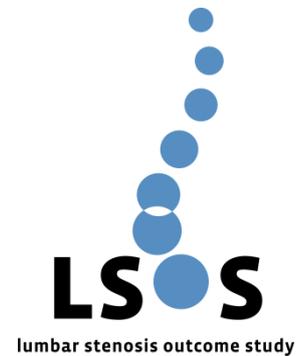


Abstract

Predictive value of morphological criteria for effect of epidural infiltration in lumbar spinal stenosis - A Swiss Prospective Multicenter Cohort Study



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Purpose

Epidural injections of local anesthetics with or without corticosteroids are established in the non-operative treatment of symptomatic lumbar spinal stenosis (LSS). Their therapeutic effect has been well investigated and identified as overall evident, but the inter-individual responses to the injections are widely distributed. We aimed to identify morphological MRI-criteria that predict failure of treatment of symptomatic LSS with epidural injection.

Methods/Materials

The prospective cohort of the Swiss lumbar stenosis outcome study (LSOS) was used to include patients (n=259) with at least one epidural injection within 6 months before baseline and the end of their follow-up (mean: 19.1 months; SD: 11.7 months). The time from initial infiltration to either re-infiltration or surgery was recorded. All patients without re-infiltration or surgery during observation time were recorded as "event free". LSS was classified according to Shizas and on axial MRI based on the most compressing anatomical structure by an independent radiologist into three groups: discal LSS (DC, n=130), ligamentous LSS (LG, n=46) and osseous LSS (OS, n=23). Mixed types were excluded (n=60) for better inter-group distinction. Kaplan Meier curves were used to quantify the time until re-intervention for the three groups.

Results

The OS-group contained significantly more patients with Schizas grade C stenosis ($p=0.03$) compared to the two other groups. The median event free time was 4.2 months (95% CI 3.6 to 5.0 months) for DC, 4.0 months (3.1 to 6.1 months) for LG and 3.6 months (2.9 to 7.0 months) for OS. There was only a trend for earlier failure in osseous LSS, without statistical significance ($p=0.215$).

Conclusion

The leading morphology of LSS (discal, ligamentous, osseous) seems not to influence the duration of action of epidural injections.