

Introduction

Congenital dislocation of the spine (CDS) is a rare malformation associated with progressive spinal deformity which leads to significant neurologic, and orthopedic sequelae. Historically, this has been treated with decompression, deformity correction and short-segment fusion through a combined anterior and posterior approach. We review patients with CDS treated with decompression, deformity correction, and a short segment fusion through a posterior only approach.

Methods

A review of all patients with CDS from 2010 until 2015 was performed. Inclusion criteria was single level involvement, sagittal vertebral displacement with anterior translation of the entire

cranial vertebral column on the caudal vertebrae,
underlying spinal malformation at a distinct level,
spinal cord

intact both cranial and caudal to the malformation, deformity correction and fusion through posterior only approach. All patients had minimum 2 years of followup. Demographic, clinical, perioperative data was collected. Advanced imaging was reviewed.

Results

6 patients were identified for inclusion. The mean follow-up after posterior treatment was 4.1 years. Mean age at the time of surgical intervention was 6.4 years. 4 patients had an abnormal preoperative neurologic exam. All had post-operative improvement in neurologic exam and gait. 4 patients had reliable Intra-operative neuromonitoring. At last followup, there were no re-operations, or rod breakages. One patient has reached skeletal maturity. 2 patients had development of deformity in uninstrumented segments, 1 patient exhibits radiographic evidence proximal junctional kyphosis (> 10 degrees).

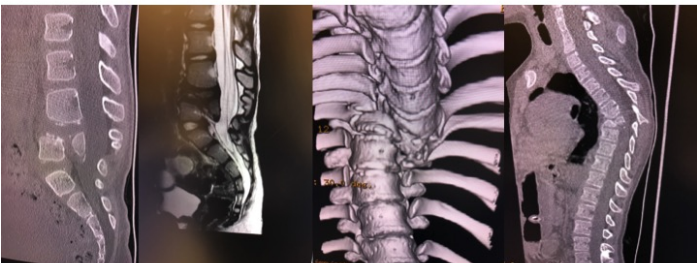
Conclusions

CDS can safely be decompressed, the deformity corrected, and fused through posterior only approach. However, close surveillance is required through skeletal maturity to ensure solid fusion and to monitor for deformity in the uninstrumented segments.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Clinically and radiographically identify CDS, 2) Recognize the clinical sequelae associated with CDS 3) Determine treatment goals and surgical options available to best manage the condition and 4) understand the need for long term surveillance after treatment and what to look for.

Examples of Congenitally Dislocated Spines



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