

Abstract #1053.doc

CAN CERVICAL PARAMETERS PREDICT PROXIMAL JUNCTION KYPHOSIS IN SCHEUERMANN'S KYPHOSIS?

Introduction/Aim

PJK is a major complication following correction of SK. In order to identify patients at greater risk of PJK, a clear understanding of the influential factors of this phenomenon is essential. This study aims to evaluate the influence of cervical parameters pre and post-operatively in predicting PJK in SK.

Materials and Methods

This is a retrospective review of 35 patients surgically treated for SK. Radiological variables were assessed in order to predict the possibility of PJK. The average age of the patients was 20 (15 - 26). Average follow-up was 7.4 (2–12) years. Radiographic measurements were made preoperatively, 2 months postoperatively, and at final follow-up.

Results

8 patients developed PJK (23%). SVA post-operatively became negative, however at final follow-up it was less negative in PJK than control group (0.6mm vs -1.5mm). T1 slope angle was found to be similar in both groups before surgery (34° vs 33.5°) but, following surgery there was a significant difference between the two groups (40.6° vs 27.3°). In addition there was an increased cervical lordosis following surgery (PJK 12° to 26° vs control 18° to 21°).

Discussion

This study evaluates correlation between pre and postoperative cervical parameters in view of development of PJK in SK. Our study shows that patients who developed PJK had slightly more negative SVA values at final follow-up. There was significant increase of T1 slope angle in PJK patients post-operatively compared to non-PJK patients.

Conclusion

We suggest the measurement of T1 slope angle pre and post-operatively may be used as a tool to identify patients with an increased risk of PJK.