

Effectiveness of hallux valgus surgery on patient quality of life: a systematic review and meta-analysis

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Background and purpose ? The quality of life (QoL) of patients with hallux valgus (HV) usually improves postoperatively. Evidence regarding the effect of HV surgery on different domains of patient QoL remains inconclusive. This systematic review and meta-analysis estimates the effect of HV surgery on patient QoL through distinguishing effects on physical domains (comprising physical function and body pain domains) using the EuroQol-5D, short form (SF) health survey-12, and SF-36 QoL scales and a visual analogue scale (VAS) score and mental and social domains using QoL scales. **Patients and methods** ? MEDLINE, EMBASE, Cochrane Library, and Web of Science databases were systematically searched from inception to March 2019 for studies on the effect of HV surgery on patient QoL. A standardized mean difference score was calculated for each specific QoL domain (mental, social, pain, physical, and VAS) using Cohen's d index. The pooled effect size (ES) was estimated using a random-effects model based on the DerSimonian and Laird method. **Results** ? From 12 published studies selected, the estimated pooled ES for QoL was 1.01 (95% confidence interval [CI] 0.52?1.51; I² = 87%) for body pain and 0.43 (CI 0.31?0.55, I² = 35%) for physical function. Regarding the composite mental and social domains of QoL, the pooled ES estimates were 0.24 (CI 0.00?0.47, I² = 80%) and 0.42 (CI 0.21?0.63, I² = 6.4%), respectively. The pooled difference in means for the VAS score was ?4.1 (CI ?4.5 to ?3.6, I² = 90%). **Interpretation** ? Our data showed that HV surgery decreased patients' perceptions regarding pain. Furthermore, the data confirmed that HV surgery increased patients' QoL, particularly concerning physical and social

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