

# PATTERN OF SKIN DISEASES AT THE DERMATOLOGY CLINIC OF JOS UNIVERSITY TEACHING HOSPITAL, JOS PLATEAU STATE NIGERIA

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## Abstract

**Background:** The prevalence and clinical pattern of skin disorders are known to vary with climatic factors and cultural habits. There are reports highlighting the prevalence and pattern of skin disorders in various geographical locations, but there is none from Jos in Plateau state. Although hospital based figures may not give a true representation of the prevalence, they may suggest the burden of the illness necessitating measures to combat them in the community.

We decided to document the skin diseases seen in the dermatology unit of Jos University Teaching Hospital between December 2012 and November 2013.

**Methodology:** All new patients that presented at the dermatology clinic between December 2012 and November 2013 were recruited for the study. Patients were examined and investigated to make correct diagnosis. The data was analysed with SPSS 16 statistical software.

**Result:** 162 new cases of skin diseases were seen in the clinic within the period. Four patients (2.5%) presented with multiple dermatological diagnoses. Atopic eczema (11.1%) was the commonest skin disease diagnosed in the clinic. Acne vulgaris was the commonest skin disease among adults (18 years and above). Eczema (26.5%) was the commonest group of skin diseases diagnosed in the clinic.

**Conclusion:** There was a wide range of skin diseases diagnosed in the clinic. The pattern of skin disease in our clinic was similar to that observed in the other parts of the country with eczema being the commonest of all the skin diseases. Periodic reviews and community based studies are required subsequently.

**Keyword:** Pattern, skin, Diseases, Dermatology, Jos.

## INTRODUCTION

Skin disease is one of the common causes of morbidity in Nigeria.<sup>1,2</sup> Previous studies from other parts of the country had reported the pattern of skin diseases.<sup>3, 4,5</sup> There appears to be a recent shift from higher frequency of skin infections and infestations to appearance of eczemas as leading cause of skin morbidity. This was thought to be orchestrated by the wave of civilization among the developing countries.<sup>3-5</sup>

In Jos, there are no data on the pattern of skin diseases. Our dermatology unit is at a developmental stage with various challenges. The paucity of basic data on dermatology practice in Jos, Plateau state of Nigeria has remained a challenge to dermatology research.

Jos has a notable different weather condition from other parts of the country due to its location at an altitude of 1,217 metres (3993 feet) above sea level on a Plateau. It lies on coordinates 9°56'N 8°53'E at North Central region of Nigeria. It has an average monthly temperature of about 21-25° C with night-

time temperatures dropping as low as 11°C in some months.<sup>6</sup>

The pattern of skin diseases in an environment is generally determined by some environmental factors and genetic predisposition of individuals in the environment.<sup>7, 8</sup> It is expected that this peculiar climate of Jos will have some effect on the pattern of skin disease in Jos.

There is need to document the pattern of skin diseases in the clinic. This will enhance proper skin care among the patients and research in dermatology. A current knowledge of the pattern of diseases in a population is important for effective planning and proper allocation of health resources.

## Methodology

All the new patients that presented at the dermatology clinic of Jos university teaching hospital, Jos from December 2012 to November 2013 were included in the study. The diagnoses were made by history and physical examination of each patient by the dermatologists. Appropriate

investigations like skin biopsy, potassium hydroxide microscopy, culture for fungi, skin snips e.t.c were done when necessary. The data was analysed with SPSS 16 statistical software. The continuous variables were expressed as means while categorical variables as proportions. The frequencies of the diagnoses were categorized and tabulated. The diseases were also classified into different groups using the International Classification of Diseases (ICD 10<sup>th</sup> revision) and the Rook Textbook of Dermatology.

**Result**

162 new cases of skin diseases were seen in the clinic within the period. Three (1.9%) had

remained undiagnosed. The mean age of the patients was 36.49 ± 14.9 years while the modal age group was 20-29 years. 152 (93.3%) were 18 years and above while 11 (6.7%) were less than 18 years. 101 (62.3%) were females while 61 (37.7%) were males- F: M of 1.7:1. Four patients (2.5%) presented with multiple dermatological diagnoses. Atopic eczema (11.1%) was the commonest skin disease diagnosed in the clinic. The ten leading skin diseases diagnosed in the clinic are shown in Table 2. Acne vulgaris was the commonest skin disease among adults (18 years and above). Eczema (26.5%) was the commonest group of skin diseases diagnosed in the clinic.

**Table 1:** Frequency of the various skin diseases

<b>Disease</b>	<b>Frequency</b>	<b>Percent</b>
Undiagnosed	3	1.9
Acne vulgaris	15	9.3
Alopecia areata	2	1.2
Aquagenic pruritus	3	1.9
Atopic eczema	18	11.1
Contact dermatitis	3	1.9
Discoid dermatitis	2	1.2
Discoid lupus erythematosus	3	1.9
Erythroderma	2	1.2
Folliculitis	2	1.2
Icthyosis vulgaris	2	1.2
Keloid	3	1.9
Kaposi sarcoma	4	2.5
Lentigens	2	1.2
Lichen planus	5	3.1
Lichen simplex chronicus	8	4.9
Melasma	5	3.1
Pemphigus vulgaris	2	1.2
Porokeratosis	2	1.2
Pruritic papular eruption	3	1.9
Pityriases rosea	2	1.2
Prurigo nodularis	4	2.5
Psoriasis	6	3.7
Pityriases versicolour	2	1.2
Seborrheic dermatitis	5	3.1
Tinea unguum	2	1.2
Urticaria	5	3.1
Vitiligo	9	5.6
Verruca vulgaris	5	3.1
Xeroderma	2	1.2
Others	31	19.1
<b>Total</b>	<b>162</b>	<b>100.0</b>

**Table 2:** Frequency of the ten leading causes of skin disease at the dermatology clinic

S/No.	Diagnosis	Frequency	Percentage
1.	Atopic Dermatitis	18	11.1
2.	Acne Vulgaris	15	9.3
3.	Vitiligo	9	5.6
4.	Lichen Simplex chronicus	8	4.9
5.	Psoriasis	6	3.7
6.	Lichen planus	5	3.1
7.	Melasma	5	3.1
8.	Urticaria	5	3.1
9.	Seborrheic dermatitis	5	3.1
10.	Verruca	5	3.1

**Table 3:** Frequency of infectious causes of skin diseases

S/No.	Diagnosis	Frequency	Percentage
1.	Chicken pox	1	6.2
2.	EDV	1	6.2
3.	Herpes zoster	1	6.2
4.	Invasive microsporosis	1	6.2
5.	Molluscum contagiosum	1	6.2
6.	Pityriases versicolour	2	12.5
7.	Tinea manum	1	6.2
8.	Tinea pedis	1	6.2
9.	Tinea ungum	2	12.5
10.	Verruca vulgaris	5	31.5
	<b>Total</b>	<b>16</b>	<b>100</b>

**Table 4:** Frequency of various group of skin diseases

S/No.	Diagnosis	Frequency	Percentage
1.	Undiagnosed	3	1.9
2.	Eczema	43	26.7
3.	Pruritus	5	3.1
4.	Urticaria	5	3.1
5.	Tumours	10	6.2
6.	Papulosquamous disorders	13	8.0
7.	Infections	16	9.9
8.	Pigment disorder	17	10.5
9.	Bullous disorders	4	2.5
10.	Autoimmune disorders	4	2.5
11.	Hair disorders disorders	3	1.9
12.	Follicular disorders	20	12.3
13.	Others	19	11.7

Figure 1: Frequency of papulosquamous disorders

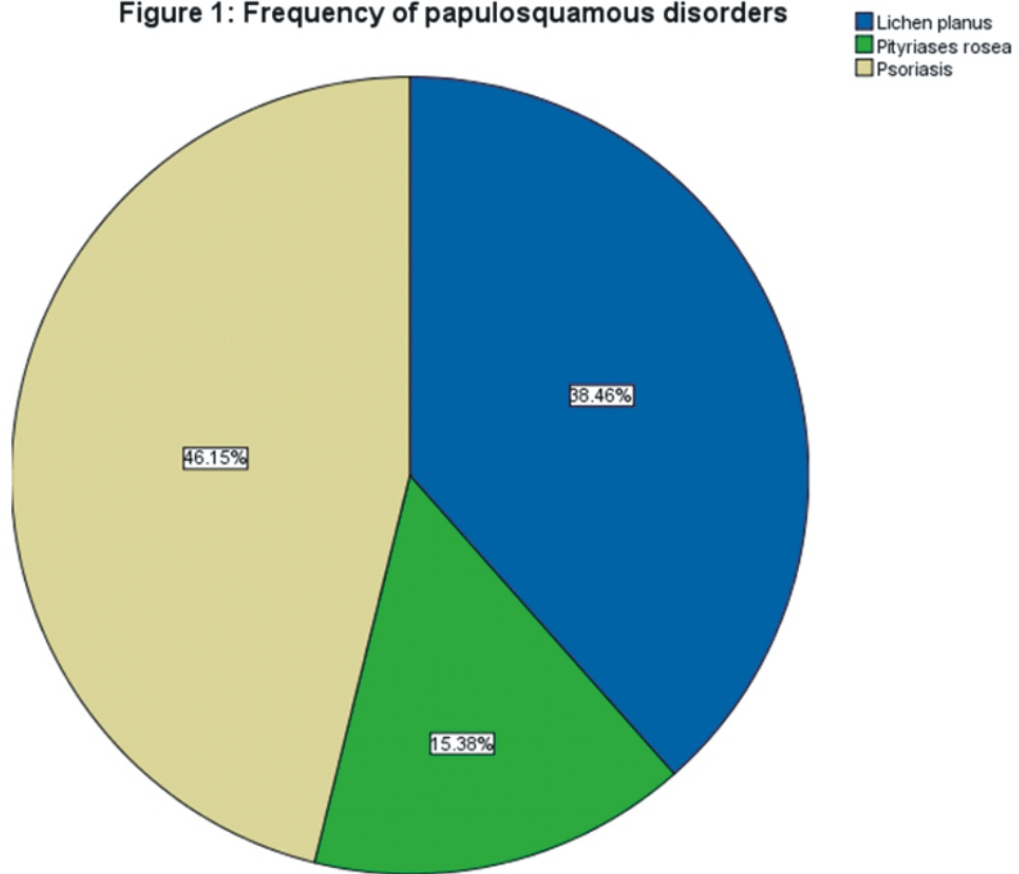


Figure 2: Frequency of follicular disorders

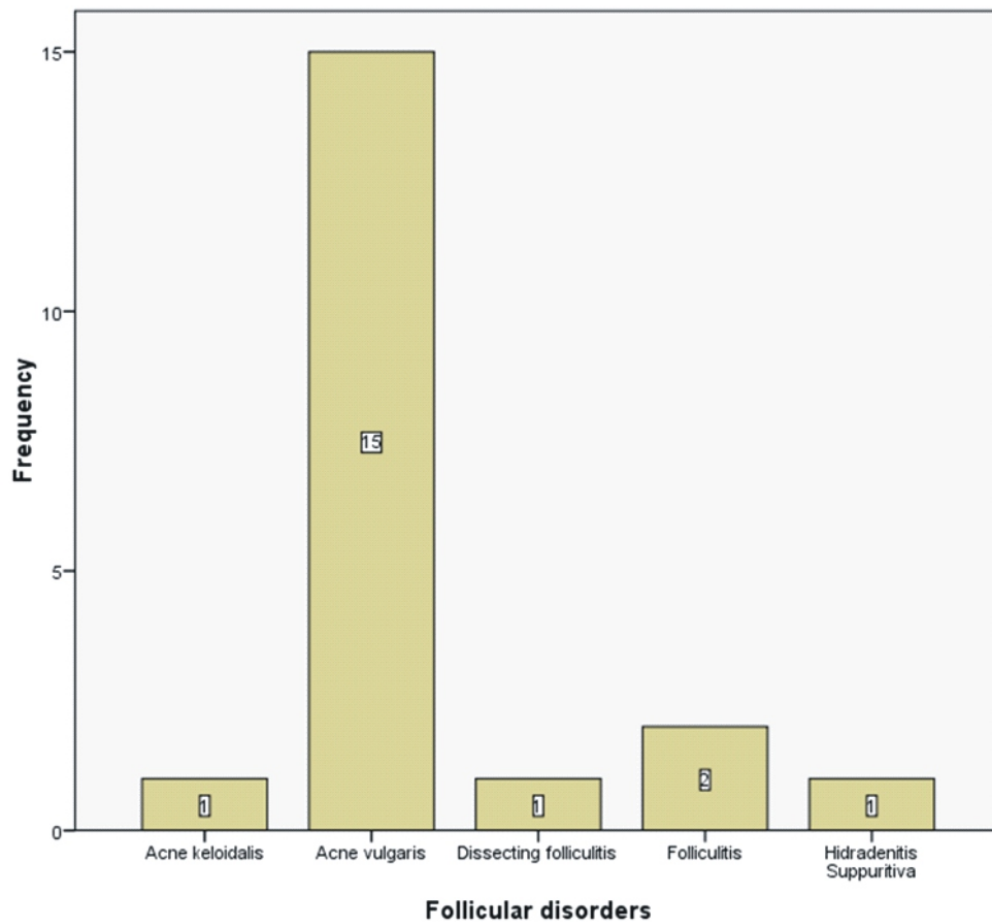


Figure 3: Frequency of pigment disorders

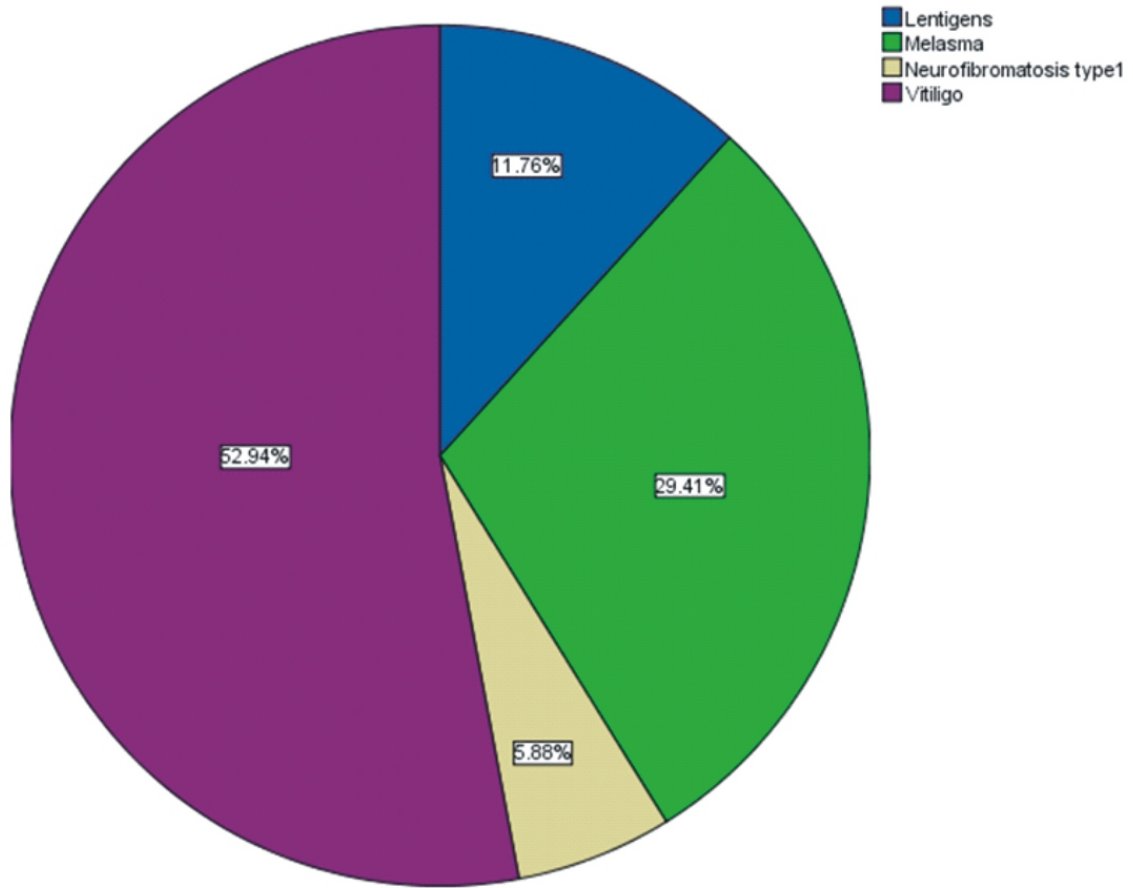
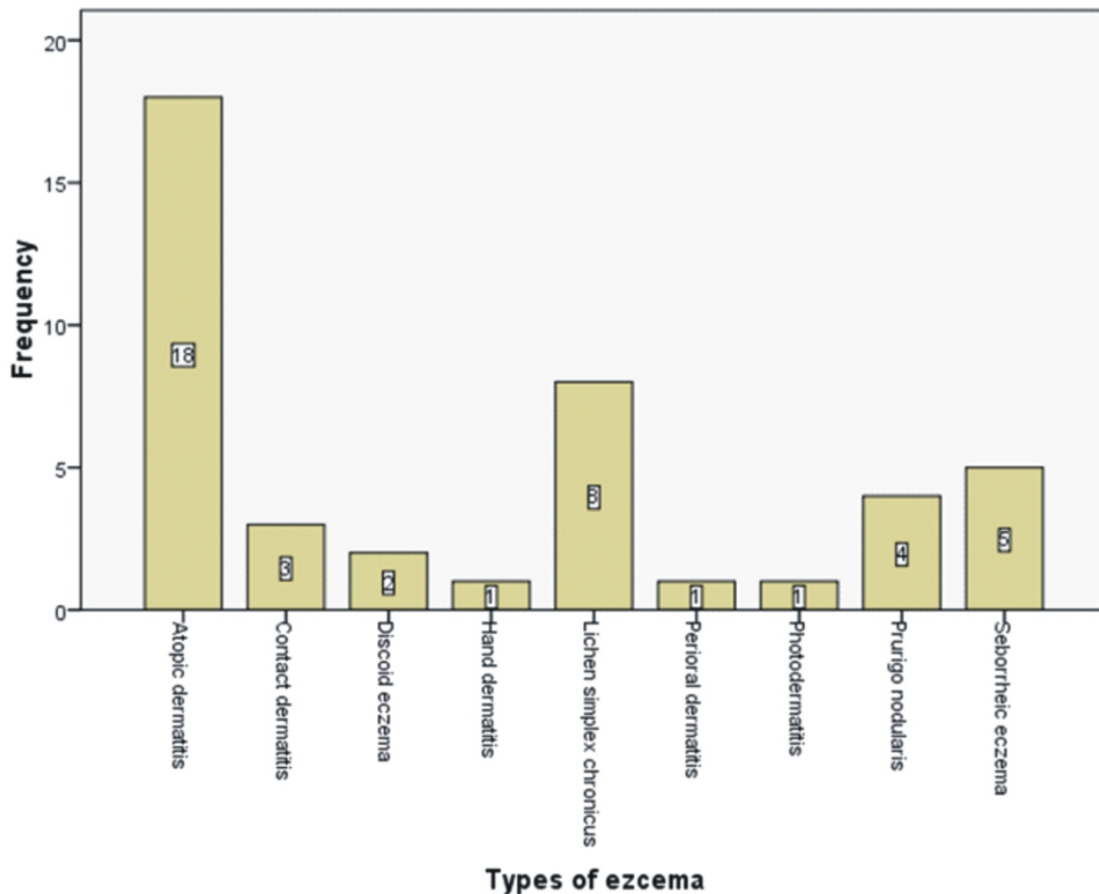


Figure 4: Frequency of various types of eczema





## DISCUSSION

Jos is a cosmopolitan city with a peculiar climate because of its location on the Plateau. The dermatology unit of the Jos University Teaching Hospital is a new referral centre, providing specialist skin care to patients in Plateau state and the other neighbouring states. Our study reported the pattern of skin diseases diagnosed in the dermatology clinic over one year.

A total of 162 new patients were seen in the clinic within the period of review. The fact that the clinic is a new referral specialist unit may explain the number of patient visits. There was a wide range of skin disorders diagnosed in the clinic. The ten leading causes of skin diseases in the clinic were atopic dermatitis, acne vulgaris, vitiligo, lichen simplex chronicus, Psoriasis, Lichen planus, seborrheic dermatitis, melasma, verruca vulgaris and urticaria. These are all forms of chronic skin diseases which presented at the new dermatology clinic. These had been reported as the common skin diseases from other parts of Nigeria.<sup>3-5</sup>

Among the various group of diseases, eczema was the commonest. This was similar to the findings from previous studies in the some parts of the country.<sup>3-5</sup> However, few studies in Nigeria had reported infections and infestations as the commonest cause of skin disease.<sup>1-2</sup> The current increase in eczemas had been attributed to the presence of civilisation and industrialisation with exposure to various chemical that are possible triggers and irritants that may cause or worsen eczema. Among the various eczemas, atopic eczema was the commonest. Atopic eczema was also the commonest skin disease in all the patients in our study. This was similar to the reports of Ogunbiyi et al<sup>4</sup> and Yahaya<sup>5</sup> in Ibadan and Kaduna respectively.<sup>4-5</sup> However in Enugu, contact dermatitis was the commonest cause of eczema that was reported.<sup>3</sup> The usually cold and dry weather of Jos predisposes to xerosis which may trigger atopic eczema especially in individuals that are atopic.

Acne vulgaris was the commonest follicular disease in our study. It was also the commonest skin disease among adults (18 years and above) seen in the clinic. Community based studies had also reported a high prevalence of acne among adolescents in Nigeria.<sup>9-11</sup> In Kaduna, which is in the northern part of the country, the prevalence of acne among adolescents was reported as 90.6%.<sup>11</sup> In addition, there is an increased self awareness among young persons most of which suffer from acne vulgaris.

These may explain the significant number of acne patients in the clinic.

Pigment disorders were among the common group of skin disorders diagnosed in the clinic. Vitiligo was the commonest type of pigment disorder in our study. Vitiligo was reported as the commonest pigment disorder in other parts of Nigeria.<sup>3,4,5</sup>

Hospital based studies in Nigeria had reported Vitiligo prevalence in the range of 2.8-6%.<sup>12-14</sup> Melasma was second most common pigment disorder after Vitiligo in our study. It was also among the ten leading causes of skin disease diagnosed in the clinic. Studies from other parts of the countries had reported few cases of melasma unlike in our study.<sup>3-5</sup> The altitude of Jos on the Plateau with a higher exposure to ultra violet radiation may contribute to occurrence of melasma. It is interesting to observe that post-inflammatory hyperpigmentation (PIH) which are common in Africans was not reported in our study.<sup>15,16</sup> The long absence of a dermatologist in Jos and poor awareness of available cosmetic options to the patients may explain why individuals with PIH prefer not to visit the hospital.

Among the infectious diseases, verruca vulgaris was the commonest skin disease. The presence of HIV infection and persistent nature of verruca vulgaris may explain the increased number of cases in the clinic. Few cases of dermatophytoses were reported in this study. Decreasing frequency of infectious diseases had been reported in previous studies from other parts of Nigeria.<sup>3-5</sup> The increasing socio-economic status in the country may contribute to the reduction in frequency of infectious diseases. In addition, indiscriminate use of over the counter anti-fungal creams may contribute to reduced number of dermatophyte infections among clinic patients.

Papulosquamous disorders were among the common skin diseases in our study. Psoriasis was the commonest papulosquamous disorder in our study. Psoriasis is generally regarded as a rare skin disease among Africans with prevalence as low as 0.8%.<sup>17</sup> Previous studies from other parts of Nigeria had reported low prevalence of psoriasis. In our study, the significant number of psoriasis reported may be due to a higher prevalence of psoriasis in the community since the climate of Jos is closer to the temperate environment where psoriasis is common. The chronic nature of psoriasis may also contribute

to its increased prevalence in a new specialist clinic.

In conclusion, there was a wide range of skin diseases diagnosed in our clinic. The pattern of skin diseases was similar to the reports from different parts of the country with eczemas being the commonest cause of skin disease. We recommend a continuous periodic review of the data in the dermatology clinic. There is a need for community surveys to study the common skin diseases in the environment.

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