| Author Year<br>Country<br>Research Design<br>Score<br>Sample Size | Methods | Outcomes |
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| Cao et al. (2018)<br>China<br>Pre-Post<br>N=50 | **Population:** Mean age=41.8±6.5 yr; Gender: male=35, female=15; Level of injury: T7/T8=5, T8/T9=11, T9/T10=15, T10/T11=19; Severity of injury: Frankel grade A=0, B=14, C=22, D=14, E=0.<br>**Intervention:** The efficacy of posterolateral decompression combined with interbody fusion and internal fixation for individuals with thoracic spinal stenosis was evaluated. Outcome measures were assessed preoperatively and 1-yr postoperatively.<br>**Outcome measures:** Operation time; Intraoperative blood loss; Postoperative complications; Oswestry disability index (ODI); VAS; Frankel grade.<br>**Chronicity:** The mean time course of disease was 5.5±1.4 mo and the mean operative time was 3.3±0.7 hr. | 1. All individuals were operated on successfully. The mean operative time was 3.3±0.7 hr; the mean intraoperative blood loss was 970±110 ml.<br>2. Postoperative complications included cerebrospinal fluid leak in two cases, transient spinal cord dysfunction in two cases and dural laceration in one case.<br>3. A significant decrease in the mean ODI and VAS score was observed postoperatively at one yr follow up (p=0.000, p=0.000).<br>1. A significant improvement in Frankel grade was observed postoperatively (p=0.000). |
| Wilson et al. (2013)<br>Canada<br>Systematic Review<br>AMSTAR=7<br>N=5 studies | **Objective:** To assess the frequency, timing, and predictors of symptom development in individuals with radiographical evidence of spinal cord compression (SCC), spinal canal stenosis (SCS), and/or ossification of posterior longitudinal ligament (OPLL) but no symptoms of myelopathy.<br>**Methods:** Comprehensive literature search of English longitudinal cohort studies of participants aged ≥18 yr with imaging evidence of SCC, SCN, or OPLL, without symptoms of myelopathy and history of tumor, infection, arthritis, or previous SCI. Data analysis was performed by calculating relative risks (RR) and 95% confidence intervals (95%CI).<br>**Databases:** MEDLINE, Cochrane, Google Scholar.<br>**Evidence:** Studies were assessed for quality using AHRQ guidelines (I, II, or III). Levels of evidence were assigned GRADE criteria (insufficient, low, moderate, or high). Clinical recommendations were made using a modified Delphi approach (weak or strong). Statistical significance was defined as p<0.05. | 2. Quality of studies was II (n=1) and III (n=4).<br>3. Overall strength of evidence was moderate.<br>4. Overall strength of recommendations was strong.<br>5. Only three studies (n=355) of the total five (n=832) were included in meta-analysis.<br>6. In SCC or SCS (n=199), myelopathy development within 44 mo (24-144 mo) was 22.6%.<br>7. In SCC or SCS, significant predictors of myelopathy development were presence of symptomatic radiculopathy (RR=3.0, 95%CI=2.0-4.4, p=0.007), prolonged somatosensory-evoked potentials (RR=2.9, 95%CI=1.7-5.1, p=0.007), prolonged motor-evoked potentials (RR=3.2, 95%CI=1.9-5.6, p=0.033), and lack of cervical cord MRI hyperintensity (RR=1.7, 95%CI=1.0-2.7, p=0.0036).<br>8. In OPLL (n=606), myelopathy development within 60-360 mo ranged from 17.0% to 61.5%.<br>9. In a subset of OPLL (n=156), predictors of myelopathy development were lateral deviation (RR=2.1, 95%CI=1.4-3.1), increased cervical range of motion (p=0.03), and canal stenosis >60%.<br>10. The authors made a strong recommendation based on moderate |

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| | | evidence: individuals with SCC/SCS secondary to spondylosis, without evidence of myelopathy, and with clinical or electrophysiological evidence of cervical radicular dysfunction or central conduction deficits may be at higher risk for development myelopathy and should be considered for surgical intervention. |