Research Study Recap

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Introduction

A recent study by Dr. Burt Yaszay, a GSSG member at Rady Children's Hospital, focused on children with congenital scoliosis. Children with congenital scoliosis are born with misshapen bones in the spine (vertebra) which cause the spine to curve abnormally. If the curvature continues to get larger, surgery is needed to stop the curve from worsening and affecting the lungs and other vital organs.

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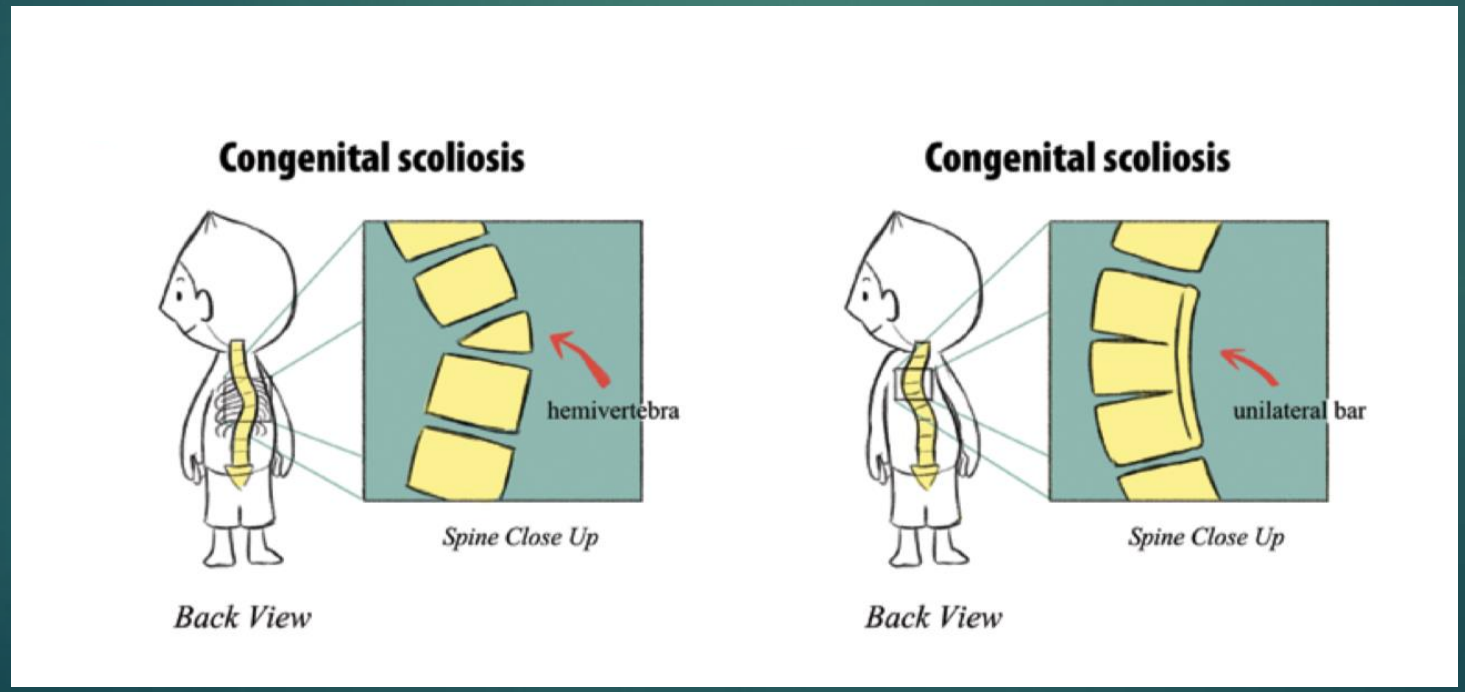
Explanation of Congenital EOS

This type of scoliosis is very difficult to treat, which led to the question: what do these patients look like after several years of treatment? This image shows what congenital scoliosis can look like:



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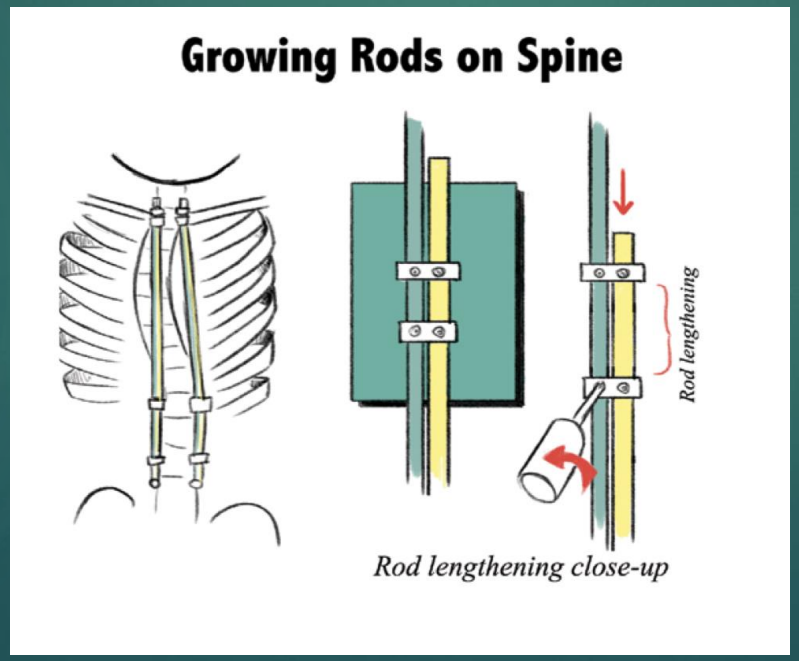
Surgical Treatment

The research study looked at 26 children with congenital scoliosis who were treated with surgery over a period of several years. All of the patients had multiple misshapen vertebra and were first treated with surgery around 5 years of age. Additional spine lengthening surgeries were done for an average of 8 years. This image shows what the spinal implants, called "growing rods," look like:



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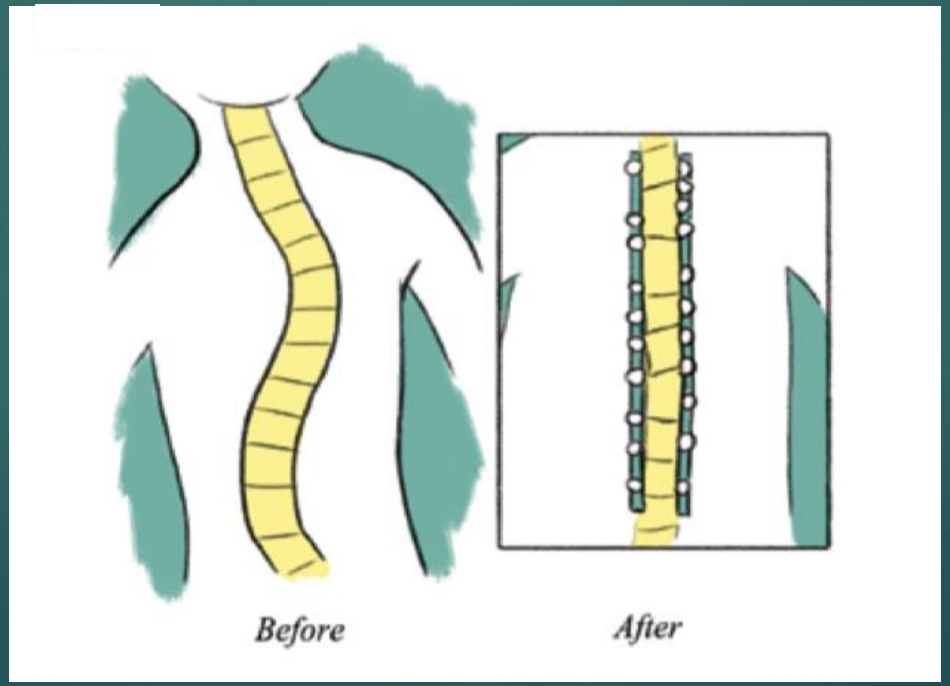
Final Surgery

24 of the 26 patients needed a spinal fusion at the end of their growing rod lengthening surgeries (when the spine stops growing). This image shows what spinal fusion implants look like:



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Treatment Outcomes and Lessons Learned

- The spinal curve was corrected on average by 35%. Scoliosis doctors usually aim for at least 50% curve correction during surgery, so 35% curve correction is considered below average. Doctors also aim for 22 centimeters or more in chest height, but only 6 of 26 patients reached 22 centimeters at the end of treatment.

- This study showed that growing rod treatment in young children with congenital scoliosis resulted in below average curve correction and below average chest height. While this study demonstrates below average results in previously treated patients, our group continues to focus on improving the care of and outcomes of these patients.

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