COMPARATIVE EFFECTIVENESS OF SUPERVISED EXERCISE, MEDICAL THERAPY, AND ENDOVASCULAR OR SURGICAL REvascularizAtion IN PATIENTS WITH INTERMITTENT CLAUDICATION: A META-ANALYSIS

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Background: The optimal treatments to improve functional status and quality of life in patients with intermittent claudication (IC) are unknown. We assessed the comparative effectiveness of supervised exercise, medical therapy, and endovascular or surgical revascularization in patients with IC.

Methods: Two investigators screened abstracts and full-text articles, abstracted data, and performed quality ratings and evidence grading. Random-effects models were used to compute summary estimates of effects. A meta-analysis of direct comparisons was supplemented by a mixed-treatment analysis to incorporate data from placebo comparisons, head-to-head comparisons, and multiple treatment arms.

Results: We identified 31 unique studies that evaluated the comparative effectiveness of treatment modalities in 6411 patients with IC. All modalities were associated with an improved SF-36 physical functioning quality of life (QOL) as compared to usual care, but there was no difference between treatments. As compared to usual care, only exercise training and endovascular revascularization improved maximal walking distance and absolute claudication distance (effect size 1.051; 95% CI, 0.173 to 1.929, p=0.0216 and 1.028; CI: 0.060 to 1.995, p=0.0385, respectively). All-cause mortality was not statistically different between modalities.

Conclusion: Currently available evidence is insufficient to determine treatment superiority for improving QOL and walking parameters in patients with IC.

A. Effect of treatments versus usual care on quality of life in IC patients. B. Effect of treatments versus each other on quality of life in IC patients. C. Effect of treatments versus usual care on walking distance in IC patients. D. Effect of treatments versus each other on walking distance in IC patients.