Minimally invasive, robot-assisted iliosacral screw insertion for fusionless fixation in children with neuromuscular scoliosis

Michel Lefranc, MD, PhD,¹ F. François Deroussen, MD,² and Richard Gouron, MD, PhD²

Departments of ¹Neurosurgery and ²Pediatric Orthopedic Surgery, Amiens University Medical Center, Amiens, France

Fusionless surgery coupled with growing rod techniques is increasingly advocated for the treatment of early-onset scoliosis in general and neuromuscular scoliosis in particular. Iliosacral screws have excellent biomechanical characteristics but are hard to place safely. Here, the authors report on robot-assisted iliosacral screw positioning as part of growing rod surgery for the fusionless correction of early-onset scoliosis. The technique is based on a bilateral double sliding rod construct anchored to the pelvis proximally with 6 hooks or sublaminar bands and distally with iliosacral screws placed by the robot.

The video can be found here: https://youtu.be/5HGH_DiD-ck.

KEYWORDS robot; pelvic fixation; early-onset scoliosis; fusionless fixation; iliosacral screw; video

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CORRESPONDENCE Michel Lefranc: Amiens University Medical Center, Amiens, France. lefrancm@me.com.