



**PREVALENCE OF SKIN DISORDERS IN ASSAM OF PATIENTS ATTENDING OPD AT AYURVEDIC HEALTH CENTRE OF KANAKLATA CIVIL HOSPITAL, TEZPUR DURING THE YEAR OF 2020-2021**

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**ABSTRACT**

Skin disorders are increasing alarmingly in recent period of time owing to a number of conditions. Although they do not cause severe medical problems, most of the time a person may suffer from anxiety and depression owing to its cosmetic concerns. The aim of the study is to provide an assisting tool for evaluating skin disorders commonly occurring in a particular geographical distribution of Assam. An observational study was done from March 2020 to January 2021. Patients suffering from skin disorders of all age group were included in the study. A prevalence study of 110 newly diagnosed cases of various skin disorders have been reported. The main objective of this study is to evaluate the prevalence of skin disorders in Assam for early diagnosis and treatment. As per our study the most of the patients seeking medical interventions were diagnosed with *Dadru*. Along with that *Kaphadoshadhikya* have been associated with among 80% pre and newly diagnosed cases of *Dadru*. An increasing number of daily patient inflow to OPD manifesting skin disorders, throws light on satisfactory improvement of symptoms relating to skin disorders, attained by the treatment module adopted in Ayurvedic health centre at Kanaklata Civil Hospital.

**Keywords** *Dadru, Skin disorder, Dosha adhikya.*

**INTRODUCTION:** The prospective observational study was conducted at Kanaklata Civil Hospital of Tezpur, Assam. Tezpur is the headquarters of Sonitpur district located 190km east of Guwahati the capital city of Assam. The population of Tezpur is largely heterogeneous and it is a trade centre for tea, rice and other crops. There has been an increase in interest among the people of Tezpur towards Ayurveda as an effective remedy for various skin ailments. A total number of 2489 patients visited Ayurvedic OPD at Kanaklata Civil Hospital to seek Ayurvedic interventions for their healthcare needs.

Skin related conditions are emerging out as new and a potent area for research in the field of medicine. From minor skin ailments to conditions potentially causing social and emotional disability degrading a person's quality of life, this branch of

medicine comprises of a large number of skin disorders. Rising concern especially among the youth for body and beauty further raises the incidence of such diseases. Ayurveda considers *Tvak* as a parameter for clinical assessment of health. A large variety of skin disorders are mentioned in Ayurveda as the disease *Kustha*. Factors essentially leading to manifestation of such diseases along with effective treatment protocol to be adopted have been discussed elaborately in Ayurveda. Present work aims at evaluating the prevalence of skin related disorders in our region and dealing effectively to limit the incidence of such diseases. The survey is conducted as per the data collected from the patients visiting Ayurvedic health centre at Kanaklata Civil Hospital.

**MATERIALS AND METHOD:**

A prospective observational study was conducted from March 2020 to January

2021. The study is conducted by recording the complaints presented by the patients visiting Ayurvedic Health Centre at Kanaklata Civil Hospital during this period. Patients suffering from skin disorders of all age group are included in the study.

**Literature review:** Ayurveda has mentioned a number of skin disorders in context of *Kustharoga*. However, the diseases commonly encountered in the OPD have been discussed in the study. As per *Ayurveda*, disease causing discoloration to the skin is considered as *kustha*<sup>1</sup> and with the passage of time if left untreated with time virulency of such diseases gradually increases, nearly becoming irresponsive to treatment<sup>1</sup>. Another important criteria, as per mentioned in our classics, to define *Kustha* is *sparshagyanendriyanasha* i.e. loss of tactile stimulation<sup>2</sup>. *Ayurveda* classifies *Kustha* primarily on the basis of *Tvakvikriti* (Cutaneous derangement) and *Dhatuvikriti* (Derangement at cellular level). As per mentioned by *Vijayrakshit* in *Madhukosh Tika* disease conditions presenting with symptoms of only *tvakvikriti* are considered as *Kshudrakustha* whereas those suggesting presence of features of *Dhatuvikriti* are considered under *Mahakustha*. In our day to day practice we are mostly dealing with patients showing clinical features of *Kshudrakustha*.

**EKAKUSTHA:** lesions in *Ekakustha* are devoid of sweating. The affected skin resembles the upper layers of fish<sup>3</sup>.

**CHARMAKUSTHA:** Lesions *Charmakustha* are scaly in nature and also thick, hard and rough resembling the skin of an elephant<sup>4</sup>

**KITIBHA:** lesions in *Kitibha* are blackish, rough and hard<sup>5</sup> *Vagbhat* considers presence of *Kandu* as another clinical manifestation<sup>6</sup>.

**CHARMADALA:** *Sparsha-asahatva* has been considered as an important clinical manifestation as per both *Charak* and *vagbhat*<sup>7</sup>. *Vagbhat* has specifically mentioned that lesions in *Charmadala* are reddish, itchy associated with pustular eruptions which may rupture leaving raw, painful wound<sup>8</sup>.

**Pama:** Lesions in *Pama* typically occurs in and around the hip in between the fingers and elbow. These are whitish, reddish or blackish in colour and associated with *Kandu, Kleda* and *ruja*<sup>9</sup>.

Pruritus is one of the most common clinical manifestation in the practice of dermatology. Conditions commonly associated with severe itching include eczema, psoriasis, scabies etc.

Dermatophytes are fungi capable of causing superficial skin infections known as ringworm or dermatophytosis. Clinical forms of cutaneous infection include tinea corporis (involvement of body), tinea capitis (scalp involvement), tinea cruris (groin involvement), tinea pedis (involvement of feet) and onychomycosis.<sup>10</sup> Tinea corporis is characterized by red scaly skin. The lesions are erythematous, annular and scaly, with a well defined edge and often central clearing. Tinea cruris often presents as plaques extending from groin flexures onto the thigh. In tinea pedis clinical features are an itchy rash between the toes, with peeling, fissuring and maceration.<sup>10</sup>

Vitiligo is an acquired condition in which circumscribed depigmented patches develop. It involves focal areas of melanocyte loss. Segmental vitiligo is

restricted to one part of the body. Generalized vitiligo is often symmetrical and frequently involves the hands, wrists knees and neck, as well as the area around the body orifices.<sup>11</sup>

The term eczema and dermatitis are synonymous. They refer to distinctive reaction pattern in the skin. In the acute stage, oedema of the epidermis progresses to the formation of intra-epidermal vesicles, which may enlarge and rupture. In the chronic stage there is less oedema and vesiculation. The eczema may be of atopic, seborrheic, discoid, irritant etc. varieties.<sup>12</sup> Lichen simplex, a plaque of lichenified eczema due to repeated rubbing or scratching. Common sites include the nape of the neck, the lower legs and the anogenital area. These are often presented with increased skin markings and excoriation.<sup>13</sup>

Psoriasis is a non-infectious, chronic inflammatory disease of the skin characterised by well defined erythematous plaques with silvery scale, with a predilection for the extensor surfaces and scalp and a chronic fluctuating course. There is a large inflammatory cell infiltrate. The lesions are red, with a dry silvery white scale. The elbows, knees and lower back are commonly involved.<sup>14</sup>

**Observation:** Among the 2489 patients attending Ayurvedic OPD at Kanaklata Civil Hospital for the year 2020 - 2021, 467 were for various skin disorders with around 110 newly diagnosed cases.

It has been noted that out of 110 patients 46 were male and 64 were female patients.

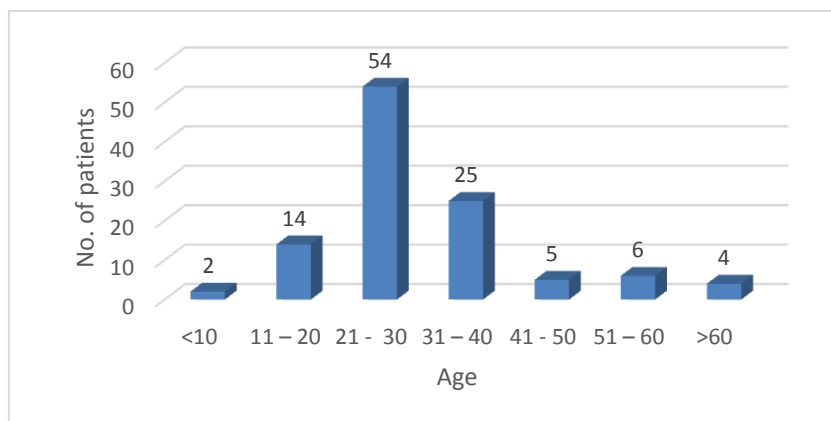
% Male = 41.8%

%Female = 58.1%

**Table 1 : Patients of all age group are included in the study.**

Age	No. of patients	Percentage
<10	2	1.8%
11 – 20	14	12.7%
21 - 30	54	49%
31 – 40	25	23%
41 – 50	5	4.5%
51 – 60	6	5.5%
>60	4	3.6%
	Total = 110	

**Table 1 : Patients of all age group are included in the study.**

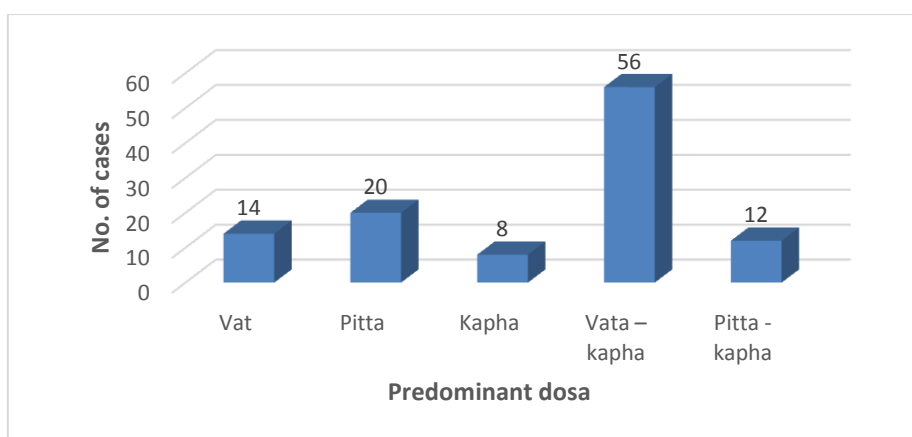


The highest prevalence of the disorder was found among the age group of 21 – 30 years is 49 %, followed by 23% in the age group of 31 – 40 years.

**Table 2 : Based on doshadhikya according to various features of reported cases –**

Predominant dosa	No. of cases	Percentage
Vat	14	12.7 %
Pitta	20	18.1%
Kapha	08	7.2%
Vata – kapha	56	50.9%
Pitta – kapha	12	10.9%

**Graph 2 : Based on doshadhikya according to various features of reported cases –**

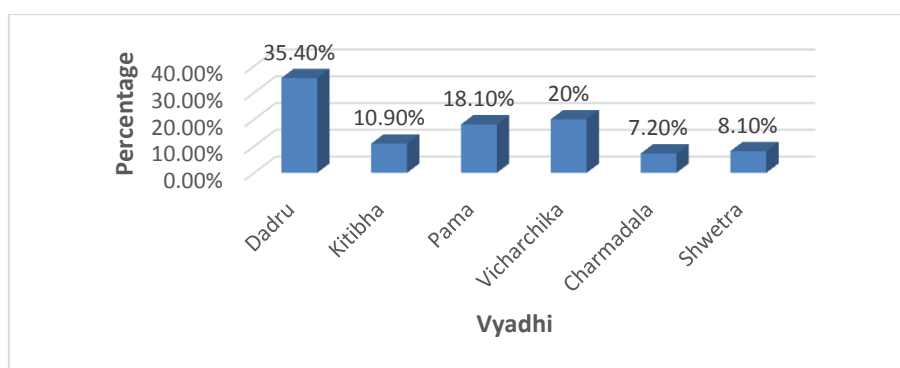


Highest prevalence of *dosa* involved is seen in terms of *vata – kapha dosa* predominance (50.9%) followed by *pitta dosa* predominance (18%) and then *vata dosa* predominance (12.7%) involved of *kapha pitta dosa* is seen among 10.9% of the population and that *kapha dosa* is seen in nearly 7.2% of the population.

**Table – 3 : According to clinical diagnosis based on Ayurvedic parameter.**

Vyadhi	No.	Percentage
Dadru	39	35.4 %
Kitibha	12	10.9 %
Pama	20	18.1%
Vicharchika	22	20 %
Charmadala	08	7.2 %
Shwetra	09	8.1 %

**Graph 3 : According to clinical diagnosis based on Ayurvedic parameter.**

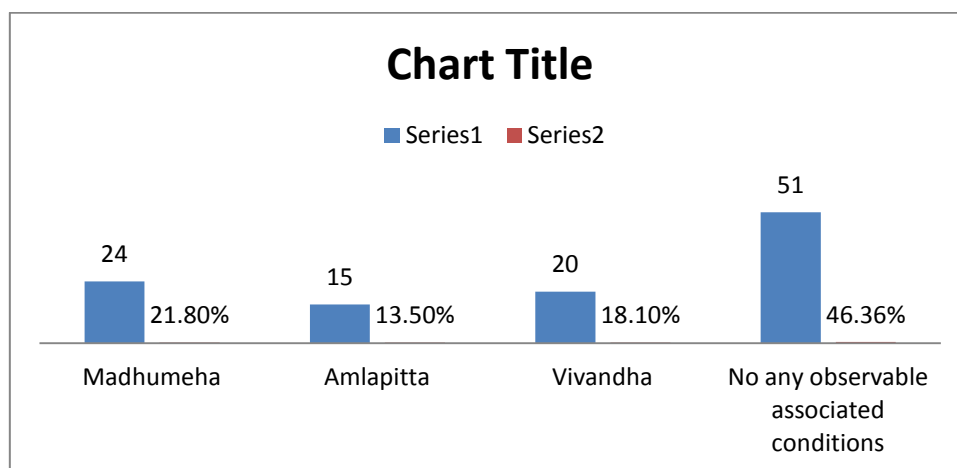


The most common clinical diagnosis is *Dadru* (35.4%) followed by *Vicharchika* (20%) and then *pama* (18.1%). Rest are evaluated as *kitibha* (10.9 %), *charmadala* (7.2 %) and *switra* (8.1%).

**Table – 4 : Anusangik other associated conditions are as follows –**

<i>Anusangik vyadhi</i>	No.	Percentage
<i>Madhumeha</i>	24	21.8%
<i>Amlapitta</i>	15	13.5%
<i>Vivandha</i>	20	18.1%
No any observable associated conditions	51	46.36%

**Graph 4 : Anusangik other associated conditions are as follows –**

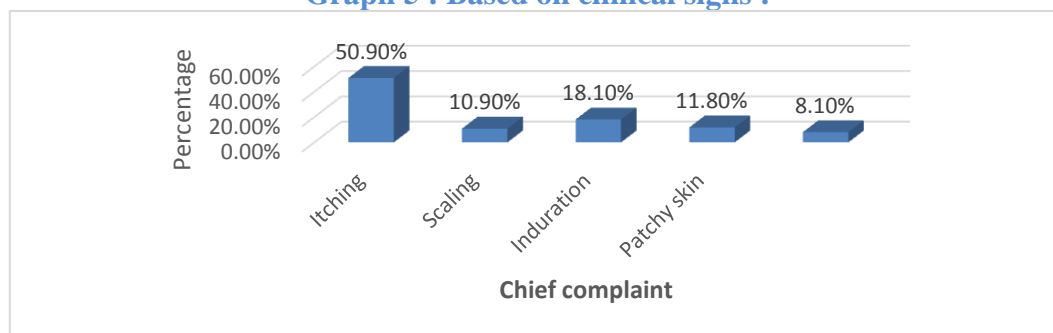


The most commonly associated condition is *madhumeha* (21.8%) followed by *vivandha* (18.1%) and *amlapitta* (13.6%) successively. With no any considerable associated condition has been found among 46.36 %.

**Table – 5 : Based on clinical signs :**

Chief complaint	No.	Percentage
Itching	56	50.9%
Scaling	12	10.9%
Induration	20	18.1%
Patchy skin	13	11.8%
Discoloration	09	8.1%

**Graph 5 : Based on clinical signs :**

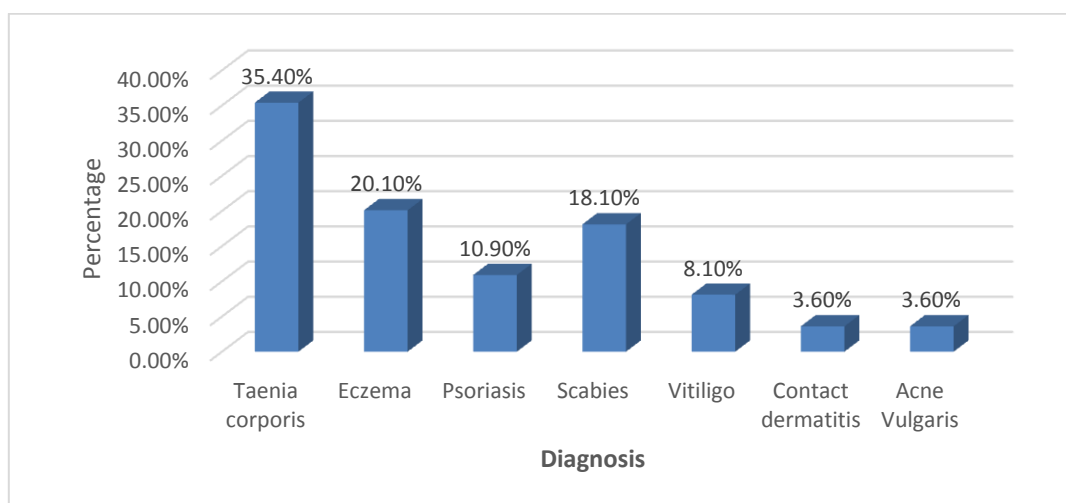


Most commonly presenting clinical sign included itching (50.9%) followed induration (18.1%). Rest of the complaints included are patchy skin (11.8%), scaling (10.9%) and discoloration (8.1%).

**Table -6 : according to causes of skin disorders.**

Diagnosis	No.	Percentage
Tinea corporis	39	35.4%
Eczema	22	20.1%
Psoriasis	12	10.9%
Scabies	20	18.1%
Vitiligo	09	8.1%
Contact dermatitis	04	3.6%
Acne Vulgaris	04	3.6%

**Graph6 : according to causes of skin disorders.**

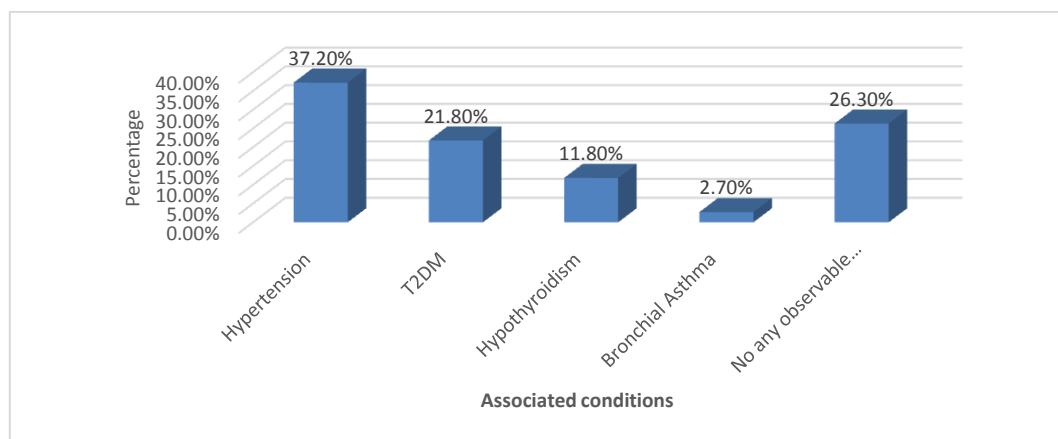


Most common type of cause is, Taenia corporis (35.4%) followed by Eczema (20%) and Scabies (18.1%). Others are Psoriasis (10.9%), vitiligo (8.1%), contact dermatitis and acne vulgaris is 3.6% each.

**Table 7: Associated cutaneous and systemic diseases found are as follows :**

Associated conditions	No.	Percentage
Hypertension	41	37.2%
T2DM	24	21.8%
Hypothyroidism	13	11.8%
Bronchial Asthma	03	2.7%
No any observable associated conditions	29	26.3%

**Table 7: Associated cutaneous and systemic diseases found are as follows :**



Most associated condition is Hypertension (37.2%), followed by T2 DM which is 21.8%. Hypothyroidism and Bronchial Asthma is found in 11.8% and 2.7 % population respectively. No any considerable associated condition has been found among 37.2 %.

**DISCUSSION:** A prospective observational study was conducted from March 2020 to January 2021. A total of 2489 patients attended Ayurvedic OPD of Kanaklata Civil Hospital for a period of 10 months for the year 2020-2021. Out of which 467 patients presented with the complaints of various skin disorders, accounting nearly 110 newly diagnosed cases. The primary objective of this study is to analyse the prevalence of skin disorders in this part of Assam to facilitate early diagnosis and hence proper management. All the data collected included age,sex,clinical presentation,dosa prevalence, along with associated cutaneous and systemic diseases of the patients.

Among the 2489 patients attending Ayurvedic OPD at Kanaklata Civil Hospital, 467 patients presented with the complaints of skin disorder, including 110 newly diagnosed cases i.e, 4.4% of cases are reported for skin disorder. In this study the incidence of skin disorder is seen more among the female patients (58.1%). The highest incidence of skin disorders are seen mostly in the age group of 21-30 years. This can be due to relatively higher incidence of concern regarding cosmetic health and physical appearance in young female compared to men which encourage them to seek immediate medical advice at a relatively early stage of the disease.

*Dosha* prevalence assessed on the basis of the clinical symptoms presented by the patients shows predominance of *vata* and *kaphadosa* in combination (50.9%) followed by *pitta dosa* with 18.1% of occurrence. Consideration of *upasaya* and *anupasaya* for a particular

patient with certain presenting complaints has been proven beneficial for ascertaining doshik prevalence. Proper history taking regarding dietary consumption and behavioural misconduct shows consumption of *vata* and *kapha* aggravating dietary and behavioural factors in the patients with *vata* and *kaphadosa* predominance. Aggravated *vata*dosha can result into improper functioning of jatharagni and hence subsequent disturbance of *dhatvagni* and *bhutagni* function. This in turn interferes with *suddha rasa dhatu* formation and improper nourishment of the subsequent *dhatu*s. *Rasa dhatu* is also considered to be the *moola of tvak*. Hence any derangement in normal *rasa dhatu* function is directly reflected onto the skin as various skin ailments.*Kaphadosa* aggravation can be exhibited as excessive oiliness of the skin which acts as a predisposing factor for a variety of bacterial and fungal infection.

Clinical diagnosis made on the basis of Ayurvedic parameters( as per the symptoms of different types of *Kusthas* mentioned in the classics) shows highest incidence of *dadru* (35.4%) among the population. Acharya Charak has considered *dadru* as one among the eleven *kshudrakusth* as per mentioned by him.Lesions are described as raised reddish associated with itching. Association of *pitta* and *kaphadosa* is seen in all the cases diagnosed with *dadru*. *Dadru* is followed by *Vicharchika* with 20% incidence rate among the registered cases. *Vicharchika* is considered under *ksudrakustha*. *Kaphadosha* predominance is seen in the condition. Lesions are typically blackish in nature,associated with itching and discharge. Another skin condition that shows some prevalency in the study is *pama*(20%). Prevalency of *pama* is seen mostly in young adults. History of close contact with persons exhibiting similar symptoms has been put forwarded by patients diagnosed as a case

of *Pama*. Lesions are typically small tiny eruptions, reddish and whitish in nature with excessive itching. A few number of cases are reported with *kitibha*(10.9)%, *charamadala*(7.2%) and *shwitra* (8.1%). *Kitibha* is *vata-kapha* predominant disorder. Spontaneous remissions and relapses in the severity of the symptoms are seen with seasonal variations, which has been advocated by *Kashyap*. Lesions in *charamadala* are reddish associated with itching and formation of painful blisters which ruptures spontaneously rendering the skin sensitive to pain. The few *Charamadala* cases registered were seen mostly in the elderly. *Shwitra* cases reported in our OPD is relatively less with 8.1% of incidence rate. It is important to note that most of the patients suffering from skin disorder have *madhumeha* as an associated condition. *Madhumeha* is classified under *vataja* variety of *prameha* and *ojakshaya* is considered as a predominant feature of *madhumeha*. *Ojakshaya* is associated with decreased *vyadhikshamatva* of a patient leading to frequent occurrence of skin infections on exposure to disease causing agents. *Ojakshaya* also leads to improper *dhatuposhan* and hence inadequate *rasadhatupusti*, leading to a number of skin disorders.

In the study, itching has been recorded as the most common presentation(50.9%). Itching can be a manifestation of a primary cutaneous disease or from systemic diseases. In the study conducted, however, itching has been associated with a primary cutaneous disease. In most cases duration of occurrence are chronic rather than acute. In most of the cases the site of onset for itching was generalized rather than localized. Itching is followed by induration(18.1%) as a presenting symptom among the recorded cases. Fibrosis of the underlying dermis and sub cutis results into the formation of the indurated areas. Induration is noted mainly in the eczematous lesions. The most

common skin disorder as per suggested by the study is *tinea corporis* comprising 35.4% of total cases. One of the important factor contributing to the highest incidence of *tinea corporis* cases is the hot and humid climate which provides optimum environment for growth of dermatophytes in this particular geographical distribution of north eastern regions. The next common skin disorder is *eczema* with 20% occurrence rate. *Eczema* can be of atopic, seborrheic, discoid, irritant, allergic, gravitational of etc. patterns. Most of the cases of *eczema* recorded in our study is of allergic in nature. *Eczema* is followed by *scabies* as a commonly experienced skin disorder in the study comprising around 18.1% of total cases. *Scabies* cases are noted mostly in the younger age group particularly in males. Low socio-economical status and lack of adequate hygiene maintenance can be linked to the patients diagnosed with *scabies*. A few number of cases of *psoriasis* has been recorded comprising 10.9% of total cases. *Vitiligo*, *contact dermatitis* and *acne vulgaris* are other few cases suggested in the study comprising 8.1%, 3.6% and 3.6% respectively of total cases.

**CONCLUSION:** From the study it can be concluded that skin disorders are a common clinical presentation in this part of north-east. The most common skin disorder reported in the Ayurvedic Health Centre attached to Kanaklata Civil Hospital of Tezpur, Assam, as per the study is *Dadru*(35.4%) followed by *Vicharchika*(20%) and *Kitibha*(18.1%). A good number of cases of *Pama*, *Charamadala* and *Shwitra* etc have also been reported. Prevalence of associated *dosas* as per suggested by the study shows predominance of *Vata* and *Kaphadosa* in combination. In most of the cases visiting our OPD, itching has been observed as the most common presentation. Most of the cases presenting with the skin ailments were reported as pre diagnosed cases of Type-2 diabetes mellitus as well. The study also concludes



that a good number of cases of various skin disorders visit Ayurvedic Health Centre at Kanaklata Civil Hospital, Sonitpur, Assam to seek medical interventions for curative purpose with a satisfactory rate of successful management of ailments at the centre.

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