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AUTOIMMUNE DISEASE OF CONNECTIVE TISSUE IN CHILDREN - JUVENILE RHEUMATOID ARTHRITIS

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Annotation. Juvenile rheumatoid arthritis is a diffuse connective tissue disease that erosive-destructive joints with autoimmune processes damage, damage to eyes and internal organs in children up to 16 years old occurs. JIA is one of the main problems of rheumatology today, with a prevalence of 0.05-0.16% and a severe, rapidly progressive course. characterized by early diagnosis of this disease is very problematic.

Keywords: joint, inflammation, autoimmune, arthritis, fever, skin damage, rheumatoid factor.

Introduction

Like adults, children can develop arthritis, a condition that causes inflammation of the joints. The most common type of chronic, or long-lasting, arthritis that affects children is called juvenile idiopathic arthritis (JIA). JIA is a broad term that includes several different diseases. Symptoms can vary depending upon the type of JIA and can include joint pain, swelling, warmth, stiffness, and loss of motion. JIA may last a limited time, such as a few months or years, but in some cases it is a lifelong disease that requires treatment into adulthood.

JIA begins in children and adolescents before the 16th birthday. Most forms of JIA are more frequent in girls, but enthesitis-related JIA (described below) is more common in boys. Systemic JIA (described below) affects boys and girls equally. Children of all races and ethnic backgrounds can get JIA. It is very rare for more than one member of a family to have JIA, but children with a family member with chronic inflammatory arthritis, including JIA, are at a slightly increased risk of developing it. Some children with JIA have family members with other autoimmune conditions like psoriasis, inflammatory bowel disease, autoimmune thyroid disease, celiac disease, type I diabetes, and other disorders.

There are multiple types of JIA, each with distinct features. Generally, they all share arthritic symptoms of joint pain, swelling, warmth, and stiffness that last at least 6 weeks.

The types are:

Oligoarticular juvenile idiopathic arthritis. This is the most common form of JIA in North America and the mildest form, affecting four or fewer joints. It is considered persistent if symptoms continue for 6 months or longer, and extended if five or more joints become involved after 6 months of illness. Commonly affected joints are knees or ankles. A form of eye inflammation called chronic (long-lasting) uveitis can develop in children with this form of JIA, especially girls who develop this form of JIA at a young age (6 years of age or less) and have a positive autoantibody called anti-nuclear antibody. Due to the risk of uveitis in children with oligoarticular JIA, patients need to have an eye exam with an ophthalmologist regularly. About half of children in North America with JIA have this type.

Polyarticular juvenile idiopathic arthritis–rheumatoid factor negative. This is the second most common type, affecting five or more joints in the first 6 months. Tests for rheumatoid factor are negative. The rheumatoid factor blood test checks for autoimmune disease, especially rheumatoid arthritis, which is an adult form of arthritis. Some children with this type develop chronic uveitis, especially girls who develop polyarticular JIA at a young age and have a positive anti-nuclear antibody.

Polyarticular juvenile idiopathic arthritis–rheumatoid factor positive. A child with this type has arthritis in five or more joints during the first 6 months. Tests for rheumatoid factor are positive. It tends to occur in preteen and teenage

girls, and it appears to be essentially the same as adults with rheumatoid arthritis who have certain autoantibodies called rheumatoid factor and anti-citrullinated protein antibodies.

Enthesitis-related juvenile idiopathic arthritis. This form of JIA involves both arthritis and enthesitis. Enthesitis happens when inflammation occurs where a ligament or tendon attaches to a bone. The most common locations for enthesitis are the knees, heels, and bottoms of the feet. Arthritis is usually in the hips, knees, ankles, and feet, but the sacroiliac joints (at the base of the back) and spinal joints can also become inflamed. Some children get episodes of acute anterior uveitis, a sudden onset of inflammation of the front of the eye. Unlike most other forms of JIA, enthesitis-related JIA is more common in boys.

Psoriatic juvenile idiopathic arthritis. Children with this type may have psoriasis, a skin condition, as well as inflammation of the joints. The skin condition usually appears first, but sometimes painful, stiff joints are the first sign, with the skin disease occurring years later. Pitted fingernails and dactylitis (swollen fingers or toes) are also signs of the disease.

Systemic juvenile idiopathic arthritis. Systemic means the disease can affect the whole body, not just a specific organ or joint. Systemic JIA usually starts with fever and rash that come and go over the span of at least 2 weeks. In many cases, the joints become inflamed, but sometimes not until long after the fever goes away, and sometimes not at all if treatment is started quickly. In severe forms, inflammation can develop in and around organs, such as the spleen, lymph nodes, liver, and linings of the heart and lungs. Systemic JIA affects boys and girls equally.

Undifferentiated arthritis. This category includes children who have symptoms that do not fit into any of the other types or that fit into more than one type.

Symptoms of Juvenile Idiopathic Arthritis (JIA)

Symptoms of JIA vary depending on the type, but all forms share persistent joint pain, swelling, warmth, and stiffness that are typically worse in the morning and after a nap or prolonged sitting. The pain may limit movement of the affected joint, although many children, especially younger ones, will not complain of pain. One of the earliest signs may be limping in the morning due to disease in one or both legs. The symptoms of JIA may go through cycles, flaring for a few weeks or months followed by periods when they go into remission. Some children have just one or two flares and never have symptoms again, while others have many flares or symptoms that never fully go away. Besides joint problems, the inflammation associated with JIA can cause other symptoms, such as:

Eye inflammation. Uveitis (inflammation of the front and middle parts of the eye) often occurs in children with JIA. It usually starts within a few years after the JIA diagnosis, but in a small percentage of children, it appears before the joint symptoms or many years afterward. The type of JIA a child has may cause the development of different types of uveitis. Children with:

Oligoarticular JIA, especially when it begins at an early age, can have chronic (long-lasting) uveitis that has mild or no symptoms. Children with polyarticular JIA without rheumatoid factor, or with psoriatic JIA are also at risk.

Enthesitis-related JIA and some children with psoriatic JIA can have episodes of acute anterior uveitis, which has a sudden onset and causes eye pain, eye redness, and sensitivity to light.

If left untreated, uveitis can lead to eye problems such as cataracts, glaucoma, and vision loss, so it is important for children with JIA to have frequent eye exams with an ophthalmologist.

Skin changes. Depending on the type of JIA a child has, he or she may develop skin changes. Children with:

Systemic JIA who have fevers can get a light red or pink rash that comes and goes.

Psoriatic JIA can develop scaly red patches of skin. Psoriatic JIA can also cause pitted nails and dactylitis (swollen fingers or toes).

Polyarticular JIA with rheumatoid factor can get small bumps or nodules on parts of the body that receive pressure, such as from sitting.

Fever. Patients with systemic JIA typically have daily fevers when the disease begins or flares. The fever usually appears in the evening, and the rash may move from one part of the body to another, usually happening with the fever. Patients with other types of JIA do not generally develop fevers.

Growth problems. Inflammation in children with any type of JIA can lead to growth problems. Depending on the severity of the disease and the joints involved, bones near inflamed joints may grow too quickly or too slowly. This can cause one leg or arm to be longer than the other, or can result in a small or misshapen chin. Overall growth also may be slowed if the disease is severe. Growth normally improves when inflammation is well-controlled through treatment.

In conclusion, uvenile rheumatoid arthritis cannot be prevented or avoided. Certain lifestyle changes can lessen your child's discomfort. This includes exercise (walking, biking, and swimming). Warm up before exercising. A physical therapist can offer your child a plan for home exercises.

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