



RESEARCH ARTICLE

PITYRIASIS ALBA: AN EPIDEMIOLOGICAL AND CLINICAL STUDY

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Abstract

Background: Pityriasis alba is a common cutaneous disorder usually asymptomatic, hypopigmented macules with or without mild scaling are its presenting lesions. Its etiology and pathogenesis are still poorly understood.

Methodology: A descriptive cross-sectional study covered all patients with Pityriasis Alba attended the dermatology department.

Results: A total of 86 patients with pityriasis alba, the age range was (2-20) years with a mean age of (8.9) years. Males were 53(61.6%) patients; females were 33(38.4%) patients. The frequency of patients started to decrease with an increase in age. Sunlight was incriminated as an aggravating factor in 32.55% (28 out of 86) patients, soap in 32.55% (28 out of 86) patients, and wind in 10.46% (9 out of 86) patients. Lesions were multiple in 91.8%, face involved in 78 patients (90.7%). History of recurrent illness was 21(24.4%), while those with no history of recurrence were 65 patients (75.6%). Lesions were characterized by erythema in 36.04% of patients, scaling in 76.74% of patients, hypopigmentation in 63.95% of patients, itching in 32.55% of patients, and burning sensation in 6.97%.

Conclusion: Pityriasis Alba is a common disease usually in young, sunlight is of aggravating factor. Lesions are hypopigmented scaly mostly multiple.

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Introduction:-

Pityriasis alba (PA) is a common cutaneous disorder characterized by asymptomatic, hypopigmented patches on the face, neck, trunk and proximal extremities of children⁽¹⁾. It is usually asymptomatic and often an incidental finding on physical examination, hypopigmented macules with or without mild scaling are its presenting lesions⁽²⁾.

The cause of PA is still unknown, but the condition is widely considered as a mild form of atopic dermatitis⁽³⁾.

Pityriasis alba is a common benign condition in children. Its etiology and pathogenesis are still poorly understood⁽⁴⁾. PA disease in children is more influenced by socio-economic status, climatic exposure, dietary habits and external environment as compared to adults⁽⁵⁾. Recent studies have found direct relations between the incidence of PA disease and atopy, the amount of sun exposure, the lack of sunscreen use, and the frequency of bathing⁽⁶⁾⁽⁷⁾. PA disease is found all over the world. It is quite common, affecting between 1.9 and 5.25% of all children, the peak of incidence is between 6-12 years⁽⁸⁾.

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Pityriasis alba is considered a low-grade eczematous dermatitis and a minor feature of atopic dermatitis⁽⁷⁾. Pityriasis alba occurs predominantly in children between the ages of 3 and 16 years. Both sexes are equally susceptible⁽⁹⁾.

Although it is not a clinically serious condition, the aesthetic aspects of the disease are important since it usually attacks the face, presents therapeutic difficulties and has a high incidence in young children⁽¹⁰⁾.

An extensive pityriasis alba is an uncommon clinical variant, the lesions are widespread and distributed symmetrically⁽¹¹⁾. Another variant of classical pityriasis alba showing strong association with dermatophyte infection especially tinea capitis called pigmented pityriasis alba⁽¹²⁾.

Pityriasis alba is found all over the world. It is quite common, affecting between 1.9 and 5.25% of preadolescent children. The peak of incidence is between the ages of 6 and 12 years⁽¹³⁾. Both sexes are equally susceptible. PA has a high prevalence in infants and children of low socioeconomic conditions in developing countries, being present in 12–90% of children⁽¹⁴⁾.

Aim of the study:

This study was carried out to have an idea about the epidemiological and clinical aspects of pityriasis alba. This is probably going to reflect this common problem among children.

This study carried out to highlight the pityriasis alba through understanding the epidemiological and clinical aspects of this common problem.

Patients and Methods:-

A descriptive cross-sectional study conducted at The Dermatology department in Al-Yarmouk Teaching Hospital, during the time extended from November 2017 to June 2018. All patients with a diagnosis of PA attended the dermatology department during that period were included in this study. The study covered 86 patients

All patients were questioned regarding their sexes, ages, age of onset of the disease, duration of the disease, season in which the disease appeared, recurrence of the illness, aggravating factors, associated symptoms, personal history of atopy, and family history of same illness or atopy.

A full examination was then done to identify the nature of the lesions, their sites, their numbers, and the color of the skin. Other features of atopy were looked for. Wood's light was used to assess the depth and extent of the lesions.

Statistical issue:

Data were entered a computer where they were grouped and analyzed using SPSS software program v23. Data expressed in frequencies and percentages. Chi-square test was used to assess the association between variables.

Ethical issue:

Verbal consents were taken from the participants after the explanation of the research work and assuring the confidentiality of the information obtained.

Results:-

A total of 86 patients with pityriasis alba, the age range was (2-20) years with a mean age of (8.9) years. Males were 53 (61.6%) patients; females were 33 (38.4%) patients. With a male to female ratio of 1.6:1 (Figure-1).

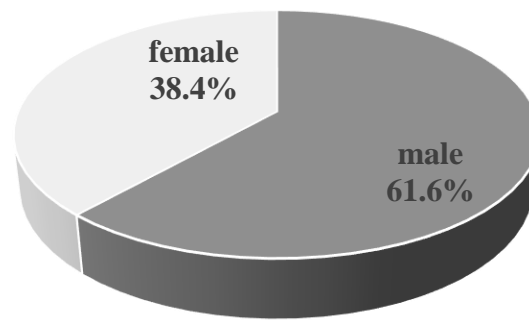


Figure 1:- Distribution of patients according to gender.

The mean age of onset was 8.3 years. The mean age of onset among male was 8.8 years and among female was 7.9 years. The duration of illness ranged from one week to four years. Table-1 showed that, the frequency of patients started to decrease with an increase in age. The lowest reported cases were in the older age group (16-20) years, the relationship between age group and gender was not significant ($P=0.818$).

Table 1:- Shows age group distribution of Pityriasis Alba.

Age	Male		Female		Total		P-value
	n	%	n	%	n	%	
< 6	14	25.0	13	43.3	27	31.4%	0.818
6-10	21	37.5	7	23.3	28	32.6	
11-15	13	23.2	8	26.7	21	24.4	
16-20	8	14.3	2	6.7	10	11.6	
Total	56	100	30	100	86	100	

Figure-2 represent a bar shape graph of the aggravating factors. Sunlight was incriminated as an aggravating factor in 32.55% (28 out of 86) patients, soap in 32.55% (28 out of 86) patients, and wind in 10.46% (9 out of 86) patients. The remaining 24.3% (21 out of 86) patients didn't report any aggravating factors. These factors affect lesions either in single or in combination, as they were claimed by the patients.

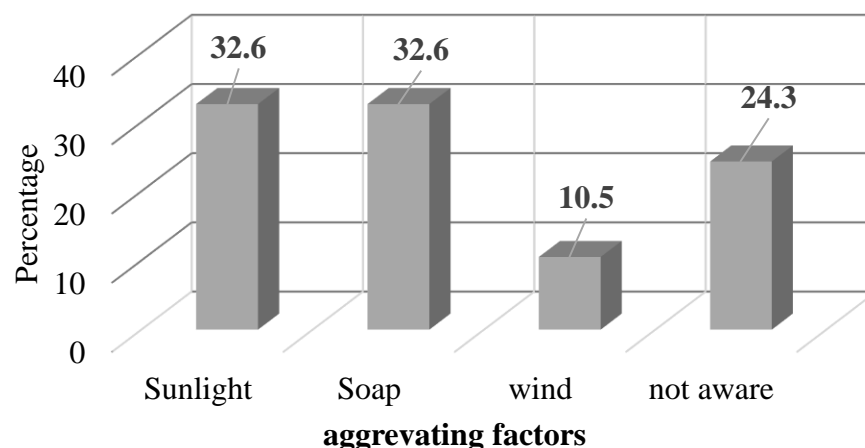


Figure 2:- Factors aggravating the lesions.

A positive history of atopy (personal, familial or both) was found in 39.5% (34 out of 86) patients. While those who had no history of atopy constituted 62.8% (54 out of 86) patients. The relationship between age group and atopic

history in patients or his family was not significant ($P=0.689$).

Table 2:- Shows the atopic and non-atopic agedistribution of pityriasis alba.

Age group	N	Atopic		Non-atopic		P-value
		No.	%	No.	%	
< 6	27	11	40.7	16	59.3	0.689
6 – 10	28	11	39.3	17	60.7	
11 – 15	21	8	38.1	13	61.9	
16 – 20	10	2	20.0	8	80.0	
Total	86	32	37.2	54	62.8	

Table-3 revealed the number of the lesions was found to be multiple in 91.8% (79 out of 86) and single in 8.1% (7 out of 86) of patients. The sites of the lesions were the face involved in 78 patients (90.7%), upper extremities involved in 20 patients (23.25%), neck involved in 14 patients (16.27%), lower extremities involved in 8 patients (9.30%), and trunk involved in 6 patients (7.0%). The total number of sites of lesions is more than the number of patients because there was more than one site involved in some patients.

The number of patients with a history of recurrent illness was 21 (24.4%), while those with no history of recurrence were 65 patients (75.6%). Positive family history of the same illness was recorded in 36% (31 out of 86) of patients.

Table 3:- Distribution of lesions according to its number and site of lesion.

Variables		n	%
Number of lesions (n=86)	Single	7	8.1
	Multiple	79	91.9
Site involved (N=126) *	facial	78	90.7
	Upper extremities	20	23.3
	Neck	14	16.3
	Lower extremities	8	9.3
	Trunk	6	7.0
Recurrence (n=86)	Recurrent lesion	21	24.4
	No recurrence	65	75.6
Family history (n=86)	Family history	31	36
	No family history	55	64

The study showed that 31 patients (36.1%) have had their illness started in winter, 24 patients (27.9%) in spring, 21 patients (24.4%) in autumn and 10 patients (11.1%) in summer (Figure-2).

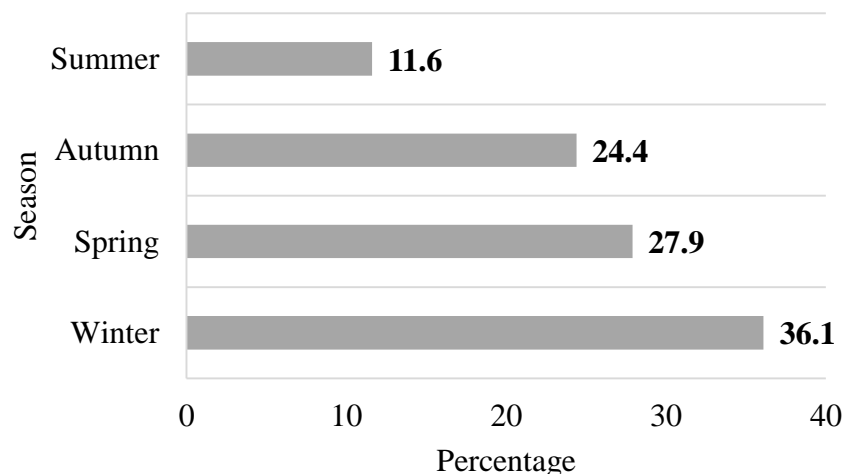


Figure 2:- Seasonal distribution of the onset of lesions.

Lesions were characterized by erythema present in 36.04% (31 out of 86) of patients, scaling present in 76.74% (66 out of 86) of patients, hypopigmentation present in 63.95% (55 out of 86) of patients, itching was present in 32.55% (28 out of 86) of patients, and burning sensation was present in 6.97% (6 out of 86) of patients (table-5).

Table 5:- Clinical features of the lesions.

Feature	Findings	n	%
Erythema	Present	31	36.1
	Absent	55	63.9
Scaling	Present	66	76.7
	Absent	20	23.3
Hypopigmentation	Present	55	63.9
	Absent	31	36.1
Itching	Present	28	32.6
	Absent	58	67.4
Burning	Present	6	6.9
	Absent	80	93.1

Discussion:-

The mean age of patients in this study was 8.9 years, the mean age of onset was 8.3 years, and the mean duration of illness was 4.7 months. This was close to Elshafey et al., 2012, who reported that the highest prevalence (12.7%) was in the age group 10-11 years⁽¹⁵⁾. Al-Fatlawy study found PA more prevalent among children of age group 6-8 years⁽⁵⁾. Alkassaby and El-Masry forward an explanation for the difference in the age distribution of PA that the variation may be due to differences in culture, ethnic group and external environment⁽¹⁶⁾. Sujatha *et al.* in their study of 200 cases of pityriasis alba, found the majority (69%) of their cases below 15 years of age⁽¹⁷⁾. While Sori et al in their study reported lesions of PA in the age range of 5 months–14 years (mean of 6.3 years)⁽¹⁸⁾.

This study showed a positive history of recurrence in about a quarter of the study patients. In another study, more than one third were recurrent⁽¹⁶⁾.

This study showed that the atopic patients constitute a 39.5% of patients with PA. PA is a condition of unknown etiology⁽¹⁹⁾, but the condition is widely considered as a mild form of atopic dermatitis. Indeed, PA is considered a low-grade eczematous dermatitis and is regarded as a minor feature of atopic dermatitis and a personal or family history of atopy has been found in 85.5% of patients affected by PA⁽²⁰⁾. The results of Lio study found 19 out of 36 cases with PA were atopic. The previous study reported higher rates of atopy⁽¹⁷⁾ but other reported lower rates of atopy⁽²¹⁾. Another researcher claimed that atopic dermatitis is probably more comorbidity of PA than an etiopathogenetic factor⁽²⁰⁾.

This study showed that sunlight, soap, and wind were incriminated as an aggravating factor in more than three quarters of the patients. Many studies had named factors like xerosis, wind, soap, and sunlight as a cause or aggravating condition⁽¹²⁾⁽²²⁾. But some other studies showed no relation between the disease and factors that may reflect the degree of sun exposure⁽¹⁵⁾⁽²³⁾. The differences in results may be due to different methods of assessment of sun exposure or different times of exposure or could be explained by the difference in climates and environmental characteristics of different populations together with other contributing factors in these populations than sun exposure alone⁽¹⁶⁾.

The majority of patients in the current study presented with multiple lesions. This was similar to Alkassaby and El-Masry study, where the lesions were mostly small in size and multiple in number whereas face was the most common site of affection⁽¹⁶⁾.

This study found that the face is the only site to be involved in 61.62% of patients, many other sites were involved such as upper and lower extremities trunk and neck. The commonest sites of lesions in Kamal study were the face with 72.7%, followed by arms 13.5%, and neck and chest 4.9%⁽¹⁹⁾. Face in Alkassaby and El-Masry study was the most common site of affection especially in children⁽¹⁶⁾.

It was found in this study, that hypopigmentation was present in more than half of the patients, scaling lesions were

found in three quarters of patients, and erythema in about one third of the cases. The loss of pigmentation in PA is usually partial and starts at the center and gradually extending toward the periphery⁽¹⁹⁾. Erythema is often so pale and of short course that it is unnoticeable. The lesions become more notable in summer⁽²⁰⁾.

In this study, it was found that 32.5% of patients presented with itching and only 6.9% of patients presented with a burning sensation. Alkassaby and El-Masry reported that pityriasis alba is usually asymptomatic, yet some patients may complain of itching or burning sensation⁽¹⁶⁾.

Conflict of interest:

None declared

Funding:

None

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