Pediatric Psoriasis: Clinical Features and Course

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ABSTRACT
Psoriasis is fairly common dermatosis among children and adolescents, equally striking males and females. The article provides insight into clinical features and epidemiology of pediatric psoriasis in children aged 4-17. The disease was found to set in at any age, typically at the age of 9-10 years and have chronic course with durable exacerbation periods, lasting from few weeks up to 1-1.5 years. The highest number of psoriasis exacerbations takes place in autumn and winter months. Among the psoriasis triggers in children, stressful situations head the list. In children with psoriasis the extensive process prevails, plaque psoriasis is more likely to occur. The number of children with a localized type (scalp lesions) increases with age, whereas the manifestations of guttate and inverse psoriasis decrease in number.

KEYWORDS: Pediatric psoriasis; Epidemiology of psoriasis; Clinical features; Psoriasis types, plaque psoriasis; Guttate psoriasis; Children

INTRODUCTION
The prevalence of psoriasis within different populations ranges between 1 and 11.8%. The highest rates among European countries were reported in Denmark (2.9%) and the Faroe Islands (2.8%) comparing to the average prevalence of psoriasis in Northern Europe of about 2%. In the United States these figures range between 2.2 and 2.6%, while almost 150,000 new cases are annually reported. Both males and females are equally predisposed to psoriasis [1-3]. Psoriasis can set in at any age. Approximately 14.8% to one third of all psoriasis cases occur by the age of 15. The prevalence of the disease increases linearly; from 0.2% among 1-year-olds to 1.2% among 18-year-olds, but the occurrence in children under the age of 10 is still nontypical. The most likely period for disease development is the age between 15 and 30 years. Currently, data was released revealing the 2-fold rise in the incidence of psoriasis among children over the last 50 years [4-6].

The prevalence of psoriasis varies greatly in children depending on the country and population. In the UK, about 0.55% of children aged 0-9 and 1.37% aged 10-19 have psoriasis [7]. The prevalence among Germans aged 0-9 is 0.18%; aged 10-19-0.83% [8] and in the Dutch population aged 0-10-0.4% at the age of 11-19 years-1.0% [9,10]. Unlike in Europe, pediatric psoriasis was not normally observed in epidemiological studies of pediatric dermatoses conducted in Asia [11-13]. This global geographical variation seems to reflect the fact that psoriasis tends to be a complex disease caused by environmental factors in genetically predisposed subjects [14-15].

In children with psoriatic manifestations, comparable to those observed in adults, the lesions differ in location and morphology, while their clinical symptoms differ from those typical for adults. In childhood typical psoriatic patches are thinner and smaller, and more often localized on the face and in the skinfolds. Such lesions are characterized by maceration. Despite these features, psoriatic papules and patches can be located in any skin area and usually symmetrically [16,17]. Rashes in the diaper area that do not respond on the conventional therapy of diaper dermatitis tend to appear frequently in young children. Such a rash is characterized by
sharply demarcated infiltrated erythematous patches in the diaper area involving inguinal skinfolds. Lesions are often macerated and capable of spreading to surrounding areas [18]. Up to 75% of all cases in elder children manifest as patches [19,20]. It is the prevailing psoriasis type in children and adults and characterized by sharply demarcated infiltrated erythematous papules or patches accompanied by a silver-white skin exfoliation. Lesions vary in size and appear mainly on the scalp, face and elbows as well as knees. Lesions of the scalp are the most common among the affected areas and often are the initial manifestation of psoriasis in children [21,22].

RESEARCH OBJECTIVES

These define clinical features and epidemiology of psoriasis in children.

MATERIALS AND METHODS

We examined 260 children with psoriasis aged 4-17 who underwent inpatient treatment in Kyiv Municipal Dermatology-STI Clinic in 2017-2019. Children were divided into groups depending on the biological age grouping: group 1-early childhood or 4-7-year-olds: 37 children (14.23%), group 2-middle childhood, 75 children (28.85%) 8-11-year-old girls, 8-12-year-old boys, group 3-adolescents-119 children (45.76%) – 12-15-year-old girls, 13-16-year-old boys and group 4-17-year-old boys and 16-17-year-old girls, 29 people overall (11.15%).

RESULTS

The mean age of the children with psoriasis who were examined and underwent inpatient treatment in Kyiv Municipal Dermatology-STI Clinic in 2017-2019 was an 11.96 ±0.22 year in parallel with the disease duration ranging between 1 month and 15 years. The girls and boys were divided equally. The group comprised of 16-17-year-olds included the greatest number of boys-55.17%, the greatest number of girls was in 4-7-year-old group-72.97%. The average duration of the last exacerbation or manifestations was 11.45 ±1.05 months.

Examining the children with psoriasis we defined that typically exacerbation develops in August, then the exacerbation curve will rise and peak in October-November, and exacerbation rates (Figure 1) stay high over the period of the last winter and spring months.
CONCLUSION

The analysis revealed that psoriasis is fairly widespread dermatosis, among children and adolescents, affecting boys and girls in equal measure. The disease can develop at any age and have a durable course. The greatest number of children with durable and extensive course comprises children aged 8-15/16. Among the triggers that provoke psoriasis in children acute or chronic stresses head the list. Among the manifestations of psoriasis, the extensive process prevails. Plaque psoriasis is the most common, the number of children in group 1 to 68.97% of children in group 4. Consideration should be given to the significant incidence, in children of early and middle childhood, of long-lasting inverse psoriasis, resulting from the localization in the skinfolds and genitals, susceptible to maceration and rapid exacerbation following the treatment.

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