

Clinical Possibilities of Manifestation of Juvenile Idiopathic Arthritis

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Introduction

Juvenile Idiopathic Arthritis is the most common rheumatologic disease in children and one of the most common chronic diseases of childhood. The term JIA encompasses a heterogeneous group of disorders that all share the clinical manifestation of chronic joint inflammation. The etiology is unknown, but both genetic and environmental factors are believed to be involved. Management of the disease has improved in recent years due to advances of pharmacologic treatment options. The prognosis of patients with juvenile idiopathic arthritis is better.

Clinical

Chronic joint inflammation must be present for at least 6 weeks in the same joint before the diagnosis of juvenile idiopathic arthritis be made. Disease onset is insidious or sudden and it is characterized by morning stiffness and arthralgia during the day. Usually children with juvenile idiopathic arthritis were absent from school and activities during physical education classes is limited reflecting disease severity. Affecting the lower extremities causing limping in children, so a morning limp that improves during the day can be found [1-3].

Arthritis can be present in many conditions. A preceding illness must bring into question the possibility of infectious trigger for post infectious arthritis. Reactive arthritis should be called into question in any child with gastroenteritis and arthritis of large joints of the lower extremities. Lyme disease caused by *Borrelia burgdorferi*, is a major health problem in endemic areas. Arthritis is a late manifestation of the disease. So a history of travel to endemic areas exposed to ticks raises the possibility of Lyme disease. If the patient complains of severe joint pain, diagnostic alternatives include acute rheumatic fever, acute lymphocytic leukemia, septic arthritis and osteomyelitis [4,5]. Gastrointestinal symptoms, microcytic anemia, and elevated inflammatory markers raise the possibility of inflammatory bowel disease. Weight loss in the absence of diarrhea may be observed in patients with active juvenile idiopathic arthritis. This sign can also be seen in patients with acute lymphocytic leukemia and in patients with inflammatory bowel disease. Differential diagnoses include systemic lupus erythematosus. Pericarditis with orthopnea can be observed both in juvenile idiopathic arthritis and systemic lupus erythematosus [6-8].

Classification of Juvenile Idiopathic Arthritis

Systemic Arthritis

Definition: Arthritis in one or more joints with or preceded by fever of at least 2 weeks' duration that is documented to be daily for at least 3 days [9-12].

Inclusion criteria	Exclusion criteria
1. Evanescent erythematous rash 2. Generalized lymph node enlargement 3. Hepatosplenomegaly 4. Serositis	1. Psoriasis or a history of psoriasis in the patient or first-degree relative 2. Arthritis in an HLA-B27 positive male beginning after the 6 th birthday 3. Ankylosing spondylitis, enthesitis related arthritis, sacroiliitis with inflammatory bowel disease, Reiter's syndrome, or acute anterior uveitis, or a history of one of these disorders in a first-degree relative
Signs and symptoms	4. The presence of IgM rheumatoid factor on at least 2 occasions at least 3 months apart
✓ Arthralgia ✓ Myalgia ✓ Chest pain and shortness of breath are signs of pericarditis or pleuritis ✓ Muscle tenderness	

Oligoarthritis

Definition: Arthritis affecting one to 4 joints during the first 6 months of disease [9,13].

Inclusion criteria	Exclusion criteria
Persistent oligoarthritis: affecting not more than 4 joints throughout the disease course. Extended oligoarthritis: affecting a total of more than 4 joints after the first 6 months of disease.	1. Psoriasis or a history of psoriasis in the patient or first-degree relative 2. Arthritis in an HLA-B27 positive male beginning after the 6 th birthday 3. Ankylosing spondylitis, enthesitis related arthritis, sacroiliitis with inflammatory bowel disease, Reiter's syndrome, or acute anterior uveitis, or a history of one of these disorders in a first-degree relative
Signs and symptoms	4. The presence of IgM rheumatoid factor on at least 2 occasions at least 3 months apart 5. The presence of systemic JIA in the patient
✓ Larger joints such as the knees, ankles, wrists are affected ✓ Limp ✓ Extensor muscle atrophy ✓ Flexion contractures in the knees and the wrists ✓ Anterior uveitis	

Polyarthritis

Definition: Arthritis affecting 5 or more joints during the first 6 months of disease [9,14,15].

Inclusion criteria	Exclusion criteria
Rheumatoid factor negative: a test for RF is negative.	1. Psoriasis or a history of psoriasis in the patient or first-degree relative 2. Arthritis in an HLA-B27 positive male beginning after the 6 th birthday 3. Ankylosing spondylitis, enthesitis related arthritis, sacroiliitis with inflammatory bowel disease, Reiter's syndrome, or acute anterior uveitis, or a history of one of these disorders in a first-degree relative
Signs and symptoms	4. The presence of IgM rheumatoid factor on at least 2 occasions at least 3 months apart 5. The presence of systemic JIA in the patient
✓ Both large and small joints can be affected, with symmetrical distribution ✓ Fever ✓ Severe limitations in motion, muscle weakness, decreased physical function	
Rheumatoid factor positive: 2 or more tests for RF at least 3 months apart during the first 6 months of disease are positive.	1. Psoriasis or a history of psoriasis in the patient or first-degree relative 2. Arthritis in an HLA-B27 positive male beginning after the 6 th birthday 3. Ankylosing spondylitis, enthesitis related arthritis, sacroiliitis with inflammatory bowel disease, Reiter's syndrome, or acute anterior uveitis, or a history of one of these disorders in a first-degree relative
Signs and symptoms	4. The presence of systemic JIA in the patient
✓ Both large and small joints can be affected, with symmetrical distribution ✓ Fever ✓ Severe limitations in motion, muscle weakness, decreased physical function ✓ Rheumatoid nodules can be found	

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Psoriatic Arthritis

Definition: Arthritis and psoriasis, or arthritis and at least 2 of inclusion criteria [9,16].

Inclusion criteria	Exclusion criteria
1. 1. Dactylitis 2. 2. Nail pitting or onycholysis 3. 3. Psoriasis in a first-degree relative	1. Arthritis in an HLA-B27 positive male beginning after the 6th birthday 2. Ankylosing spondylitis, enthesitis related arthritis, sacroiliitis with inflammatory bowel disease, Reiter's syndrome, or acute anterior uveitis, or a history of one of these disorders in a first-degree relative 3. The presence of IgM rheumatoid factor on at least 2 occasions at least 3 months apart 4. The presence of systemic JIA in the patient
Signs and symptoms	
✓ Monoarticular arthritis ✓ Tenosynovitis ✓ Sacroiliitis ✓ Disordered bone growth with resultant shortening	

Enthesitis Related Arthritis

Definition: Arthritis and enthesitis, or arthritis or enthesitis with at least 2 of inclusion criteria [9,15,17].

Inclusion criteria	Exclusion criteria
1. The presence of or a history of sacroiliac joint tenderness and/or inflammatory lumbosacral pain The presence of HLA B-27 antigen 2. Onset of arthritis in a male over 6 years of age 3. Acute anterior uveitis 4. History of ankylosing spondylitis, enthesitis related arthritis, sacroiliitis with inflammatory bowel disease, Reiter's syndrome, or acute anterior uveitis in a first-degree relative	1. Psoriasis or a history of psoriasis in the patient or first-degree relative 2. The presence of IgM rheumatoid factor on at least 2 occasions at least 3 months apart 3. The presence of systemic JIA in the patient
Signs and symptoms	
✓ Pain and tenderness at the enthesis ✓ Swelling	

Undifferentiated Arthritis

Definition: Arthritis that fulfills criteria in no category or in 2 or more of the above categories [9,18].

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