

A Synopsis on Idiopathic Scoliosis

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Introduction

Scoliosis is a condition which causes abnormal spinal curvature. There are three categories of scoliosis namely idiopathic, congenital, and neuromuscular. The most common type is "Idiopathic" which means that the exact cause is unknown.

Although it has no specific age and can develop in toddlers and young children but it often occurs in late childhood or adolescence i.e. during puberty and is 8 times more likely to affect girls than boys.

Description

In idiopathic scoliosis, bones of the spine get slightly twisted or rotated. The spine develops a side-to-side curvature which usually looks like an elongated "C" or "S". It is mild or rarely causes pain.

Idiopathic scoliosis curves vary in size. In many cases, scoliosis curves are small and do not require treatment but if the curves are larger then it may require wearing a brace or undergoing through surgery to restore normal posture.

Idiopathic scoliosis is further classified into 3 categories as Infantile idiopathic scoliosis, Juvenile idiopathic scoliosis, Adolescent idiopathic scoliosis:

Infantile idiopathic scoliosis: less than 1 percent of all pediatric cases are due to this category and it is diagnosed in children between birth and 3 years of age.

Juvenile idiopathic scoliosis: 12 to 20 percent of all pediatric cases are due to this category and it is diagnosed in 3 to 9 years of age.

Adolescent idiopathic scoliosis: Around 80% of all pediatric idiopathic scoliosis cases fall into this category and it is diagnosed in 10 and 18 years old children.

Idiopathic scoliosis, if detected early, can be easy to monitor and can also prevent the condition of requiring surgery.

Causes

Although the exact cause is not identified but Idiopathic Scoliosis indicates a genetic connection as it continues to run in families. So, genetics plays a role in the development of scoliosis. Research is going on and researchers are suspecting genes that are involved in causing the disorder.

Symptoms

Patients with this disorder have no pain or neurologic abnormalities (like weakness). Common Signs of idiopathic scoliosis often become visible when the child growth spurts. Symptoms include:

- Titled or uneven shoulders
- one shoulder blade protruding more than the other
- Prominence on the back or a rib hump
- Asymmetrical waistline
- Difference in hip height

Diagnosis and Treatment

In many cases, Idiopathic scoliosis is diagnosed during a pediatric checkup or school screening where examiner ensures that the neck, head and pelvis of a patient are midline and evaluates body symmetry in shoulders, scapulas, legs, arms, hip and more.

Treatment of AIS relies on number of factors such as the location and severity of curve, age of a child, pattern and progression of curve.

Depending on these factors treatment falls into 3 main categories: observation, bracing, and surgery.

Observation is recommended for Children who are almost full-grown and have mild scoliosis i.e. if they have a spinal curve of less than 25°. In this condition, doctor simply monitors the curve to make sure it does not get worse and may schedule follow-up X-rays until fully grown.

Bracing is recommended for the children who are still growing and have moderate scoliosis i.e. if the spinal curve is between 25° and 45°. Although bracing won't straighten the existing curve of spine but it can partially correct the curve and helps in preventing it from becoming more severe. If the spinal curve gets worse despite the use of brace then, the child will probably need surgery.

In case of severe scoliosis, when a curve is greater than 45°, surgery is recommended as it might affect lung function. The most common surgical procedure called "spinal fusion" uses metal rods, hooks, screws, and wires which significantly straightens the curve while the fusion heals and becomes a single solid bone.

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