Osteoarthritis in Children

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Symptoms of Osteoarthritis in Children

Although OA isn't prevalent in children, it also isn't impossible to contract before middle age. It may be true that arthritis in general (and osteoarthritis in particular) is a disease that typically comes later in life, but some events, inherited conditions, and physical abnormalities can start in childhood and trigger OA symptoms well before it normally occurs. In other cases, serious illness could be masquerading as OA, which makes deeper investigation and swift diagnosis even more important.

Primary OA vs Early-Onset OA

Osteoarthritis that occurs with regular wear and tear – not triggered by an underlying cause – is known as "primary" OA. Essentially, this means that OA has developed over time rather than from a trauma or other condition, and it rarely affects people under the age of 40.

Early-onset osteoarthritis is somewhat different. It bears many of the same markers as the "primary" type (such as stiffness and less range of motion), but it most often involves a deep-seated problem in the bones or joints that becomes OA. This is considered "secondary" OA, and it's the type that's seen in children. In some cases, the trouble stems from a traumatic event, but in most cases, the problem is congenital (present since birth).

Causes of Early-Onset OA and its Symptoms

Many, if not most, cases of osteoarthritis in childhood involve the hips. But wherever it hits first, damage tends to progress into arthritis rather than attack the joints right from the start. In many circumstances, the blood flow to the bone is limited or cut off, which eventually kills the bone or tissue (avascular necrosis) and triggers the onset of arthritis.

- **Congenital hip dislocations**. Some children are born with a dislocated hip, which can cause severe problems from a very young age. A major problem with congenital hip problems is that it can take some time to spot the issue, but if the problem can be diagnosed and corrected before age 6, it very likely won't lead to osteoarthritis.

- **Legg-Calve-Perthes Disease**. This condition of the hip was once considered a form of childhood arthritis, but it is more accurately described as a necrosis – that is, an area of dead bone. Legg-Calve-Perthes is a congenital disease that prevents blood from reaching the hip, weakening the bone and causing a noticeable limp. It becomes evident between the ages of 2 and 12, and if left untreated, this condition will develop into arthritis.
- **Physical trauma**. High impact, physically strenuous exercise can cause stress fractures in any athlete; when these small bone splits occur in children, the bone growth plate (known as the epiphysis) can be damaged. A fragmented epiphysis can lead to premature OA.
- **Genetic mutations**. Deficiencies in cartilage, abnormal development of the bone growth plate, and other

barriers to normal bone and tissue growth can be inherited through the genes. Dwarfism, hypermobility, and dislocated hips are examples of genetic mutations that can lead to early-onset OA. Unfortunately, it's not easy to find the specific genes that are to blame, and treating the problems can be just as difficult.

There are several other lesser-known diseases that can lead to avascular necrosis, and in turn, osteoarthritis in adolescence. On the other hand, there are a number of conditions that may seem like arthritis or OA precursors at first, but are actually different sorts of conditions that require different treatment plans.

Conditions Resembling OA

Some invasive conditions can affect the joints as well as the muscles, organs, and other tissues of the body, which can make diagnosis difficult. Since OA is quite rare in children, your doctor may want to investigate further by checking for chronic conditions with similar symptoms, like:

- **Juvenile arthritis.** This is a broad term for the types of arthritis that strike people before and during adolescence. It can affect a few joints (pauciarticular disease), more than five joints (polyarticular disease), or the whole body (systemic disease). Inflammation comes in different degrees depending on the subset, and fatigue and anemia commonly accompany the pain and swelling.

- **Lupus.** A surprisingly common autoimmune disease, lupus can bring symptoms that can mimic the pain of arthritis. Since the symptoms are widespread, the pain can travel to a number of joint areas, and the stiffness and swelling can be immobilizing. It's important to diagnose lupus as early as possible, before the disease has time to attack the organs and central nervous system.
- **Kawasaki's disease.** One of the types of arthritis that occurs most often in children, Kawasaki's disease is an inflammatory condition that can lead to serious cardiac complications. Over 80% of patients are under the age of 5, and since swelling and joint pain on both sides of the body is a fairly common symptom, it can be easy to misdiagnose the disorder. Rash and widespread redness distinguishes Kawasaki's disease from other diseases, in many cases.
- **Scoliosis**. Sometimes a bone is abnormally placed in the spine at birth, which causes the prominent side-to-side curvature of the spine known as congenital scoliosis. In other cases, children suffer from idiopathic scoliosis, which has no distinct cause. Sometimes a limp, uneven gait, or other movement problem can suggest arthritis, but is in fact a defect of the spine rather than inflammation of the joints.

Diagnosing and Treating OA in Children

An accurate diagnosis begins with accurate reporting on the part of the patient. Unfortunately, children may have a hard time communicating their pain, so it's important to help them to voice their discomforts. If you notice something strange with their movements or behaviour – stiffness, limping, achiness, and sleepiness, for example – you should ask them to describe what they're feeling, and then make an appointment with your pediatrician. It's important that you don't dismiss complaints as "growing pains".

A physical assessment is a good first step when a joint issue is suspected. Your physician can carry out a gait analysis, range of motion tests, and a thorough physical exam (with a CT scan or MRI, if needed) to uncover the source of the problem. If arthritis is present, treatment can begin with anti-inflammatories, topical painkillers, physical therapy, or perhaps surgery.

Living with arthritis is physically and emotionally demanding, and the challenges can be overwhelming for a young person. Anger, irritability or refusal to take medications is natural; you'll need to work with your child to help them understand how and why they need to keep their body healthy and protected. Growing up with chronic pain and inflammation is not easy, but an early diagnosis and lots of emotional support can go far to improving your child's quality of life and attitude.