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Pityriasis rosea: a natural history of pediatric cases in the Central Anatolia Region of Turkey*

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Background/aim: This study aimed to evaluate the demographic, clinical, and epidemiological features of pityriasis rosea (PR) in a cohort of 46 children in Yozgat, a city in the Central Anatolia Region of Turkey.

Materials and methods: Forty-six children with PR were monitored at regular intervals (1, 2, 4, and 12 weeks) for 3 months from the time of diagnosis. A complete evaluation of the patient was performed at each visit.

Results: The average age of patients at time of diagnosis was 12 ± 3.9 years. Cases were most common in the winter (rainy, snowy months; n = 14, 31%). Fifteen patients had a medical history significant for the presence of upper respiratory tract infection, while skin PR manifestations were preceded by drug intake in a second group of 15 patients. The presence of a herald patch was observed in 78.3% of patients, most frequently on the trunk (n = 23). Pruritus occurred in 75% of patients. Median PR duration was 3 weeks (range: 1–20 weeks).

Conclusion: The course of PR is similar in Turkish children and adults. The high prevalence of pruritus in children with PR in Turkey was also significant. Further evaluation of this finding comparing adults and children is now required.

Key words: Children, clinical features, pityriasis rosea

1. Introduction

Pityriasis rosea (PR) is an entirely self-mitigating acute papulosquamous disease with no known cause. Both bacterial and viral agents have been proposed, although convincing experimental evidence is lacking. PR is typically characterized by the emergence of a herald patch and subsequently the diffusion of a papulosquamous rash running parallel along skin cleavage lines. PR typically resolves within 6–8 weeks. Few reports of pediatric PR are currently available (1–4).

The present study summarizes the demographic, clinical, and epidemiological features of PR in a cohort of 46 children in Yozgat, a city in the Central Anatolia Region of Turkey.

2. Materials and methods

2.1. Sample size

Forty-six patients between 1 and 18 years of age presenting to the Bozok University Faculty of Medicine's Infectious Disease, Dermatology, or General Pediatrics Clinics and diagnosed with PR were enrolled between January 2012 and January 2013. In agreement with the literature, diagnosis of PR was in most cases based on history and physical exam. In atypical cases a skin biopsy was performed by a dermatologist to differentiate PR from other exanthemas (3,5). Patients with inconclusive diagnoses were considered ineligible for participation.

Standardized forms were used to collect patient data at the time of diagnosis, including sex and age, presence and location of herald patch, time of lesion onset, duration

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of symptoms, distribution and type of lesions, presence of pruritus, previous upper respiratory tract infection (URTI), history of exposure to PR, and medication use.

Forty-six children with PR were monitored at regular intervals (1, 2, 4, and 12 weeks) for 3 months from the time of diagnosis. A complete evaluation of the patient was performed at each visit. The study protocol was reviewed and approved by the Bozok University Medical Faculty Ethics Committee. Parents provided informed consent for all participating children.

2.2. Statistical analysis

Statistical analyses were performed with SPSS 15. The chi-square test or Fisher's exact test, as appropriate, was used for comparisons in different groups. $P < 0.05$ was considered statistically significant.

3. Results

The 46 patients with PR in the study group consisted of 30 females and 16 males. Mean patient age was 12 ± 3.9 years.

PR was more common in winter (rainy, snowy months; n = 14.31%), followed by fall (n = 12.27%), spring (n = 11. 22%), and summer (n = 9.20%). Medical history included URTI in 15 patients, while drug intake prior to the skin manifestations was present in another 15. The most common drugs used before onset of the rash were antipyretics and nonsteroidal antiinflammatory drugs.

A herald patch was observed in 78.3% of patients, most often on the trunk (n = 23). The median time between appearance of a herald patch and eruption of widespread lesions was 4 days (range: 0–30). Approximately 93% of patients had characteristic papulosquamous lesions, 4.3% had purely papular lesions, and 2.2% had papulovesicular lesions. No oral lesions or residual pigmentary changes were observed. Pruritus was reported in 74% of patients.

No significant differences were determined in terms of sex, distribution, history of URTI, or drug use ($P > 0.05$). However, duration of inverse distribution (n = 2) was greater (median: 17 weeks) compared to other distributions ($P < 0.05$).

The disease resolved within 2 weeks after the onset of symptoms in approximately half of the patients. Improvement was observed in 2–4 weeks in 28.3% of cases. Active disease lasting more than 4 weeks occurred in only 20% of cases. One patient withdrew from monitoring. Disease concurrence is defined as the presence of PR among individuals in close contact with the patient. Household contact with other individuals with PR occurred in 2 cases (4.3%). One parent reported that the patient had experienced a previous episode of PR (disease recurrence rate: 2.2%).

Oral antihistamines were the most common medication used among PR patients (n = 37). The Table summarizes the study results.

Table. Clinical and epidemiological features of the patients with pityriasis rosea.

Characteristics	n (%)
Sex	
Female	30 (65.2)
Male	16 (34.8)
Season of onset	
Winter	14 (31)
Fall	12 (27)
Spring	11 (22)
Summer	9 (20)
Pruritus	34 (74)
Signs	
Herald patch	36 (78.3)
Type of lesion	
Papulosquamous	43 (93.5)
Papular	2 (4.3)
Papulovesicular	1 (2.2)
Distribution of lesions	
Central	32 (69.6)
Diffuse	10 (21.7)
Peripheral	2 (4.3)
Inverse	2 (4.3)
Duration	
Resolution <2 weeks	23 (50)
Resolution 2–4 weeks	13 (28.3)
Resolution >4 weeks	9 (20)
Lost to follow-up	1 (2.2)
Recurrence	1 (2.2)
Treatment	
Oral antihistamines*	37 (80.4)
Topical corticosteroids*	20 (43.5)
Oral antibiotics*	5 (10.9)
Systemic steroids*	2 (4.3)

*Used alone or in combination with other treatments.

4. Discussion

PR is a common acute exanthema (4). Limited data are available concerning its prevalence in children. Gül et al. determined a prevalence of PR of 1.27% in a study involving the pediatric age group (6). The causes of PR are unclear, although the use of certain medications, stress, pregnancy, and infection have all been implicated (7–13). Of our study group, 32.6% had a prior history of URTI.

Peak incidence occurred in winter and fall, a finding that is supported by the available literature (4,14). We postulate that a decrease in ambient temperature

suppresses cellular immunity, promoting disease among vulnerable individuals.

Pruritus has been reported in 25% of adult patients and 69%–90% of pediatric PR patients, and pruritus was identified in 74% of our cases (1,2,4). The incidence of pruritus in our study was higher than the typical rate reported for adult patients, but comparable to previous reports in pediatric populations.

In addition, 78.3% of our patients exhibited a herald patch, which is compatible with the previously reported range of 12%–94% (15). Our rates for household concurrence, 4.3% (in 2 patients), and recurrence, 2.2%, were both within previously cited ranges of 1%–4.6% and 1.4%–2.8%, respectively (16). Secondary lesions in PR are very similar to the herald patch, although they are always smaller. Gigantean (larger and fewer lesions), pustular, purpuric, and vesicular PR cases are rare. The trunk, abdomen, and neck are the most common sites, while the extremities and face are rarely involved (4,17). In our pediatric patients with PR, the classical papulosquamous type located on the trunk (93.5%) was the most common manifestation.

Active lesions resolved within 2 weeks in half of our cases and within 4 weeks in 78.3%, a rate similar to that seen in African-American children (2).

Seventy-four percent of our patients had pruritus. Scratching of lesions can lead to secondary infection and scarring. It seems reasonable to offer patients relief from their pruritus and to prevent nonpigmentary sequelae through the application of systemic antihistamines, mild topical steroids, or both (2,17). Oral antibiotics were prescribed to 5 patients with possible bacterial infection, and systemic steroid therapy was provided for 2 patients not responding to systemic antihistamines and topical steroids.

In contrast to our study conducted in a Turkish pediatric population, PR involving the scalp and face in African-American children is often extensive and papular and leaves residual pigmentary changes in the majority of patients (2). This suggests that genetic factors are involved in the etiology and course of PR.

In conclusion, the course of PR is similar in Turkish children and adults. We observed a higher incidence of disease during rainy and snowy months. URTI preceded the emergence of rash in 32.6% of our patients. Another significant finding was the high prevalence of pruritus, which resolved rapidly in our PR cases. Further studies with larger patient numbers are now needed to compare PR symptoms in different age cohorts and ethnic groups.

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