

Streszczenie rozprawy doktorskiej w j. angielskim

This doctoral dissertation is founded upon a series of research publications delving into the intricacies of interbody implant subsidence in the management of degenerative cervical intervertebral disc disease. The thesis centers on an analysis of radiological risk factors associated with subsidence and its implications for treatment outcomes. To this end, an observational study was conducted as part of a comprehensive prospective research endeavor, focusing on patients undergoing treatment for cervical discopathy via the anterior cervical discectomy with fusion (ACDF) technique. Out of an initial pool of 193 individuals, 104 patients meeting the study's criteria were included. The ACDF procedures, spanning one or two levels, entailed the utilization of PEEK (polyetheretherketone) interbody implants, with or without an adjunct titanium coating. Radiological evaluations were conducted preoperatively, postoperatively, and at subsequent intervals of one, six, and twelve months. Concurrent clinical assessments employing the Visual Analogue Scale (VAS) and Neck Disability Index (NDI) scales were undertaken. Radiological risk factors, including implant size, intervertebral space location, and segmental anatomical characteristics, were meticulously evaluated. Furthermore, the influence of sagittal balance parameters within the cervical spine on subsidence incidence was scrutinized. Statistical analyses revealed a correlation between implant-to-space height ratios and subsidence occurrence and severity, with oversized implants demonstrating a higher propensity for subsidence. Notably, disruptions in sagittal balance, as evidenced by the C2-SVA parameter, were associated with heightened subsidence risk. Clinical evaluations underscored the impact of subsidence on cervical spine pain and functional quality, revealing correlations with subsidence severity. Collectively, these findings underscore subsidence as a consequential complication influencing the clinical outcomes of surgical interventions for degenerative cervical intervertebral disc disease. To mitigate subsidence risk, meticulous attention must be paid to aligning the implant appropriately with the anatomical conditions of the treated segment.