Original Article

# Prevalence of Pithyriasis alba in elementary school children in Babol, Northern Iran

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## *Abstract*

***Background:*** *Pithyriasis Alba (PA) is a nonspecific dermatitis with unknown origin and is a common dermatosis during childhood. Its prevalence is higher in individuals with darker skin, inadequate personal hygiene, sun exposure, xerosis with atopic dermatitis. The purpose of this study was to determine the prevalence of pithyriasis alba in elementary school children in Babol, Northern Iran.*

***Methods:*** *This cross sectional study was carried out on 937 children in elementary schools in Babol, north of Iran, from 2007 through 2008. The diagnosis of the disease was made through clinical examination. The variables like age, gender, areas of skin lesions were also evaluated. Data were collected and analyzed.*

***Results:*** *Nine hundred-thirty seven children (491 boys and 446 girls) between the ages 7-11 years were examined. P.A was seen in 44 (9.9%) out of 446 girls and in 44 (9%) out of 491 boys ($p>0.05$). The prevalence of PA was 9.4%.*

***Conclusion:*** *The results show that the prevalence of pithyriasis alba was relatively high in the school children. Preventive protocols for the infected children are recommended.*

***Key words:*** *Pithriasis Alba, Elementary school, Prevalence, Boys, Girls.*

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Pithyriasis Alba (PA) is a common benign condition in children that its etiology and pathogenesis are still poorly understood. Recent studies have found direct correlations between the incidence of PA and atopy, the amount of sun exposure, the lack of sunscreen use, and the frequency of bathing. It is usually asymptomatic and often an incidental finding on physical examination, hypopigmented macules with or without mild scaling are its presenting lesions. Erythematous, pigmented and extensive PA are rarer variants (1). Its differential diagnosis includes tinea versicolor, naevus achromicus, vitiligo and leprosy (2). The prevalence of pithyriasis alba in different population is very different. Its prevalence was higher in individuals with darker skin in high phototype categories, as in males. High prevalence is in those with inadequate personal hygiene and sun exposure habits and individuals with atopic dermatitis with xerosis (3). Estimated prevalence of PA in different population is very different, between1% to 31% (2, 4-13). The purpose of this study was to determine the prevalence of pithyriasis alba in elementary school children in Babol, northern Iran.

## Methods

This cross-sectional study was carried out on 937 children in elementary schools of babol, northern Iran, from 2007 to 2008. The children were selected into 2 simple accidental and cluster sampling methods. The diagnosis of the disease was made through clinical examination. For unknown lesions, we performed smear for finding of fungi or skin biopsy.

The following variables were recorded: age, gender, areas covered and complaints of patients. The study was approved by the Research Center of Babol Medical faculty. The obtained data were analyzed by SPSS version 11, Student t, test and Fisher exact test were used when appropriate.

## Results

Nine hundred thirty seven children (491 boys, 446 girls) aged between 7-11 years were examined. The prevalence of Pithyriasis Alba (PA) between the different sexes and ages were not significant. Eighty-eight (9.4%) of children had pithyriasis alba. Fifty (10.2%) cases were boys and 38(8.6%) children were girls (p=0.433). Table 1 shows the sex and age of children with pithyriasis alba in Babol.

Mean age of the children in different sexes was not significant (p=0.714). Lesion sites were as follows: fifty seven cases in the face and the neck, fifteen cases in lower extremities, thirteen cases in upper extremities and three cases in the trunk. Forty cases did not have any symptoms with pithyriasis alba, although in forty eight children different complaints such as pruritus or burning sensation were reported.

**Table 1. Prevalence of Pithyriasis Alba (PA) Between the different sexes and ages**

| Variable | With PA | Without PA |
|---|---|---|
| **Sex and Age** | **N(%)** | **N(%)** |
| **Boys** | | |
| 7 | 10(10.2) | 88(89.8) |
| 8 | 9(9.1) | 90(90.9) |
| 9 | 8(8.2) | 90(91.8) |
| 10 | 10(10.2) | 88(89.8) |
| 11 | 7(7.1) | 91(92.9) |
| **Girls** | | |
| 7 | 8(8.9) | 82(91.1) |
| 8 | 8(9.1) | 80(89.9) |
| 9 | 9(10.1) | 80(89.9) |
| 10 | 12(13.5) | 77(86.5) |
| 11 | 7(7.8) | 83(9.2) |

## Discussion

In this study, we found that the prevalence of Pithyriasis Alba was 9.4% and this was not meaningful between the different sexes and ages. The commonest sites of lesions were the face (64.8%), followed by the lower extremities (17%), the upper extremities (14.8%), and the trunk (3.4%).

Burning or pruritus was reported in 54.6% and in 45.5% of the cases did not have any symptoms in the lesions. Blessmann et al. reported that the prevalence of PA was higher in individuals with darker skin, in high phototype categories, as in males (3).

The number of daily baths and sun exposure between 10.00h and 15.00h were significanthly higher in PA group when compared with the control group. Prevalence study of pithyriasis alba in different areas lead to variable results between 1 to 31% (4-14). In one study in Mali (West Africa) Faye et al. reported that the prevalence of PA was 31% (2). Another study in Bamako (Mali) Mahe et al. reported that prevalence of PA was 3.6% (5).

In one study in 419 school children in Northern India, Kumar et al. reported a prevalence rate of 6.4% (14). Dogra et al. from Northern India reported that the prevalence of PA was 8.4% (10). In the study of Abdel et al. of Egypt reported the prevalence of 13.5% (12). Another study showed the prevalence of PA in primary school children was 12% (11). Hiletework in Addis ababa reported that the prevalence of PA was 4.4% (6). In Singapore the prevalence of PA between school children was reported to be 25% (13).

In one study among the Romanian school children, Popescu et al. reported that 5.1% of children had PA (8). Nonda et al. after analysis of 10000 children reported that prevalence of PA was 5.25% (9). In the study of Popescu et al. among the Romanian school children showed that PA had a male predominance (p=0.007) (8). In other studies, Tay did not find any differences among the different sexes, sites of lesions and complaints or symptoms of patients with PA lesions (7).

In conclusion, due to the different prevalences and ethiology of PA in different climates, it is recommended that for every child with PA, the full history of sex, age, site of lesions and the symptoms of PA with history of atopic dermatitis are obtained. This information leads to correct diagnosis in using proper protocols for reducing prevalence of PA and treatment modalities.

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