

Oral presentation

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## Is there a relationship between the results of unterberger test and convexity of scoliosis major curve?

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### Objective

The Unterberger stepping test is normally used to identify vestibular dysfunction and not to detect central disorders of balance. However we found a statistically significant difference in a sample of thirty scoliotic patients compared with a healthy control group. Our aim was to study if there is a relationship between direction of rotation during the test performance and convexity of scoliosis major curve.

### Study design

Fifty-nine patients with adolescent idiopathic scoliosis (range: 14–55 degrees Cobb) performed an Unterberger test (fifty steps on place with closed eyes) before physical therapy session. Patients were divided into two groups: single curves, twenty-nine subjects with eleven left or right thoracic curves and thirty patients with double curves.

### Results

There was a statistically significant concordance between the side of the curve and patient displacement after test performance in the single curves group when compared with the double curves, even if not all patients performed in the same way. There was not a statistically significant difference among left and right curve behaviours.

### Conclusion

These results could be explained both with neuromotorial changes primary or secondary to the pathology, and bio-mechanical ones due to vertebral displacements.