

## FP69

**Intraoperative tomography to complex surgeries of the spine in children**

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**Introduction:** The spine of children is subject to several diseases that can cause non-traumatic deformity and neurological deficit. The authors analyzed a series of 90 children with severe spinal deformities undergoing surgery with intraoperative image by computed tomography (CT).

**Methods:** From January 2006 to December 2012, children with complex malformations of the spine underwent surgery for decompression of neural elements and stabilization. We analyzed the main causes of deformities, variables related to surgery, use of instrumentation and surgical complications. The surgeries were performed with intraoperative imaging by tomography and navigation system.

**Results:** The main causes were secondary congenital malformations followed by genetic disorders. Surgery was planned using multiplanar reconstruction station and prototyping of malformation. Decompression was performed and tomography was used to follow all the process. After decompression, tomography was used to improve the spine stabilization. Cervical spine was the most affected place and followed by thoracic spine. There were no deaths in the series. The most frequent complications were dehiscence, local infection and pseudoarthrosis. The use of CT during surgery did not increase the time of surgery and decrease the number of reoperations. Children with genetic malformations had higher rates of clinical complications than congenital spine malformations due to associated comorbidities.

**Conclusions:** Despite the complexity of spinal surgeries in children, results demonstrated an improvement or stabilization of neurological function, facilitating the process of physical rehabilitation and improving quality of life. The use of CT during surgery improved the quality and decrease the number of reoperations.