PD97 Comparison Of Clinical Outcomes Of Self-Expandable Versus Balloon-Expandable Valves For Transcatheter Aortic Valve Replacement: A Population-Based Cohort Study

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Introduction: Transcatheter aortic valve replacement (TAVR) has become a leading treatment for patients with severe aortic stenosis (AS). Recent studies comparing TAVR outcomes with balloon-expandable valves (BEVs) and self-expandable valves (SEVs) show generally similar results, although BEVs have lower rates of moderate-to-severe aortic regurgitation and pacemaker implantation. This study aimed to compare the clinical outcomes of SEVs and BEVs in Taiwan.
Methods: The Taiwan National Health Insurance Research Database (NHIRD) is a representative claims database capturing 99.9 percent of residents. We identified patients who underwent TAVR with either a SEV or BEV in 2021 using the NHIRD. The outcomes were six-month survival, length of hospital stay (LOS) and intensive care unit (ICU) stay, postoperative complications, and healthcare expenditure. We used inverse probability of treatment weighting (IPTW) based on age, gender, and Charlson Comorbidity Index score to identify the effect of TAVR valve type on LOS and ICU stay, postoperative complications, and healthcare expenditure. Differences between SEVs and BEVs for IPTW-weighted Kaplan-Meier curves of overall survival were measured with the log rank test.
Results: Among the patients identified who underwent TAVR, 366 received a SEV and 132 received a BEV. The mean ages were 82.70 (standard deviation [SD] 8.08) years and 82.25 (SD 7.53) years, respectively. The hazard ratio for six-month mortality rate for SEVs compared with BEVs was 2.78 (95% confidence interval 1.52, 5.09). The six-month mortality rate was also significantly higher for SEVs than for BEVs (13.11% versus 4.55%). For clinical outcomes, the mean total LOS (14.78 [SD 12.19] versus 14.45 [SD 12.96] days), mean ICU stay (5.91 [SD 9.78] versus 6.23 [SD 8.04] days), rate of complications (<3%) and in-hospital healthcare costs (USD43,285 [SD 11,993] versus USD42,920 [SD 13,931]) were similar for both groups. The results were also similar after weighting.
Conclusions: Patients in Taiwan who underwent TAVR with BEVs had better survival outcomes than those who received SEVs, while other clinical and cost outcomes were comparable between the valve types.

PD99 Effectiveness And Safety Of Bioelectrical Stimulation Techniques In Fibromyalgia: A Systematic Review

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Introduction: Fibromyalgia, a musculoskeletal ailment of unknown origin, profoundly affects quality of life. Emerging bioelectrical stimulation techniques, including transcranial magnetic stimulation (TMS), transcranial direct current stimulation (tDCS), and pulsed low-frequency magnetic field stimulation (PEMF), show promise in short-term pain alleviation. This study aimed to rigorously evaluate the effectiveness and safety of these techniques in treating fibromyalgia.
Methods: A systematic review (SR) of available literature on the effectiveness and safety of bioelectrical stimulation techniques was carried out according to the Cochrane Collaboration methodology and PRISMA reporting guideline. Evaluated studies included SRs (with or without meta-analyses) and randomized controlled trials (RCTs) published after the SRs. SRs were appraised with the AMSTAR-2 tool and RCTs were assessed with version two of the Cochrane Collaboration risk-of-bias tool for randomized trials. The findings were synthesized narratively. In the absence of SRs with meta-analyses for specific techniques, we conducted a meta-analysis for each available outcome measure, including pain, fatigue, symptom severity, quality of life, anxiety, and depression.
Results: Seven SRs incorporating 35 RCTs were included. Two SRs evaluated TMS effectiveness, while five focused on tDCS. Additionally, 17 RCTs were included: two on repetitive TMS, six on tDCS, and eight on PEMF (three assessing targeted PEMF). General confidence in the SR results varied, with most having critically low confidence. Three additional RCTs were rated as low risk of bias, seven were rated as unclear risk of bias, and the remaining seven were rated as high risk of bias. A meta-analysis covered additional RCTs on PEMF and assessed pain intensity, symptom severity, general health-related quality of life, and fibromyalgia-related quality of life.
Conclusions: Overall, the results suggest that repetitive TMS, tDCS, and PEMF could improve pain and quality of life in patients with fibromyalgia. It is, however, necessary to conduct high quality studies to demonstrate the clinical relevance of these effects. While the techniques evaluated appear to be safe, mild adverse effects involving the area of stimulation may occur.

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