



Neuromuscular scoliosis

Cause

This type of scoliosis occurs secondary to problems with nerve or muscle and can therefore affect anyone who has disruption of these tissues.

Diagnosis

To ensure comfort when seated and correction of impairment when walking patients should be seen by a scoliosis specialist. Children with neuromuscular conditions will be monitored from a young age, which is essential to ensure that curvatures do not become too severe. X-rays and MRI scans will be taken to assess the degree of curvature.

Treatment

The treatment of neuromuscular scoliosis will be individualised and needs a multidisciplinary approach by neurologists as well as spinal surgeons. Bracing might provide support for the trunk in the seated position, but is usually ineffective at stopping progression of the curve. Seating modifications such as inserts into wheelchairs may help with positioning of the child, but will not correct the scoliosis.

The fundamental issue that families and their treating doctor need to address is whether preservation of the ability to sit by invasive surgery will maintain or improve the child's quality of life and function. For some children with cognitive or visual/sensory impairment, these decisions are difficult. Parents often struggle with the fact that they are unable to explain to the child why they are having surgery and help them understand the pain accompanying the procedure. These can be difficult issues to address in view of the risks and recovery associated with such surgery. These decisions should be made with great care. Talking with other families who have been through this decision process is very helpful, and SAUK can put families in touch with other members who have first-hand experience of neuromuscular scoliosis. Ultimately, parents will have to make this difficult decision for their child.

- Surgery

Surgical treatment is reserved for patients who have progressive curvature that interferes with function or is likely to cause difficulties in the years ahead. Surgical treatment is otherwise generally done for curves larger than 50 degrees. Often, when pelvic asymmetry or obliquity (tilting) occurs in conjunction with severe curvature, the spine and the pelvis are operated on to correct the pelvic obliquity and spinal imbalance. Success in these patients is measured by the ability to rebalance the spine and to preserve function and comfort and allow meaningful interaction of the patient with his or her environment and family. Although many of these patients are severely disabled, they can generally live fulfilling and productive lives.

Prognosis

Scoliosis is common in neuromuscular condition. It often occurs when a child is young. Prevalence varies with the different types of neuromuscular scoliosis. Because early detection is important, these children need to be checked annually for development of spinal abnormalities. Treatment is generally surgical, and a long fusion is usually necessary. Spinal fusion has proved beneficial for these children.