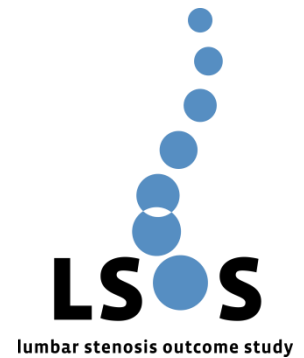


Abstract

Consensus on Radiological Parameters to Describe Lumbar Stenosis



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*National Conference of Radiology, Iasi (RO), October 2016
(Oral Presentation)*

Purpose

To define radiological criteria and parameters that should be used as a minimum standard in a structured radiological report for patients with lumbar spinal stenosis. A Delphi survey among 21 renowned international experts in spine imaging was performed regarding quantitative, semi-quantitative, and qualitative radiological criteria and parameters to characterize lumbar spinal stenosis.

Methods/Materials

Overall, 27 radiological criteria and parameters were identified. There was no formal statistical analysis. Results are presented descriptively to allow the reader to follow and understand the core points of the meeting.

Results

Radiological criteria and parameters were distinguished with regard to the relevant anatomical space (central, lateral, and foraminal stenosis) and according to their quantitative or qualitative nature. It was noted, however, that the choice of modality might have an impact on the reliability of a radiological criterion or parameter (e.g., reliability of measurement of a bony structure on CT versus MR images). The quantitative parameters were not considered to be an essential part of standard clinical reports as a result of a lack of evidence regarding the correlation between the parameter and symptoms. Relation between fluid and cauda equina and the compromise of the central zone are two parameters that should be applied in the majority of patients with central stenosis. Both parameters are easy to understand by physicians who read the reports, and both parameters consider anatomical variation. The nerve root compression in the lateral recess was recommended by experts as the criteria of lateral stenosis. The compromise of the foraminal zone and the foraminal nerve root impingement were selected because they are easy to understand by clinicians, and they consider the individual anatomical variation of patients.

Conclusion

Five core radiological criteria should be used in a radiological report describing lumbar spinal stenosis in a structured radiological report for patients with lumbar spinal stenosis.