Khismatullina ZR, et al., J Clin Dermatol Ther 2021, 7: 065
DOI: 10.24966/CDT-8771/100065

HSOA Journal of Clinical Dermatology and Therapy

Short Review

Clinical Features of Psoriatic Arthritis in Children

Zarema Rimovna Khismatullina and Ksenia Mikhailovna Koreshkova*

Department of Dermatovenereology, Bashkir State Medical University, Ufa, Russia

Abstract

Psoriasis is one of the most common childhood skin disorders, the second after atopic dermatitis. Psoriatic Arthritis (PsA) is a chronic inflammatory disorder of the joints, spine and enthesis, usually associated with psoriasis. In children, PsA belongs to the group of juvenile idiopathic arthritis (according to the classification of the International League of Associations for Rheumatology, ILAR). The paper reviews the current scientific literature data on PsA peculiarities in childhood, the highest incidence in children, distribution by gender, as well as the predominant forms of joint syndrome.

Results: Juvenile PsA is characterized by the pronounced clinical heterogeneity. The disease is twice as common in the girls. Two peaks of incidence are distinguished among 6-7 years and 14-18 years. Skin events precede the development of arthritis in 30% of children. The predominant form of the disease in children is asymmetric oligoarthritis.

Keywords: Juvenile; Oligoarthritis; Onychodystrophy; Psoriasis; Psoriatic arthritis

Introduction

Psoriasis is diagnosed annually in about 20 thousand children under the age of 10. Up to 30% of adults fell ill with psoriasis under 18 years old and up to 70% of them had a burdened family history while the burdened history was revealed only in 30% of those who were affected in their adulthood. Twohighest incidences of psoriasis are currently detected among 6-7 years old and 14-18 years old children. It is believed that a feature of psoriasis in childrenis a tendency to the more pronounced exudative phenomena and involvement of joints and enthesis which is more rare than in adults. This paper studied the features of the course and clinical picture of psoriatic arthritis in childhood and adolescence.

Purpose of the Study

Study the features of epidemiology, clinical course and articular syndrome in PsA in children

Materials and Methods

In this paper we examined the scientific literature for the period of 2010-2020 dedicated to the clinical features of psoriatic arthritis in children. Literature sources published earlier than 2010 were not used in the review.

Results

The highest incidence of PsA in children falls on the senior preschool age (6-7 years) and puberty (14-18 years) and thuscoincides with the peak of the incidence of psoriasis [1]. To diagnose PsA in children is often difficult due to the peculiarities of the disease - differences in the clinical course, localization and form of the articular syndrome. Among juvenile arthritis PsA accounts for up to 10%, there is a pronounced clinical heterogeneity of the disease, as well as gender differences - girls account for 60-70% of sick children [2]. Data on the frequency of occurrence of PsA in childhood varies. According to the American register Childhood Arthritis and Rheumatology Research Alliance (2017), PsA is recorded in 5% of children with juvenile arthritis, however, according to the German register Biologics in Paediatric Rheumatology (2016), the proportion of PsA among juvenile idiopathic arthritis is 7.4% [2,3]. According to Russian data, PsA accounts for 1.5% of all juvenile idiopathic arthritis (Union of Pediatricians of Russia, 2017), according to the I.M. IM Sechenov, this pathology occurs in 6% of children with juvenile idiopathic arthritis [4]. When diagnosing juvenile PsA they usually rely on the Vancouver diagnostic criteria (1989). According to these criteria, juvenile PsA is exhibited in the presence of arthritis and typical psoriatic rash or arthritis and at least 3 of the follow “minor” signs: psoriasis-like rash, dactylitis, onychodystrophy, psoriasis in relatives of the 1st or 2nd degree of relationship. Probable juvenile PsA is diagnosed if arthritis and at least 2 of the “minor” signs are present [4].

The average age of PsA incidence among children is 6.2 years, the minimum and maximum ages of the disease onset were 4 months and 15 years, respectively [4]. In more than half (71%) of children PsA was preceded by skin psoriasis (skin syndrome appeared inaverage 5 years), in 29% of cases the disease began with skin psoriasis (joint involvement occurred in average 2.5 years) [5]. It was noted that the disease often remains undetected even in the presence of characteristic symptoms due to the clinical features of psoriasis in childhood, thus the connection between PsA and skin psoriasis also remains undetected, especially in cases where the lesion of the musculoskeletal system

***Corresponding author:** Ksenia Mikhailovna Koreshkova, Department of Dermatovenereology, Bashkir State Medical University, Ufa, Russia, Tel: +7 89177315237; E-mail: saitik16@yandex.ru

Citation: Khismatullina ZR, Koreshkova KM (2020) Clinical Features of Psoriatic Arthritis in Children. J Clin Dermatol Ther 6: 065.

Received: February 05, 2021; **Accepted:** February 09, 2021; **Published:** February 16, 2021

begins with mono- or oligoarthritis joints of the hands observed in 35-40% of cases [5]. Asymmetric oligoarthritis in 40-80% of children further spreads to other joints (knee, elbow, etc.) [6]. The predominant forms of skin psoriasis were also revealed in children with PsA - in 76.3% of children plaque psoriasis was revealed, among which 39% were found to involve the scalp, 13% of patients had teardrop-shaped psoriasis, the palmar-plantar form was found in 5.1% of cases. In 22% of children, skin syndrome was combined with onychodystrophy. Isolated psoriatic onychodystrophy occurred in 5.1% of cases. Clinical forms of onychodystrophy were dominated by onycholysis (35%), "oil stain" symptom (21%), "thimble" symptom (18%) [6].

Currently a gradual onset of juvenile PsA is one of the main clinical features. The first symptoms of PsA in children may be: weight loss, increased fatigue, myalgia. In about 30% of children at the onset of the disease were noted morning stiffness in the joints, edema and sharp paroxysmal pain most intense in the morning hours [7]. In most children (up to 80%), psoriatic arthritis is manifested by the involvement of the proximal and distal interphalangeal joints of the hands and feet, the metacarpophalangeal, metatarsophalangeal joints, as well as the knee and shoulder joints. At the onset of the diseasetwo thirds of patients (68.7%) have mono- and oligoarticular forms of articular syndrome, the process most often begins with damage to the proximal interphalangeal joints of the hands, ankle and knee joints. As for the rheumatoid-like form of articular syndrome (polyarthritis), at an early stage it occurs less frequently (18% of children), psoriatic spondylitis is found in 13.2% of patients [7].

The features of the articular syndrome in children with PsA are still being studied in detail. It is believed that in juvenile PsA any joints, up to the temporomandibular joints, can be affected, however the knee joints, small joints of the hands and feet, as well as ankle joints are most often involved in the process - in 41%, 29% and 31% of cases, respectively. With regard to the classification of PsA, they successfully keep to the classification used for adults, according to which 5 forms of the disease are distinguished: Asymmetric oligoarthritis (35-40%), arthritis of the distal interphalangeal joints (DMFS arthritis) (15-29%), mutilating arthritis, psoriatic spondylitis. Axial arthritis is characteristic - damage to all joints of one finger is developing as a rule afterdactylitis. Cyanotic skin discoloration and sausage-like appearance of the finger are often observed in combination with tendovaginitis of the flexor tendons of the fingers [8]. Isolated arthritis of the distal interphalangeal joints in children is extremely rare - more often it is combined with damage to the peripheral joints and psoriatic onychodystrophy. In 5% of children, symmetric lesions of the metacarpophalangeal and proximal interphalangeal joints of the hands are observed, which is the most important in the onset of the disease (in the absence of skin syndrome)as this option is easily mistaken for a seronegative polyarthricular variant of juvenile idiopathic arthritis. Mutating arthritis in PsA is manifested as a rule by osteolysis of the phalanges of the fingers and toes, due to the shortening of the fingers their characteristic deformation develops. It often takes years for this form of the disease to develop, and it is generally rare in childhood and adolescence. Psoriatic spondylitis in children in isolated form occurs in 13% of cases. By its severity, this form of articular syndrome can be compared with juvenile spondyloarthritis [9]. Changes in the articular syndrome were also identified over time: on average5 years after the onset of the disease rheumatoid-like form of PsA begins to prevail (41% of patients), the proportion of asymmetric oligoarthritis gradually decreases (24.1%), the frequency of spondyloarthritis (24%) and mutating arthritis increases (11%) [10].

Conclusion

The clinical picture of PsA in children is extremely heterogeneous and has its own characteristics. Among children with this disease the girls are twice as common as the boys. There are two PsA high incidences in childhood and adolescence - 6-7 years old and 14-18 years old, and the second peak is more pronounced. In 30% of childrenskin conditions precede the development of arthritis. At the onset of the disease the majority of patients have asymmetric oligoarthritis followed by a gradual increase in the proportion of polyarthritis. Further study of the characteristics of PsA in children and adolescents will make it possible to develop more effective measures for the timely diagnosis of this disease.

References

1. Ritchlin CT, Colbert RA, Gladman DD (2017) Psoriatic Arthritis. N Engl J Med 376: 957-970.
2. Beukelman T, Kimura Y, Ilowite NT, Mieszkalski K, Natter MD, et al. (2017) The new Childhood Arthritis and Rheumatology Research Alliance (CARRA) registry: Design, Rationale, and Characteristics of patients enrolled in the first 12 months. Pediatr Rheumatol Online J. 15: 30.
3. Horneff G, Klein A, Oommen PT, Hospach A, Foeldvari, et al. (2016) Update on malignancies in children with juvenile idiopathic arthritis in the German BIKER Registry. Clin Exp Rheumatol 34: 1113-1120.
4. Sevostyanov VK, Zholobova ES, Melik-Huseynov DV (2017) Structure of juvenile idiopathic arthritis according to the register of children with rheumatic diseases in Moscow. Rus Med J Medical Review 1: 6-10.
5. Chebysheva SN, Geppe NA, Zholobova ES, Aleksanyan KV, Meleshkina AV, et al. (2020) Clinical Features of Psoriatic Arthritis in Children. Doctor Ru 19: 22-26.
6. Adaskevich VP, Katina MA (2018) Clinical peculiarities of psoriasis in children and adolescents. Pediatrics (SuppleConsiliumMedicum) 2: 83-88.
7. Prakken BJ, Martini A, Malattia C (2018) Juvenile idiopathic arthritis: pathogenesis and clinical aspects: EULAR Textbook on Paediatric Rheumatology. Amsterdam, Netherlands Page no: 24.
8. Alexeeva EI (2015) Juvenile idiopathic arthritis: clinical picture, diagnosis, treatment. Current Pediatrics 14: 78-94.
9. Ficco HM, Citera G, Cocco JA (2014) Prevalence of psoriatic arthritis in psoriasis patients according to newer classification criteria. Clin Rheumatol 33: 1489-1493.
10. Colbert RA (2010) Classification of juvenile spondyloarthritis: enthesitis-related arthritis and beyond. Nat Rev Rheumatol 6: 477-485.

Advances In Industrial Biotechnology | ISSN: 2639-5665

Advances In Microbiology Research | ISSN: 2689-694X

Archives Of Surgery And Surgical Education | ISSN: 2689-3126

Archives Of Urology

Archives Of Zoological Studies | ISSN: 2640-7779

Current Trends Medical And Biological Engineering

International Journal Of Case Reports And Therapeutic Studies | ISSN: 2689-310X

Journal Of Addiction & Addictive Disorders | ISSN: 2578-7276

Journal Of Agronomy & Agricultural Science | ISSN: 2689-8292

Journal Of AIDS Clinical Research & STDs | ISSN: 2572-7370

Journal Of Alcoholism Drug Abuse & Substance Dependence | ISSN: 2572-9594

Journal Of Allergy Disorders & Therapy | ISSN: 2470-749X

Journal Of Alternative Complementary & Integrative Medicine | ISSN: 2470-7562

Journal Of Alzheimers & Neurodegenerative Diseases | ISSN: 2572-9608

Journal Of Anesthesia & Clinical Care | ISSN: 2378-8879

Journal Of Angiology & Vascular Surgery | ISSN: 2572-7397

Journal Of Animal Research & Veterinary Science | ISSN: 2639-3751

Journal Of Aquaculture & Fisheries | ISSN: 2576-5523

Journal Of Atmospheric & Earth Sciences | ISSN: 2689-8780

Journal Of Biotech Research & Biochemistry

Journal Of Brain & Neuroscience Research

Journal Of Cancer Biology & Treatment | ISSN: 2470-7546

Journal Of Cardiology Study & Research | ISSN: 2640-768X

Journal Of Cell Biology & Cell Metabolism | ISSN: 2381-1943

Journal Of Clinical Dermatology & Therapy | ISSN: 2378-8771

Journal Of Clinical Immunology & Immunotherapy | ISSN: 2378-8844

Journal Of Clinical Studies & Medical Case Reports | ISSN: 2378-8801

Journal Of Community Medicine & Public Health Care | ISSN: 2381-1978

Journal Of Cytology & Tissue Biology | ISSN: 2378-9107

Journal Of Dairy Research & Technology | ISSN: 2688-9315

Journal Of Dentistry Oral Health & Cosmesis | ISSN: 2473-6783

Journal Of Diabetes & Metabolic Disorders | ISSN: 2381-201X

Journal Of Emergency Medicine Trauma & Surgical Care | ISSN: 2378-8798

Journal Of Environmental Science Current Research | ISSN: 2643-5020

Journal Of Food Science & Nutrition | ISSN: 2470-1076

Journal Of Forensic Legal & Investigative Sciences | ISSN: 2473-733X

Journal Of Gastroenterology & Hepatology Research | ISSN: 2574-2566

Journal Of Genetics & Genomic Sciences | ISSN: 2574-2485

Journal Of Gerontology & Geriatric Medicine | ISSN: 2381-8662

Journal Of Hematology Blood Transfusion & Disorders | ISSN: 2572-2999

Journal Of Hospice & Palliative Medical Care

Journal Of Human Endocrinology | ISSN: 2572-9640

Journal Of Infectious & Non Infectious Diseases | ISSN: 2381-8654

Journal Of Internal Medicine & Primary Healthcare | ISSN: 2574-2493

Journal Of Light & Laser Current Trends

Journal Of Medicine Study & Research | ISSN: 2639-5657

Journal Of Modern Chemical Sciences

Journal Of Nanotechnology Nanomedicine & Nanobiotechnology | ISSN: 2381-2044

Journal Of Neonatology & Clinical Pediatrics | ISSN: 2378-878X

Journal Of Nephrology & Renal Therapy | ISSN: 2473-7313

Journal Of Non Invasive Vascular Investigation | ISSN: 2572-7400

Journal Of Nuclear Medicine Radiology & Radiation Therapy | ISSN: 2572-7419

Journal Of Obesity & Weight Loss | ISSN: 2473-7372

Journal Of Ophthalmology & Clinical Research | ISSN: 2378-8887

Journal Of Orthopedic Research & Physiotherapy | ISSN: 2381-2052

Journal Of Otolaryngology Head & Neck Surgery | ISSN: 2573-010X

Journal Of Pathology Clinical & Medical Research

Journal Of Pharmacology Pharmaceutics & Pharmacovigilance | ISSN: 2639-5649

Journal Of Physical Medicine Rehabilitation & Disabilities | ISSN: 2381-8670

Journal Of Plant Science Current Research | ISSN: 2639-3743

Journal Of Practical & Professional Nursing | ISSN: 2639-5681

Journal Of Protein Research & Bioinformatics

Journal Of Psychiatry Depression & Anxiety | ISSN: 2573-0150

Journal Of Pulmonary Medicine & Respiratory Research | ISSN: 2573-0177

Journal Of Reproductive Medicine Gynaecology & Obstetrics | ISSN: 2574-2574

Journal Of Stem Cells Research Development & Therapy | ISSN: 2381-2060

Journal Of Surgery Current Trends & Innovations | ISSN: 2578-7284

Journal Of Toxicology Current Research | ISSN: 2639-3735

Journal Of Translational Science And Research

Journal Of Vaccines Research & Vaccination | ISSN: 2573-0193

Journal Of Virology & Antivirals

Sports Medicine And Injury Care Journal | ISSN: 2689-8829

Trends In Anatomy & Physiology | ISSN: 2640-7752