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ORIGINAL ARTICLE

Assessment of the clinical profile of linear dermatoses along the blaschko's lines

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ABSTRACT:

Background: Dermatology is a distinct visual branch of medicine because the majority of skin lesions are easily identifiable. The present study was conducted to evaluate the clinical profile of linear dermatoses along the blaschko's lines. **Materials & Methods:**58 patients presenting with cutaneous dermatoses lesions in linearpatternandalong theBlaschko'slinesof both gendersunderwent a thorough physical examination, with particular attention paid to lymphadenopathy, mucosal alterations, hair alterations, and nail alterations. A skin biopsy was performed from the advancing edge of the lesions. **Results:** Out of 58 patients, males were 26 and females were 32. Lesions were lichen Striatus in 22, linear epidermal nevus in 14, linear lichen planus in 9, linear Morphoea in 6, Segmental Vitiligo in 2, Hypomelanosis of Ito in 3, Nevus depigmentosus in 2. The common site was upper limb in 18, lower limb in 15, trunk in 7, trunk & upper limb in 5, trunk & lower limb in 4, trunk, upper & lower limb in 6 and neck in 3 cases. The difference was significant (P< 0.05). **Conclusion:** Common lesions were lichen Striatus, linear epidermal nevus, linear lichen planus, linear Morphoea, Segmental Vitiligo, Hypomelanosis of Ito, and Nevus depigmentosus. The common site was upper limb, lower limb and trunk.

Keywords: blaschko's lines, lichen Striatus,linear Morphoea

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INTRODUCTION

Dermatology is a distinct visual branch of medicine because the majority of skin lesions are easily identifiable. The morphology of individual lesions, their general pattern and spatial relationship to one another, and their distribution across body sites are helpful in the inspection of the skin and can offer a quickly identifiable clue to a visual diagnosis. In fact, for many illnesses, clinical diagnosis is more accurate than laboratory testing.[1,2]

Numerous patterns, such as Discoid, Petaloid, Arcuate, Annular, Polycyclic, Livedo, Reticulate, Target, Stellate, Digitate, Linear, Serpiginous, Whorled, etc., are evident in skin lesions.[3] Of these patterns, linearity stands out as a particularly noteworthy characteristic that both patients and clinicians find intriguing. One lesion may take on a straight form, or several lesions may be grouped ina linear pattern.[4]

The notion of Blaschko's lines was initially introduced by dermatologist Alfred Blaschko, a private practitioner, during a 1901 meeting of the German Dermatological Society in Breslau, when he presented his research on the distribution patterns of linear skin lesions.[5] In his original description, he described Blaschko's lines as "a system of lines on the human skin which the linear nevi and dermatosis follow." Dermatological lesions classified as linear fall along imaginary skin lines, such as blood vessels, lymphatics, Blaschko's line, or dermatomal distribution.[6]The present study was conducted to evaluate the clinical profile of linear dermatoses along the blaschko's lines.

MATERIALS & METHODS

The present study was conducted on 58 patients presenting with cutaneous dermatoses lesions inlinearpatternandalong theBlaschko'slinesof both genders. All were informed regarding the study and their written consent was obtained.

Data such as name, age, gender etc. was recorded. Every patient underwent a thorough physical examination, with particular attention paid to lymphadenopathy, mucosal alterations, hair alterations, and nail alterations. The palms and soles were examined. A skin biopsy was performed from the advancing edge of the lesions. The biopsy slides were stained with H&E for analysis.Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 58		
Gender	**Males**	**Females**
Number	26	32

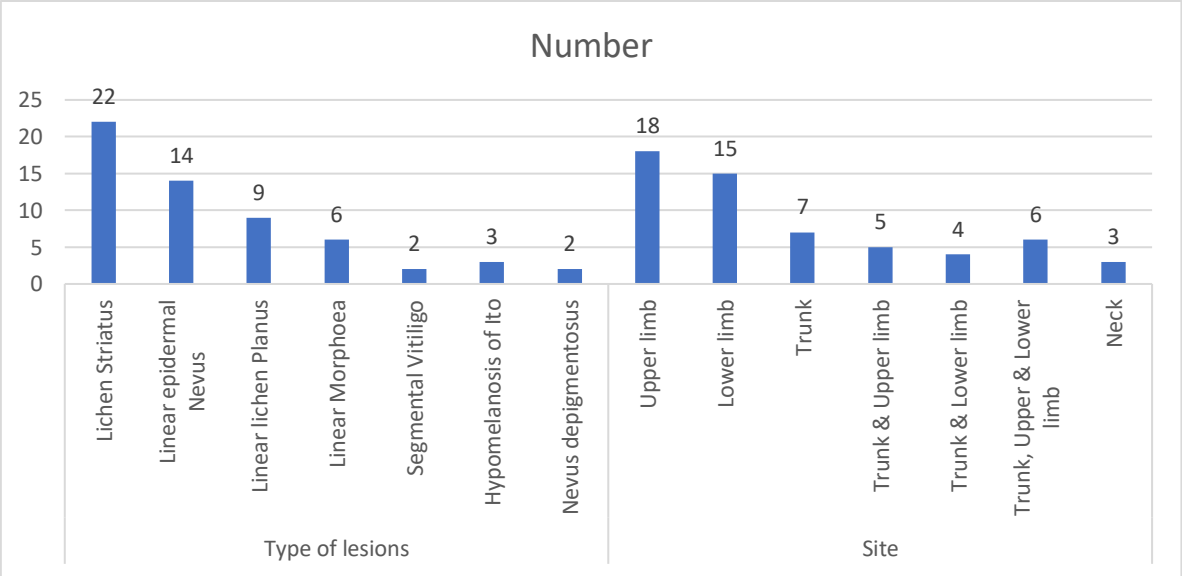
Table I shows that out of 58 patients, males were 26 and females were32.

Table II Assessment of parameters

Parameters	Variables	Number	P value
Type of lesions	Lichen Striatus	22	0.05
	Linear epidermal Nevus	14	
	Linear lichen Planus	9	
	Linear Morphoea	6	
	Segmental Vitiligo	2	
	Hypomelanosis of Ito	3	
	Nevus depigmentosus	2	
Site	Upper limb	18	0.04
	Lower limb	15	
	Trunk	7	
	Trunk & Upper limb	5	
	Trunk & Lower limb	4	
	Trunk, Upper & Lower limb	6	
	Neck	3	

Table II shows that lesions were lichen Striatus in 22, linear epidermal nevus in 14, linear lichen planus in 9, linear Morphoea in 6, Segmental Vitiligo in 2, Hypomelanosis of Ito in 3, Nevus depigmentosus in 2. The common site was upper limb in 18, lower limb in 15, trunk in 7, trunk &upper limb in 5, trunk &lower limb in 4, trunk, upper &lower limb in 6 and neck in 3 cases.
The difference was significant (P< 0.05).

Graph I Assessment of parameters



DISCUSSION

The term mosaicism in genetics indicates persons with cells of different genotypes. Genetic mosaicism classically appears as Blaschko's lines in the skin.[7] The pattern may vary according to timing and cell type of mosaicism.[8,9]Dr. Alfred Blaschko, dermatologist from Berlin, in 1901 stated that epidermal nevi, and some other conditions now known to be mosaic, follow characteristic lines and whorls on the skin.[10,11] Lyonization, somatic mutation, half-chromatid mutation, chromosomal nondisjunction or chimerism can result in Blaschko's lines. Blaschko's lines represent boundaries between populations of mutant and normal cells.[12,13]The present study was conducted to evaluate the clinical profile of linear dermatoses along the blaschko's lines.

We found thatout of 58 patients, males were 26 and females were 32. Molho- Pessach et al[14], at the skin outpatient department, investigated the prevalence, age and sex distribution, correlation, distribution, clinical presentation, and histological correlation of linear dermatoses. In outpatient clinic, linear dermatoses occur 0.2% of the time annually. It was discovered that lichen striatus was the most prevalent among the linear dermatoses. The other dermatoses that followed Blaschko's lines were segmental vitiligo, hypomelanosis of ito, linear lichenoid dermatitis, linear psoriasis, segmental neurofibromatosis, linear whorled nevoidhypermelanosis, incontinentiapigmenti, nevus depigmentosus, and linear porokeratosis. These dermatoses were observed in this study in descending order of frequency. Noted was the preponderance of

women. The majority of patients primarily displayed unilateral distribution on their extremities.

We observed thatlesions were lichen Striatus in 22, linear epidermal nevus in 14, linear lichen planus in 9, linear Morphoea in 6, Segmental Vitiligo in 2, Hypomelanosis of Ito in 3, Nevus depigmentosus in 2. The common site was upper limb in 18, lower limb in 15, trunk in 7, trunk & upper limb in 5, trunk & lower limb in 4, trunk, upper & lower limb in 6 and neck in 3 cases. Hauber et al[15]reviewed a series of 12 consecutive cases of LS. Diagnosis was supported by histological examination. Ten of our 12 patients were children aged 6 months to 12 years. The male gender predominated by 9:3. The lower limb was involved more often than the upper limb and trunk. The duration of the disease until regression ranged from 4 months to 4 years (median, 12 months). Post-inflammatory hypopigmentation was noted in 5, and hyperpigmentation in 4 patients. Two patients showed nail involvement (onychodystrophy, longitudinal ridging) which appeared simultaneously with the skin lesions and resolved completely. A personal history of atopic disorders was found in 7 of 12 patients. From this series we can confirm that LS mainly affects children. Both skin and nail lesions disappear completely even if they last longer than one year.

The shortcoming of the study is small sample size.

CONCLUSION

Authors found that common lesions were lichen Striatus, linear epidermal nevus, linear lichen planus, linear Morphoea, Segmental Vitiligo, Hypomelanosis of Ito, and Nevus depigmentosus. The common site was upper limb, lower limb and trunk.

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