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Titel des Beitrags: Sensory recovery outcome after digital nerve repair in relation to different reconstructive techniques: meta-analysis and systematic review.

Abstract: Good clinical outcome after digital nerve repair is highly relevant for proper hand function and has a significant socioeconomic impact. However, level of evidence for competing surgical techniques is low. The aim is to summarize and compare the outcomes of digital nerve repair with different methods (end-to-end and end-to-side coaptations, nerve grafts, artificial conduit-, vein-, muscle, and muscle-in-vein reconstructions, and replantations) to provide an aid for choosing an individual technique of nerve reconstruction and to create reference values of standard repair for nonrandomized clinical studies. 87 publications including 2,997 nerve repairs were suitable for a precise evaluation. For digital nerve repairs there was practically no particular technique superior to another. Only end-to-side coaptation had an inferior two-point discrimination in comparison to end-to-end coaptation or nerve grafting. Furthermore, this meta-analysis showed that youth was associated with an improved sensory recovery outcome in patients who underwent digital replantation. For end-to-end coaptations, recent publications had significantly better sensory recovery outcomes than older ones. Given minor differences in outcome, the main criteria in choosing an adequate surgical technique should be gap length and donor site morbidity caused by graft material harvesting.
Our clinical experience was used to provide a decision tree for digital nerve repair.