Clinical Analysis of Psoriasis Course in Children

The paper describes specific clinical features of psoriasis course in children and determines their significance during disease. A total 198 children with different clinical form of psoriasis were included in examination. The age of examined patients was from 16 months to 14 years. In 198 patients 84 (42.4%) had initial onset of psoriasis, 114 (57.6%) - had recurrence. The disseminated form of the disorder was observed in 176 (88.8%) children, and localized form of disease - in 22 (11.2%) children. The examination has demonstrated that psoriasis has specific features in children, being peculiar for disease course in child's age.

Keywords: Childhood psoriasis, epidemiology, course of psoriasis.

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Introduction

Psoriasis is a common chronic inflammatory skin disease in children and adults being characterized with increase in keratinocytes proliferation, alteration in dermal and epidermal T cells, monocytes and neutrophils. About 2.5% of the world's population is afflicted with the disease (Christophers, É., 2001). The disease often begins in the early childhood, with spread of papular rash on the skin. Often repeating recurrences leads to systemic psoriasis development that carries a severe impact on life quality (Nyfors and Lomholt, 1975; Leman and Burden, 2001). In different countries it spreads from 3 to 7% (Raychaudhuri and Farber, 2001; Farber and Nall, 1974). Among all of the existing skin diseases psoriasis comprises 15-30%. As it is known, in 2-12% of diseased adults the primary psoriasis displays at the age under 10 years (Nanda et al., 1990; Kavli et al., 1985; Barker, 2001).

Disorder takes many clinical forms in the childhood group, with punctate, guttate, nummulare and plaque-type lesions, diaper distribution, facial involvement, triggered by emotional factors and skin injury.

The aim of the study is to examine specific clinical features of psoriasis course in children, and to determine their significance during disease.

Materials and methods

198 children younger than 14 years old with psoriasis were observed in the study. The examination was taken at the dermatology department in hospital of Tashkent Pediatric Medical Institute in Uzbekistan during the period March 2006 - December 2009. The diagnosis of patients was confirmed by typical clinical findings and laboratory examinations.

Results

Patient and onset

The age of examined patients was from 16 months to 14 years (median 9 years). Among them: 36 (18.2%) patients had age from 16 months to 7 years, 77 (38.6%) had 7-10 years, 85 (42.9%) had 10-14 years. There were 83 (41.9%) male and 115 (58.1%) female subjects, with a male-to-female ratio of 1:1.38. The age of onset ranged from 16 months to 12 years. The disease was beginning under 3 years old in 32 (16.2%) patients, from 3 to 7 years old - in 103 (52.0%) patients, from 7 to 14 years old - in 63 (31.8%) patients. The median onset age consisted 8.5 years. The total duration of psoriasis was from 2...
week to 7 years. Among 198 patients the 84 (42.4%) had initial onset of psoriasis, 114 (57.6%) had recurrence. Among 114 patients the 51 (44.7%) had 1-2 recurrences and 63 (55.3%) had 2-3 recurrences for a year.

The disease often began in early childhood and it was more experienced by females. The median duration of disease in male and female patients were 1.5 and 2 months.

In 63 (31.8%) of observed 198 patients the psoriasis was observed and diagnosed for the first time, whereas in 135 (61.2%) children regular recurrences were noticed. The main cause factors leading to disease onset and its recurrence included: consuming food allergens, psycho-emotional factors, influence of environmental factors, including solar irradiation. In 86 (43.4%) examined patients the psoriasis onset season was marked in spring-summer, in 38 (19.2%) - in fall-winter and in 74 (37.4%) patients the disease connection with the season factor was not detected. On comparison of patients’ number depending on season, more cases occurred in spring-summer onset.

Those sick children addressed to dermatology unit of Tashkent Pediatric Medical Institute (TPMI) had received sometimes at primary healthcare units the wrong diagnoses: “atopic dermatitis”, “seborrheic dermatitis”, “plantar-palmary hyperkeratosis”. Apparently, the clinics of above mentioned dermatoses were conditioned by flat papule rashes on skin with presence of profuse scaling on their surface.

During examination of patients with other specialists the accompanying diseases were diagnosed; chronic tonsillitis (33.3%), chronic cholecystitis (61.1%), reactive hepatitis (3%), dental caries (38.4%) were predominated among them.

**Types of psoriatic lesions**

From the total number of 198 children with psoriasis the disseminated form of the disorder was observed in 176 (88.8%), and localized form in 22 (11.2%) patients.

In early childhood in children suffering from psoriasis the disseminated form of disease were more often observed. With the following recurrences, papular rashes were like watering together with formation larger plaque forms of rash. In comparison with data of former studies, the last years indicate that exudative, pustular, intertriginous (skin folds area) forms of psoriasis occur more often among children, that can be evaluated as specific course of diseases in children (Christophers, 2001; Leman and Burden, 2001; Nanda et al., 1990).

**Table 1.** The sites of rash in children suffering from psoriasis with localized and disseminated forms

<table>
<thead>
<tr>
<th>Site</th>
<th>Localized forms</th>
<th>Disseminated forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scalp</td>
<td>12 (54.5%)</td>
<td>121 (68.7%)</td>
</tr>
<tr>
<td>Facial</td>
<td>2 (9.1%)</td>
<td>86 (48.8%)</td>
</tr>
<tr>
<td>Trunk</td>
<td>1 (4.5%)</td>
<td>154 (87.5%)</td>
</tr>
<tr>
<td>Arms</td>
<td>3 (13.6%)</td>
<td>134 (76.1%)</td>
</tr>
<tr>
<td>Elbows</td>
<td>20 (90.9%)</td>
<td>96 (54.5%)</td>
</tr>
<tr>
<td>Skin folds area</td>
<td>0 (0)</td>
<td>38 (21.6%)</td>
</tr>
<tr>
<td>Around genitals</td>
<td>0 (0)</td>
<td>36 (20.4%)</td>
</tr>
<tr>
<td>Legs</td>
<td>1 (4.5%)</td>
<td>131 (74.4%)</td>
</tr>
<tr>
<td>Knees</td>
<td>13 (59.1%)</td>
<td>98 (55.6%)</td>
</tr>
<tr>
<td>Palm and sole</td>
<td>0 (0)</td>
<td>5 (2.8%)</td>
</tr>
<tr>
<td>Nail</td>
<td>0 (0)</td>
<td>8 (4.5%)</td>
</tr>
<tr>
<td>Mucosal</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>176</td>
</tr>
</tbody>
</table>

The aggregate of 198 children with psoriasis consisted of 48 (24.2%) punctate-type psoriasis, 64 (32.3%) presented guttate forms of psoriasis, 28 (14.1%) presented nummulare and 58 (29.3%) had plaque-type psoriasis. The 38 (19.2%) patients with disseminated form of disease had papular and plaque rush on big skin folds area and around of genitals, which was diagnosed as intertriginous type psoriasis. Only 1 (0.5%) patient had generalized pustular psoriasis. In addition, 21 (10.6%) children suffered...
from nummulare and plaque-type psoriasis accompanied with the exudative character of lesion, which was diagnosed as exudative-type psoriasis.

Sites of skin

Sites of rashes on different parts of children’s skin do not differ from the adults’ patients. The main nidi of rashes localization are marked in Table 1. The disease nidi often are on scalp in 12(54.5%) patients with localized and in 121 (68.7%) patients with disseminated forms of psoriasis, on extensor surface of hands in 3(13.6%) and 134 (76.1%), on legs in 1 (4.5%) and 131 (74.4%), on elbows in 20 (90.9) and 96 (54.5%), on knees in 13 (59.1%) and 98 (55.6%), respectively. The specific feature is localization papules and plaques in big folds (21.6%) and around genitals (20.4%). There no children with lesion of mucus. The changes of nail plaques were marked in 8 (4.5%) patients with disseminated clinical form of the disease.

Conclusion

Analysis of examination outcomes brings the conclusion that psoriasis has specific features being peculiar for disease course in child’s age:

1. Psoriasis is widespread pathology of skin in child’s age, there is tendency to rejuvenation of disease with the beginning in early age;
2. Among the children suffering from psoriasis specific localization of rashes are often marked in areas of big folds and around genitals;
3. In connection with specific structures of child’s skin exudative psoriasis often occurs;
4. Children have typical appearance of small papule rash of follicular character, localizing in hairy area of follicles;
5. In connection with raised insolation in conditions of Uzbekistan exacerbation of psoriasis is often in spring-summer;
6. With prolonging of course and the following recurrence of psoriasis, dissemination and raise of rashes’ sizes with formation of plaques are observed;
7. In early childhood the primary displays of disease are characterized by more flat scaling rash and in connection with it, there are often wrong diagnosis such as “atopic dermatitis”, “seborrheic dermatitis”, “plantar-palmary hyperkeratosis”.

References