

Favorable Outcome of Lumbar Disc Herniation Surgery Also in Morbidly Obese Patients

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Introduction: This study aimed to evaluate if increasing grade of obesity is associated with inferior outcome after lumbar disc herniation (LDH) surgery.

Material and Methods: We retrieved data from the Swedish register for spine surgery regarding patients aged 20-64 who 2006–2016 underwent LDH surgery and had pre- and one-year postoperative data. 4156 were normal-weighted, 4063 over-weighted, 1384 had class I obesity, 317 class II obesity and 59 class III obesity (“morbid obesity”). Data included patient satisfaction, improvement in leg-pain (National Rating Scale; NRS; rating 0-10), disability (Oswestry Disability Index; ODI; rating 0-100) and complications.

Results: One-year post-surgery, 80% of normal-weighted, 77% over-weighted and 74% obese patients (class I-III evaluated together) were satisfied ($p < 0.001$) [75%, 71%, 75% in the three obesity groups I-III, respectively ($p = 0.43$)]. In mean, all groups improved by more than the minimal clinical important difference (MCID) in both NRS leg pain (> 3.5) and ODI (> 20). NRS leg pain improved in normal-weighted by 4.8 (95%CI 4.7-4.9), in over-weighted by 4.5 (4.5-4.6) and in obese by 4.3 (4.2-4.4) ($p < 0.001$) [4.4 (4.3-4.6), 3.8 (3.5-4.1) and 4.6 (3.9-5.3) in obese class I-III ($p < 0.001$)]. ODI improved in normal-weighted 30 (30-31), overweighted 29 (28-29) and obese 26 (25-27) ($p < 0.001$) [29 (28-29), 25 (22-27) and 27 (22-32) in obese class I-III patients ($p < 0.01$)]. 3.0% normal-weighted, 3.9% over-weighted and 3.9% obese suffered complications ($p = 0.047$) [3.8%, 4.4%, 3.5% among obese class I-III patients ($p = 0.90$)].

Conclusions: LDH surgery is also in patients with morbid obesity in general associated with favorable outcome and few complications.