

SUMMARY

THE GOAL OF STUDIES: To identify whether clinical outcomes are correlated with the improvement of pelvic balance after surgical correction of low-grade isthmic spondylolisthesis.

MATERIAL: 103 cases operated of adult low-grade isthmic spondylolisthesis up to 65% slip degree.

METHOD: All patients were operated on by the same surgeon. Clinical and radiological outcomes were assessed at least 1 year after the surgery. Pelvic balance was assessed manually on standing lateral view radiograms. The analyzed parameters included: (1) Pelvic Incidence, (2) Sacral Slope, (3) Pelvic Tilt.

For the means of analysis patients were divided into subgroups according to two main criteria of SDGS (Spinal Deformity Study Group)

1. Radiological status of the pelvis
2. Value of PI in degrees

Clinical outcomes were measured with Oswestry Disability Index and Visual Analogue Scale.

RESULTS

Reduction of pelvic tilt correlated with clinical outcomes in a subgroup of patients with PI between 45 and 60 degrees. This correlation was statistically significant but weak. In other words the greater reduction of pelvic tilt the greater reduction of back pain and greater improvement of quality of life. Intensity of back pain was significantly lower in $45 < PI < 60$ than in $PI > 60$ subgroup.

CONCLUSIONS

Correction of pelvic balance is correlated with reduction of back pain and improvement of quality of life in low-grade isthmic slip with PI values between 45 and 60 degrees. It is weak but statistically significant correlation.