of tinea infections 38 (3.35%) and pityriasis versicolor 20 (1.76%). Viral infection molluscum contagiosum was observed in 3 (0.26%) patients. [Table 2] 580 (51.15%) patients were female and 554 (48.85%) were male with a female / male ratio of 1.05 :1.

Allergic contact dermatitis (105 : 9.26%), seborrheic dermatitis (71: 6.26%) and psoriasis (11: 0.57%) were common in males while irritant contact dermatitis (99 : 8.73%), atopic dermatitis (31:2.73%) and pompholyx (10 :0.88%) had increased incidence in females. Impetigo contagiosa 86 (7.58%), folliculitis (15:1.32%), furunculosis (12:1.06%), pyogenic paronychia (8:0.70%), scabies (66:5.82%) and molluscum contagiosum (3:0.26%) were common in females whereas males were frequently affected with ecthyma (72:6.35%), pediculosis 3(0.26%), tinea infections (22:1.94%) and pityriasis versicolor (11:0.97%). [Table 1 & 2].

In the present study 369 (32.54%) pediatric (1-14 years age) and 765 (67.46%) adult cases were observed. Age distribution showed that majority of patients were in the age group of 21 -40 years with 356 (31.39%) cases followed by 15-20 years age group with 172 (15.17%) cases.

**Table 1: Pattern of skin inflammation in both sexes**

Diseases	Male		Female		Total	
	No.	%	No.	%	No.	%
Allergic contact dermatitis	105	9.26	104	9.17	209	18.4
Irritant contact dermatitis	81	7.14	99	8.73	180	15.8
Seborrheic dermatitis	71	6.26	49	4.32	120	10.5
Atopic dermatitis	19	1.68	31	2.73	50	4.41
Psoriasis	11	0.97	9	0.79	20	1.76
Pompholyx	8	0.71	10	0.88	18	1.59
Total	295	26.0	302	26.63	597	52.6

**Table 2: Pattern of skin infection in both sexes**

Diseases	Male		Female		Total	
	No.	%	No.	%	No.	%
Impetigo contagiosa	72	6.35	86	7.58	158	13.93
Ecthyma	72	6.35	61	5.38	133	11.73
Folliculitis	10	0.88	15	1.32	25	2.20
Furunculosis	8	0.70	12	1.06	20	1.76
Pyogenic paronychia	5	0.44	8	0.70	13	1.15
Scabies	56	4.94	66	5.82	122	10.76
Pediculosis	3	0.26	2	0.18	5	0.44
Tinea infections	22	1.94	16	1.41	38	3.35
Pityriasis versicolor	11	0.97	9	0.79	20	1.76
Molluscum contagiosum	00	00	3	0.26	3	0.26
Total	259	22.8	278	24.52	537	47.35

Pediatric cases were predominantly affected with impetigo contagiosa 133 (11.73 % ), ecthyma 94 (8.29%), scabies 71 (6.26%) and molluscum contagiosum 3 (0.26 % ) whereas adult patients had increased incidence of folliculitis 23 (2.03%), furunculosis 18 (1.59 % ), pyogenic paronychia 12 (1.06 % ), pediculosis 5 (0.44%), tinea infections 33(2.91% ), pityriasis versicolor 20 (1.76 % ), allergic contact dermatitis 205 (18.08%), irritant contact dermatitis 167 (14.73 % ), seborrheic dermatitis 99 (8.73%), atopic dermatitis 37( 3.26 % ), psoriasis 20(1.76%) and pompholyx 11(0.97%). [Table 3-6]

**Table 3: Pattern of skin inflammation in different age groups**

Diseases	1-5 Years		6-14Years		15-20 Years	
	No.	%	No.	%	No.	%
Allergic contact dermatitis	00	00	4	0.35	33	2.91
Irritant contact dermatitis	6	0.53	7	0.62	27	2.38
Seborrheic dermatitis	7	0.62	14	1.23	29	2.56
Atopic dermatitis	8	0.71	5	0.44	4	0.35
Psoriasis	00	00	00	00	00	00
Pompholyx	2	0.18	5	0.44	3	0.26
Total	23	2.03	35	3.09	96	8.47

**Table 4: Pattern of skin inflammation in different age groups**

Diseases	21-40 y		41-60 y		60 y	
	No.	%	No	%	No.	%
Allergic contact dermatitis	80	7.05	47	4.1	45	3.97
Irritant contact dermatitis	104	9.17	30	2.6	6	0.53
Seborrheic dermatitis	40	3.53	20	1.7	10	0.88
Atopic dermatitis	20	1.76	3	0.2	10	0.09
Psoriasis	13	1.15	3	0.2	4	0.35
Pompholyx	8	0.71	00	00	00	00
Total	265	23.3	103	9.08	75	6.61

**Table 5: Pattern of skin infection in different age groups**

Diseases	1-5 years		6-14 years		15-20 years	
	No.	%	No.	%	No.	%
Impetigo contagiosa	96	8.47	37	3.26	15	1.32
Ecthyma	59	5.20	35	3.09	23	2.02
Folliculitis	1	0.09	1	0.09	3	0.26
Furunculosis	1	0.09	1	0.09	4	0.35
Pyogenic paronychia	00	00	1	0.09	1	0.09
Scabies	37	3.26	34	3.00	23	2.03
Pediculosis	00	00	00	00	3	0.26
Tinea infections	1	0.09	4	0.35	4	0.35
Pityriasis versicolor	00	00	00	00	00	00
Molluscum contagiosum	2	0.18	1	0.09	00	00
Total	197	17.37	114	10.05	76	6.70

**Table 6: Pattern of skin infection in different age groups**

Diseases	21- 40Years		41-60years		60 years	
	No	%	No	%	No.	%
Impetigo contagiosa	7	0.62	3	0.26	00	00
Ecthyma	8	0.70	4	0.35	4	0.35
Folliculitis	15	1.32	4	0.35	1	0.09
Furunculosis	10	0.88	3	0.26	1	0.09
Pyogenic paronychia	4	0.35	6	0.53	1	0.09
Scabies	20	1.76	4	0.35	4	0.35
Pediculosis	00	00	00	00	2	0.18
Tinea infections	17	1.50	10	0.88	2	0.18
Pityriasis versicolor	10	0.88	9	0.79	1	0.09
Molluscum contagiosum	00	00	00	00	00	00
Total	91	8.02	43	3.80	16	1.41

## DISCUSSION

The prevalence of non-infective skin diseases have outstripped that of infectious skin diseases in some studies varying from 40.90% to 58.70%.<sup>3-7</sup> Further this trend was noticed in our present study with inflammatory skin diseases accounting for 52.65% cases. However, some other studies have reported a higher prevalence of infective skin diseases varying from 59.10% to 89.70%.<sup>8-12</sup> In contrast, infective skin diseases accounted only 537 (47.35%) cases in our present study.

In the inflammatory skin diseases group, allergic contact dermatitis was commonest 209 (18.43%) disorder followed by irritant contact dermatitis 180 (15.87%) in the present study. However seborrheic dermatitis have been reported as commonest disorder at Kolkata and contact dermatitis at Mangalore.<sup>13,14</sup> Among infective skin diseases, bacterial infections were more common in the present study followed by parasitic, fungal and viral infections. Unlike our study, Ashokan N et al from Kerala and Agrawal S et al from Uttarakhand have reported highest incidence of fungal diseases.

In pediatric cases, bacterial infections have been observed as the commonest skin infection followed by parasitic, fungal and viral infections in the present study. A similar pattern has also been reported in a study from Rajasthan and dissimilar results have been reported from Kashmir Valley where viral infections were seen as most common disorder followed by fungal, bacterial, parasitic and mycobacterial infections and from Maharashtra where parasitic infections were most common.<sup>15-17</sup>

In our study, patients of 21-40 years age group formed the largest group and preponderance of females has been observed. A similar pattern has also been reported by Kuruvilla M et al.<sup>11</sup> Male preponderance has been reported in other studies.<sup>10-12</sup>

## CONCLUSION

We conclude that skin disorders are common in Darbhanga and incidence of inflammatory skin

diseases is slightly higher than that of infective skin diseases.

## ACKNOWLEDGMENT

We are thankful to staff of the medical record section Darbhanga Medical College and Hospital, Darbhanga for their co-operation during the study.

**Conflict of Interest:** Nil

## REFERENCES

1. Marks R ed . Roxbergh's common skin diseases, 17 th ed. Arnold Publications Inc , 2003 : 68
2. William DJ , Timothy GB , Dirk ME , eds. Andrews' diseases of skin: Clinical dermatology, 11th ed. Elsevier Inc, 2011 : 247 -53
3. Das KK. Pattern of dermatological diseases in gauhati medical college and hospital Guwahati. Indian J Dermatol Venereol Leprol 2003;69: 16-18.
4. Devi T, Zamzachin G, "Pattern of skin diseases in Imphal". Indian J. Dermatology, 2006; 51: 149-50.
5. Gangadharan C, Joseph A , Sarojini PA .Pattern of skin diseases in Kerala . Indian J Dermatol Venereol Leprol .1976 ;42 : 49-51
6. Ashokan N, Prathap P, Ajithkumar K, Ambooken B, Binesh VG, Geoge S. Pattern of skin diseases among patients attending a tertiary care teaching hospital in Kerala . Indian J Dermatol 2009 ; 75 : 517-18.
7. Agrawal S, Sharma P, Gupta S, Ojha A. Pattern of skin diseases in kumaun region of Uttarakhand . Indian J Dermatol Venereol Leprol 2011;77 : 603-5 .
8. Grover S, Ranyal RK, Bedi KA . A cross section of skin diseases in rural Allahabad . Indian J Dermatol 2008;53 ; 179-81
9. Sayal SK ,Das AL ,Gupta CM . Pattern of skin diseases among civil population and armed forces personnel at Pune . Indian J Dermatol Venereol Leprol 1997 ; 63 : 29-32
10. Dayal SG ,Gupta GP . A cross section of skin diseases in Bundelkhand region, UP. Indian J Dermatol Venereol 1977 ; 43 :258-61.
11. Kuruvilla M, Sridhar KS, Kumar P, Rao G. Pattern of skin diseases in Bantawal Taluq

- Dakshin Kanada . Indian Journal Dermatol Venereol 2000;66 :247-8 .
12. Rao GS , Kumar SS ,Sandhya . Pattern of skin diseases in an Indian village . Indian j Med Sci 2003 ; 57: 108-10
  13. Kuruvilla M, Dubey S ,Gahalaut P. Pattern of skin diseases among migrant construction workers in Mangalore . Indian J Dermatol Venereol Leprol 2006 ; 72 :129-32 .
  14. Das DA, Haldar HS, Das DJ, Mazumdar MG , Biswas BS , Sarkar SJ . Dermatological disease pattern in an urban institution in Kolkata .Indian J Dermatol 2005 ; 50 : 22-24 .
  15. Balal M , Khare AK , Gupta LK , Mittal A , Kuldeep CM. Pattern of pediatric dermatosis in a tertiary care centre of South West Rajasthan . Indian J Dermatol 2012 ; 57 : 275 -8 .
  16. Hassan I, Ahmad K, Yaseen A .Pattern of pediatric dermatoses in Kashmir Valley : A study from tertiary care centre . Indian J Dermatol Venereol Leprol 2014 ; 80: 448-5
  17. Bhatia V. Extent and pattern of pediatric dermatoses in rural areas of central India . Indian J Dermatol Venereol Leprol 1997 ; 63 : 22-25