

Oral presentation

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Radiculopathy in degenerative lumbar scoliosis: treatment with selective nerve root steroid injections

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Objective

To define the origin of radiculopathy of patients with degenerative lumbar scoliosis and to assess the correlation between percentage of radiculopathy pain relief with selective nerve root injections and lateral canal dimensions.

Methods

Ninety-three consecutive patients (average age sixty-eight years) with degenerative de novo scoliosis (74% lumbar, 26% thoracolumbar; average curve 24 degrees) were retrospectively studied in terms of presenting symptomatology. For those patients with ipsilateral radicular symptoms, plain radiographs and MRI at presentation were reviewed. Radiographic measurements included major and lumbosacral curve Cobb angle. Computerized measurements of MRI included minimum subarticular height and foramen cross-sectional area of the nerve root that was injected. The patient's reported response from the nerve root injections was rated poor, good and excellent (<50%, 50–70%, >70% of relief). Correlation between MRI measurements and response from the steroid injections were done with the Pearson's test.

Results

Eighty-one percent of the patients presented with back pain, 61% with radicular symptoms, 15% with imbalance and 40% with neurogenic claudication. Based on the results from the selective nerve root injections and from

the fifty patients with radicular symptoms, 36% had nerve root symptoms coming from the major curve, 60% from the lumbosacral hemicurve and 4% from both. The affected nerve roots were more frequently the L4 (26%) and L5 nerve roots. Seventy-five percent of the cases had radicular symptoms coming from the concavity of the curve, 15% from the convexity and 20% from both sides. In the cases with ipsilateral radicular symptomatology (n = 41), there was no statistical significant correlation (p > 0.05) between the lateral canal dimensions and the response.

Conclusion

In degenerative scoliotic curves, radicular symptoms come mainly from the concavity of the lumbosacral hemicurve. There is no evidence that the rate of relief from selective nerve root injections correlates with the degree of stenosis noted in the MRI.