Abstract #1232.docx

PROSPECTIVE MULTICENTER ASSESSMENT OF EARLY COMPLICATION RATES ASSOCIATED WITH ADULT CERVICAL DEFORMITY (ACD) SURGERY IN 78 PATIENTS

Introduction
Although ACD can have profound impact, few reports have focused on the treatment of these patients. We present early complication rates associated with surgical treatment for ACD based on a prospective multicenter cohort.

Methods
Prospective multicenter database of consecutive operative ACD patients was reviewed for early (≤30 days from surgery) complications. Enrollment required at least one of the following: cervical kyphosis >10˚, cervical scoliosis >10˚, C2-7 SVA >4cm or chin-brown vertical angle >25˚.

Results
78 patients (59% women) underwent surgical treatment for ACD and had a mean age of 60.7 yrs and previous surgery in 52%. Surgical approaches included anterior-only (A, 14%), posterior-only (P, 49%), anterior-posterior (AP, 35%) and posterior-anterior-posterior (PAP, 3%). Mean numbers of fused anterior and posterior vertebral levels were 4.7 and 9.4, respectively. A total of 52 early complications (Figure) were reported, including 26 minor and 26 major (Table) for an overall complication rate of 66.7%. 22 (28.2%) patients had at least one minor complication, and 19 (24.4%) had at least one major complication. Overall, 45 (57.7%) patients had at least one complication. The most common complications included dysphagia (11.5%), deep wound infection (6.4%), new C5 motor deficit (6.4%) and respiratory failure (5.1%). One mortality (1.3%) was reported. Overall early complication rates were significantly different based on approach: A (27.3%), P (68.4%) and AP/PAP (79.3%) (p=0.007).

Discussion
Surgery for ACD is associated with high early complication rates. Among 78 patients treated for ACD and prospectively followed, 52 early (≤30 days of surgery) complications were reported (26 minor, 26 major), including 1 mortality. Overall, 45 (57.7%) patients had at least one complication and 24.4% had at least one major complication. Significantly higher rates of complications were associated with combined and posterior-only approaches compared with anterior-only approaches. These findings may prove useful in treatment planning and patient counseling.

Conclusions
From a prospective adult cervical deformity database, early complications have been described. These findings may prove useful in treatment planning and patient counseling.