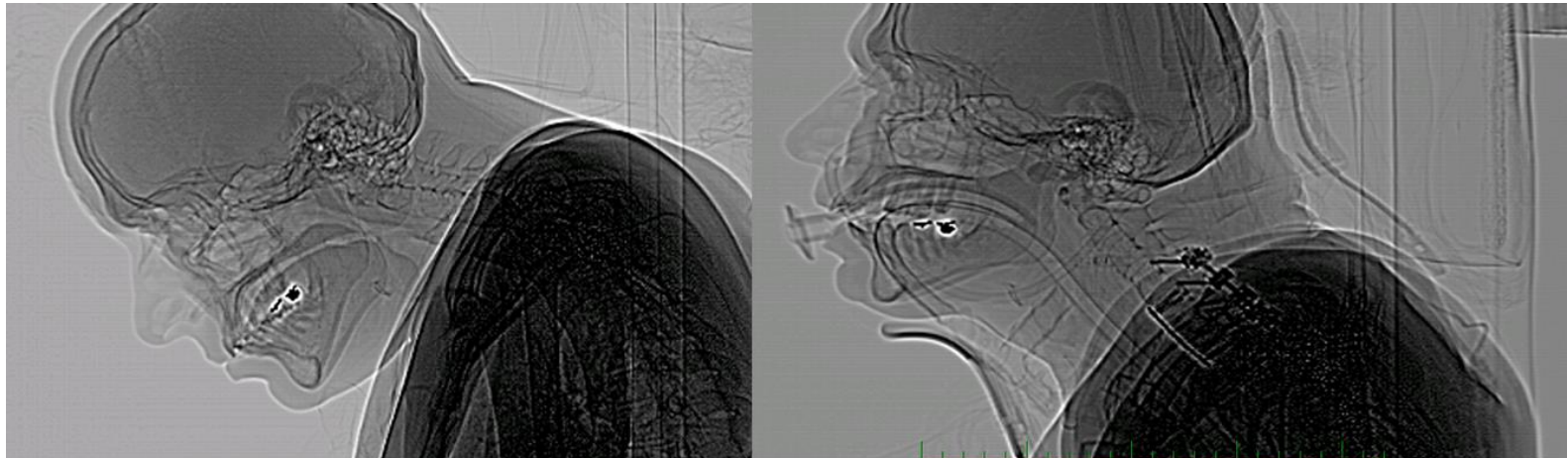


Visual field related quality of life after deformity correction in cases of lower cervical spine trauma of patients with ankylosing spondylitis

Retrospective monocentric study

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Disclosures

I disclose the following financial relationships with commercial entities that produce healthcare related products or services:

- Consultant for: Medtronic, Johnson and Johnson
- Board member of: NSC
- Employee of: KZ
- Grant/Research support from: KZ
- Speaker/teacher for: Baxter, Medtronic, Johnson and Johnson
- Intellectual property rights for: Syntropiq

Introduction & Background

Demonstrating the correlation between degree of correction and visual related life quality measurement scale in the group of patients with lower cervical spine trauma with ankylosing spondylitis (AS).



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Materials and Methods

- Clinical and radiological retrospective analysis was performed in 23 cases of patients with AS, operated for acute subaxial trauma.
- The preferred therapeutic strategy in cases with severe preoperative kyphotic deformities was a 360-degree stabilization and fusion, which was performed in 17 cases.
- The analyzed parameters included clinical and neurological state at admission and follow-up, fusion rate and radiological parameters including segmental kyphosis correction and McGregor's slope (McGS) measurements.
- Visual related life quality was evaluated by simplified Song's measurement scale.

Eur Spine J
DOI 10.1007/s00586-016-4588-z

ORIGINAL ARTICLE

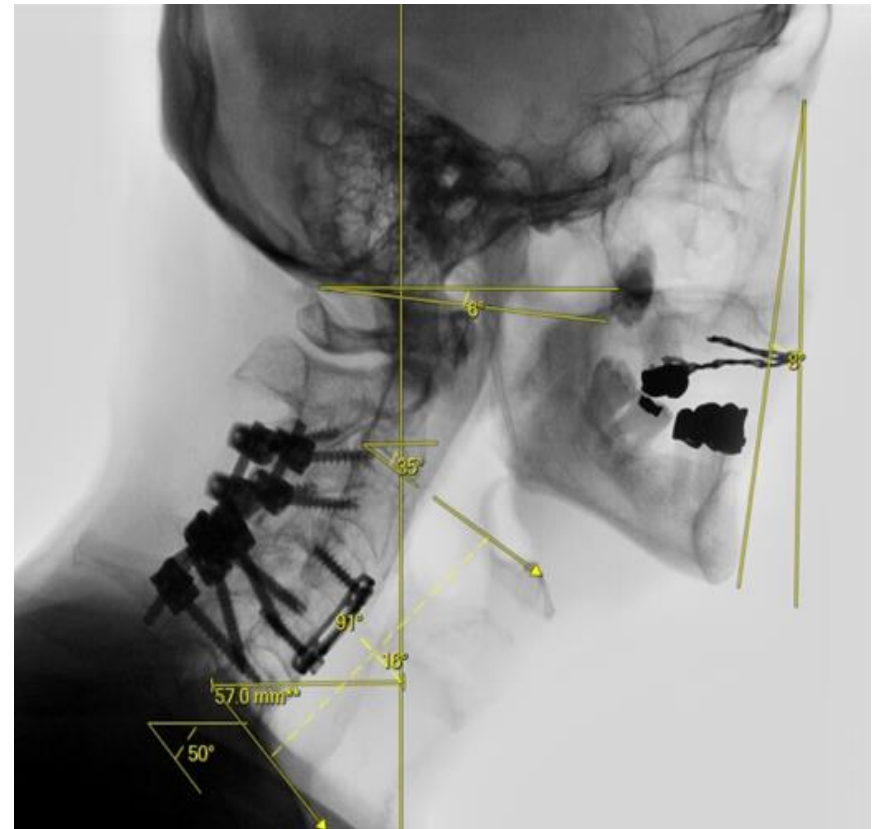
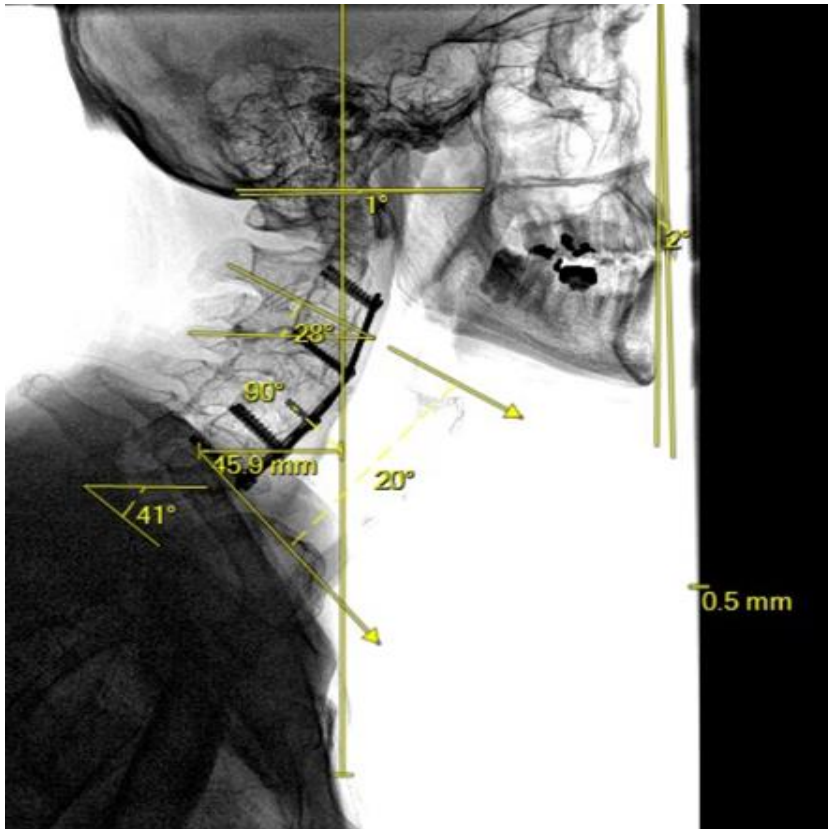
Optimal chin-brow vertical angle for sagittal visual fields in ankylosing spondylitis kyphosis

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Guoying Zhang¹ · Guoquan Zheng¹ · Geng Cui¹ · Xuesong Zhang¹ ·
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Visual field related quality of life after deformity correction in cases of lower cervical spine trauma of patients with ankylosing spondylitis

Materials and Methods



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Results

The average segmental correction was 6 degrees (0-11) in the group of patients treated using solely the anterior approach and 21 degrees (4-45) in the group treated by a 360° approach. The final postoperative McGS in both sets of patients was 8.8° (CBVA 10.2°) with the 4.5° correction in the group of anterior approaches and 19.8° in 360-degree group.

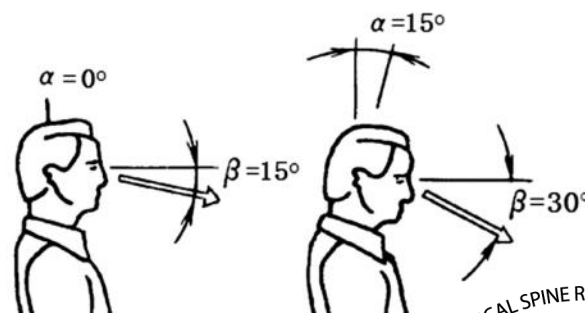
ANTERIOR	preop	postop	correction
McGS	11°(0-26)	6.5°(2-13)	-4.5°
O-C2angle	24.6°(22-28)	20.3°(20-24)	-4.3°
C2 tilt	35.4°(29-44)	26.8 °(20-30)	-8.6°
C2- angle	11°(5-14)	17°(6-22)	+6°
C2-C7 SVA	29.8mm(15-40)	26.2mm(19-38)	-3.6mm
T1 tilt	35.5°(27-41)	37.5°(28-41)	+2°

360°	preop	postop	correction
McGS	29.8°(11-60)	10°(0-26)	-19.8°
O-C2angle	24.6°(20-38)	24.3°(18-36)	-0.3°
C2 tilt	50.1°(33-100)	34°(20-67)	-16.1°
C2- angle	6.8°(-40-31)	21.3°(-14-35)	+14.5°
C2-C7 SVA	55.7mm(24-84)	42mm(20-74)	-13.7mm
T1 tilt	48.4°(27-61)	50,9° (24-72)	+2.5°

Results

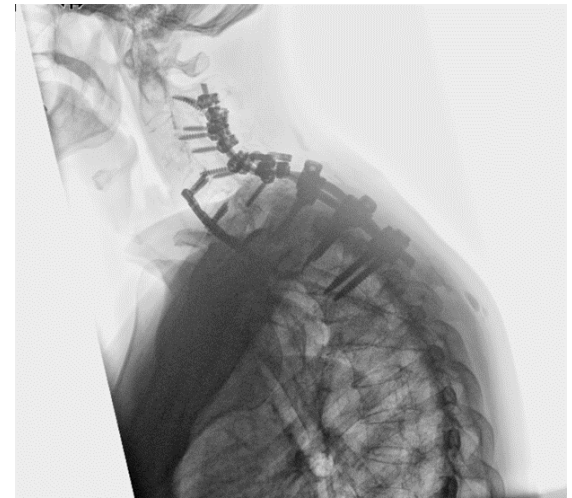
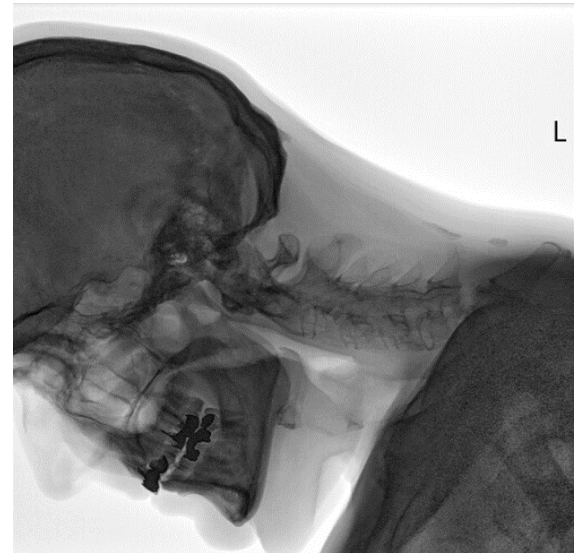
Best overall subjective results as well as results of outdoor and indoor activities were obtained in the group of younger active patients without neurological deterioration (best results outdoor activities for CBVA 0-10°, 10-20° for indoor activities, best overall subjective results CBVA 10-20°). On the other hand, cases of overcorrection were identified in patients with neurological deficits, passive patients and elderly patients (best results for CBVA 10-20° for outdoor activities , 20-30° for indoor activities, best overall subjective results for CBVA 20-30°).

All 3 patients presenting with complete spinal cord lesions died. Of the 9 patients with an incomplete spinal cord lesion, 7 improved by one or two ASIA grades.



Conclusion

In patients with subaxial cervical trauma, it is safe and reliable to concurrently perform final sagittal correction. The degree of kyphotic correction should be strictly individual considering the age, the activity and the neurological deterioration of patient to avoid the risk of overcorrection.



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