THE SIGNIFICANCE OF GENDER IN THE PATTERN OF SKIN DISEASES IN ZARIA, NIGERIA.?

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ABSTRACT

Background: Skin diseases are common worldwide, although their frequency of occurrence varies from region to region. This is a histopathologic analysis with the aim of establishing possible gender difference in the occurrence of skin diseases in a tropical hospital.

Patients and Method: A 14-year histopathological analysis of consecutive patients with skin lesions from January 1991 to December 2004 was carried out. The skin biopsies were fixed in 10% formalin, processed in wax and histological sections on slides, stained with Haematoxylin and Eosin, were studied.

Results: Three hundred and twenty (320) patients were analysed. The overall male: female ratio was 1.3:1.0. The median age for the women was 28years while the male median age was 32years. The skin diseases were divided into eight (8) aetiologic/histologic groups. Of these, viral accounted for 92(28.8%) and papulosquamous was 86 (26.9%). The least common were fungal- 9 (2.8%) and bacterial 3 (0.9%). Using the Chi-square test, there was no statistical significant difference in the sex distribution of skin diseases.

Conclusion: There was no gender difference in the pattern of occurrence of skin diseases in our setting.

Key words: Skin Disease, Gender, Pattern.

INTRODUCTION

Skin diseases are common worldwide and their frequency of occurrence varies from region to region. The skin is a complex organ with many functions and is composed of numerous cell types.[1-3] These cell types exist in a homeostatic milieu which can be disrupted by diverse conditions.[4] The regional variations in the distribution of these diseases are attributable to environmental factors such as humidity, exposure to potential toxic agents and cosmetic desire for increased pigmentation as seen in tanning or decreased pigmentation achieved by skin bleaching using harsh body creams that expose the skin layers to the harmful effects of ionizing radiation.[4]

Skin diseases range from inflammatory lesions to cancers and may be limited to the epidermal layer, though the dermis is often involved in a variety of morphologic diagnosis.[3,4] These diseases may manifest with varying pigmentations to non bullous and vesiculobullous eruptions, which are non specific. They are divided into categories based on clinical history and histologic criteria.[3,4]

Many skin diseases have gender predilection due to hormonal influence.[5,6] Of particular note is cutaneous melanoma a malignant neoplasm arising from epidermal melanocytes or pre-existing naevus cells which is commoner in females.[5,7]

This is a histopathological documentation of non neoplastic skin diseases in a tropical hospital. It aims to establish possible gender differences in the distribution of these skin diseases.

METHOD

This is a retrospective 14-year histopathological analysis of specimens from patients with skin lesions seen in our laboratory between January 1991 and December 2004. Our laboratory is located in a tertiary university teaching hospital covering the Northwestern region of Nigeria and our patients are referred from this area. Patients' skin biopsies were fixed in 10% formalin,

processed in wax and histological sections on slides were stained with Haematoxylin and Eosin (H&E). Special stains for acid-fast bacilli and fungus were used where applicable.

The histology slides of these patients were studied. Clinical information and biodata of age, sex and sites of lesions were extracted from patients' records in the department.

The diseases were categorized based on histologic/aetiologic criteria. The chi-square statistical test method was used to test for statistical significance in the gender distribution of the diseases. The level of significance was taken at P=0.05.

RESULTS.

A total of three hundred and twenty (320) black African patients with skin diseases were analysed. One hundred and thirty nine (139) were female and one hundred and eighty one (181) were male. The male: female ratio was 1.3:1.0.The median age for the females was 28years and a mean age of 28.2years. The male median age was 32years and the mean age was 30.8years. **Table 1**

The skin diseases were divided into aetiologic/histologic groups; (1) Viral- 92(28.8%) comprising of verruca vulgaris and plantaris 75 (23.4%), condyloma acuminatum 15 (4.7%) and molluscum contagiosum 2 (.6%), (2) Papulosquamous- 86 (26.9%) made up of Psoriasis 47 (14.7%), lichen planus 35 (10.9%) and scleroderma 4 (1.3%), (3) Naevus-51 (15.9%); Intradermal 25 (7.8%), compound 12 (3.8%), junctional 9 (2.8%), cellular blue 4 (1.3%) and blue naevus 1 (.3%), (4) Cysts 41(12.8%) were distributed as epidermal 31(9.6%), pilar4 (1.3%) and dermoid 6 (1.9%), (5) Others - 23 (7.2%), such as pyogenic granuloma 15 (4.7%), ichthyosis 4 (1.3%), vitiligo 2 (0.6%) and eczema 2 (0.6%), (6) Vesiculobullous-15(4.7%) comprising bullous pemphigus 7 (2.2%), dermatitis herpitiformis 3 (0.9%), pemphigus vulgaris 4 (1.3%) and pemphigus foliaceus1 (0.3%), (7). Fungal- 9 (2.8%) and bacterial 3 (0.9%) mainly tuberculosis 2 (0.6%) and trichinella spiralis 1 (0.3%). There was no statistically significance in the gender distribution of the skin diseases. **Fig 1/Table 2**

Distribution of the skin lesions was generalized in 67 (20.9%) patients, the head and neck was involved in 83 (25.9%), trunk 59 (18.4%), genitalia 17 (5.3%), flexural regions in 14 (4.4%) and the upper and lower limbs in 80 (25.0%) patients. One hundred and seventy two (54%) patients had pruritus, forty two (13%) had change in skin pigmentation while 50 (16%) patients had scaly lesions. Fifteen 15 (6.3%) patients had vesiculo bullous eruptions. **Table 3**

Table 2: Gender distribution of all diseases

SKIN DISEASES	MALE	FEMALE	TOTAL(%)	P-value=0.05
VIRAL				X^2 =0.04, df=2
Verruca vulgaris/plantaris	37	38	75(23.4)	
condyloma acuminatum	7	8	15(4.7)	Not Significant
Molluscum contagiosum	1	1	2(0.6)	
BACTERIAL				X^2 =3.00, df=1
Tuberculosis	0	2	2(0.6)	
Tricinella spiralis	1	0	1(0.3)	Not Significant
FUNGAL	7	2	9(2.8)	
CYSTS				X^2 =4.05, df=2
Epidermal	19	12	31(9.7)	
Pilar	2	2	4(1.3)	
Dermoid	1	5	6(1.9)	Not Significant
PAPULOSQUAMOUS				X^2 =0.91, df=2

Psoriasis	34	13	47(14.7)	
Lichen planus	24	11	35(10.9)	
Scleroderma	2	2	4(1.3)	Not Significant
VESICULOBULLOUS				X^2 =7.54, df=3
Bullous pemphigus	6	1	7(2.2)	
Dermatitis herpetiformis	0	3	3(0.9)	
Pemphigus vulgaris	2	2	4(1.3)	
Pemphigus foliaceus	0	1	1(0.3)	Not Significant
NAEVUS				X^2 =1.63, df=4
Junctional	4	5	9(2.8)	
Compound	7	5	12(3.8)	
Intradermal	11	14	25(7.8)	
Blue	0	1	1(0.3)	
Cellular blue	2	2	4(1.3)	Not Significant
OTHERS				X^2 =5.23, df=3
Ichthyosis	4	0	4(1.3)	
pyogenic granulomas	7	8	15(4.7)	
Eczema	1	1	2(0.6)	
Vitiligo	2	0	2(0.6)	Not Significant
TOTAL	**181**	**139**	**320**	

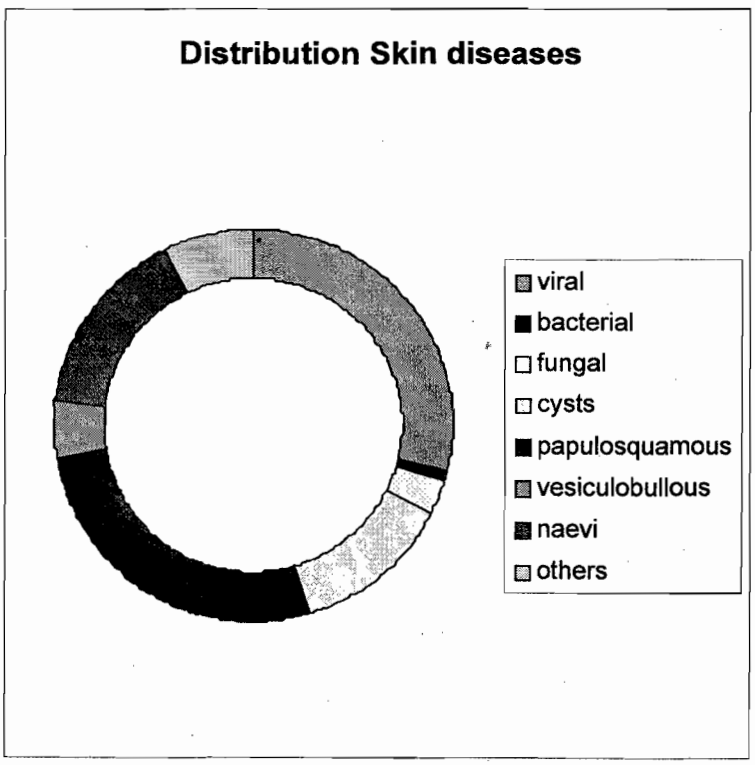

Figure I: Distribution of skin diseases

Table 3: Site distribution of all diseases and presenting symptoms

Sites	Frequency (%)
Head & Neck	83(25.9)
Trunk	59(18.4)
Flexural areas	17(5.3)
Genital	14(4.4)
Limbs	80(25.0)

Table 4

Presenting Symptoms	Frequency (%)
Pruritus	172(54.0)
Change in Pigmentation	42(13.0)
Scaly lesions	50(16.0)
Vesiculobullous lesions	15(6.3)
HIV	0(0.0)

DISCUSSION

A wide variety of disorders show important cutaneous manifestations and disorders of the skin itself account for a substantial proportion of medical consultations.[8] The incidence of skin diseases is increasing worldwide with a higher distribution in tropical areas. This is attributable to overcrowding, poor hygiene and poverty.[9] Patients with protracted clinical diseases are the ones usually referred to the histopathology laboratory. This explains the small number of patients seen within the 14-year study period.

Viral skin diseases (warts) were the commonest in this study with a male: female ratio of 1.0:1.2. Common warts are cutaneous manifestation of human papillomavirus infection common in children and adolescents.[9] The incidence is greatest in sexually active adults with a greater frequency in females. [6] There was no statistically significant difference in the gender distribution of these viral lesions in our study. Fifty seven (62%) of our patients were in the age range 18-45 years, a period of increased sexual activity. None of our patients was screened for HIV at the time of presentation. The prevalence of skin disease in HIV positive patients is well documented.[10-11]

Psoriasis was the commonest papulosquamous lesion seen with a higher frequency in males and a mean age of 32years. There was also no statistically significant gender difference in the distribution of psoriasis in this study. Our finding is supported by other reports.[12] The estimated prevalence of psoriasis vary from 0.5% to 4.6% with rates varying between countries and races, and an almost equal male to female sex ratio with a median age of 28years.[12] Other similar studies reported an incidence rate ranging from 0.2% to 5.0%. [13-15]

Naevi are common and are widely distributed all over the body. The average number seen in Caucasian is between twenty and thirty.[16] The face and neck were the commonest sites of affectation in this study. Reports from studies on naevi support this site distribution. [17,18] These are sites of maximal exposure for melanin provoking influences. Gender played

no significant role in their distribution pattern in our setting.
Self-medication and easy accessibility to over the counter drugs in patent medicine shops has drastically reduced the prevalence of infective skin diseases due to bacteria and fungus.

CONCLUSION

In conclusion, there was no significant gender difference in the occurrence of skin diseases in our setting. The head and neck were the commonest sites of predilection of these diseases.

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