INTRODUCTION: Vein anastomosis is the most important factor determining the success in the replantation of distal phalanx amputations. The purpose of the study was to show that the delayed venous method provides a higher success rate in distal phalanx replantations and does not require use of specialized techniques.

METHODS: The delayed venous method for vein anastomosis was used for the last 2 years. This surgical procedure includes initial arterial anastomosis, delayed expansion of the vein, and subsequent vein anastomosis. We have chosen to delay for at least one hour the veins repair, in order to allow the veins to expand to a more reasonable diameter for repair.

RESULTS: The delayed method was used in 7 cases. Expansion of veins up to 1 mm or more resulted in a high success rate (71%). In contrast, the success rate for distal phalanx replantation is extremely low in other techniques, because of the difficulty of vein finding and anastomosis.

CONCLUSION: It is very difficult to find the collapsed veins and to perform vein anastomosis immediately after arterial repair. The delayed venous method allows easier anastomosis of the subdermal veins of the distal phalanx. Therefore, it is a useful operative technique for treatment of amputated distal phalanx amputation.

Comparison of Results and Details of Upper Extremity Reconstruction with Free Vs Perforator Flap

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INTRODUCTION: In reconstruction of upper extremity defects there are many options like local, free, island and perforator flaps. Reconstruction with perforator flaps is new trend in plastic surgery. Because of good vascularity, upper extremity is one of the most suitable part of the body for designing well known and also ad hoc perforator flaps. In this study we aimed to compare of reconstruction of upper extremity deformities with free versus perforator flaps.

METHODS: We analyzed the results of 33 patients whom we made reconstruction of upper extremity defects. We performed free flaps for 12 (1W, 11M), perforator flaps for 21 patients (7W, 14M). Mean age was 38 for free flaps, 32 for perforator flaps. Etiologic factors were similar as trauma, gunshot injury, instrument exposition, burn and malignancy.

We evaluated size of defects, types of flaps, type of perforator or recipient vessel, operation time, hospitalization time, complication and results.

RESULTS: The mean defects size was 4, 5x3cm at which were reconstructed with perforator flaps, 8x12cm at which were reconstructed with free flaps. ALT was performed for 5, medial sural for 1, latissimus dorsi for 1, SCIA for 3, gracilis for 1, ulnar perforator for 1 patient. 2 ven, 1 arter anastomoses were applied with radial arter at 9, ulnar at 2, digital arter patient. Radial arter perforator flaps was performed for 3, ulnar for 5 and digital for 3, dorsal metacarpal for 6, lateral arm for 4 patient. Mean operation time was 5 hours at free flaps and 1, hours at perforator flaps. Mean hospitalization time was 7 days for free flaps and 5 days for perforator flaps. Venous kongestion was seen at 60% of perforator flaps at operation room but resolved. Medical lesshes were applied for venous insufficiency at 8 patients. Partial flap loss was seen at 9 perforator flaps. We need more defatting at free flaps. Cosmetic results were obtained by both of methods.

CONCLUSION: Free flaps are used with success during many centuries especially at bone, instrument, tendon exposed wounds. However, perforator flaps are good alternatives, safe and simple if the defect is not too large. The perforator can be based on anatomical described perforators and also, flap can be designed as ad hoc perforator flap like free style free flap. Upper extremity is a good area for these flaps because of good vascularization and arcs between them. But, crush zon must be keep in mind when planning.

As a result, there is no another option except free flap in large defects, but if the defects is less than 4 cm especially at distal part, perforator flaps can be performed with good cosmetic results and time consuming.
Randomized Controlled Trials for Surgical Treatment of Carpal Tunnel Syndrome: A Systematic Review

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INTRODUCTION: Randomized controlled trials (RCTs) are considered the gold standard in evidence-based medicine. We conducted a systematic review to evaluate the quantity, quality, and trends of RCTs that assess surgical treatment of carpal tunnel syndrome (CTS).

METHODS: We identified RCTs comparing two or more surgical interventions for CTS in PubMed, Cochrane, Scopus, Google Scholar, and Clinicaltrials.gov. Two independent reviewers assessed manuscripts for inclusion. RCT characteristics including year, journal, country, funding, study size, methodology, follow-up, and intention-to-treat analysis were collected. For all studies, we calculated the Jadad scale (0–5), a validated instrument for assessing the methodological quality of RCTs. The Kendall rank correlation was used to assess trends of RCTs over time.

RESULTS: Of 2253 identified studies, 58 met full inclusion criteria. They were published between 1985–2015, with a significant increase in the number published over time (p=0.003). The majority were published in Journal of Hand Surgery – European Volume (n=15, 25.9%), Journal of Bone and Joint Surgery (n=9, 15.5%), and Journal of Hand Surgery – American Volume (n=8, 13.8%). Most RCTs were single-center studies (n=54, 93.1%) conducted in the UK (n=13, 22.4%) or the US (n=10, 17.2%), with a mean study size of 80.1±55.5 patients. Funding source was unknown in 62.1% (n=36). Three-quarters (n=44, 75.9%) of RCTs did not define primary outcome measure(s); of those that did, less than half (n=6, 42.9%) specified them before beginning the RTC. <30% (n=17) of RCTs conducted a power analysis. In regards to follow-up, 31.0% (n=18) had complete follow-up, 36.2% (n=21) lost some patients to follow-up, 1.7% (n=1) did not incorporate follow-up in study design, and the remainder were unknown. Only four studies with patients reported lost to follow-up provided an explanation for each patient. 10.3% (n=6) of RCTs conducted intention-to-treat analysis. The mean Jadad score was 2.14±1.26, with no significant improvement over time (p=0.245).

CONCLUSION: We showed a significant increase in the number of RCTs published studying surgical treatment of CTS over time, however a mean Jadad score of 2.14 with no significant change over time suggests a need for improvement in quality. Although RCTs are level one evidence and there are many comparing surgical interventions for CTS, the majority employ flawed methodology. Proper study design is key to avoiding introduction of bias and ensuring the validity of conclusions drawn.

Reference Citations:
1. Jadad AR, Moore RA, Carroll D, et al. Assessing the quality of reports of randomized clinical trials: is blinding necessary? Control Clin Trials. 1996;17:1–12.

Revision Decompression, Collagen Nerve Wrap, and Adipofascial Flap for Recurrent and Persistent Carpal Tunnel Syndrome

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INTRODUCTION: The treatment of recurrent or persistent carpal tunnel syndrome is a rare but challenging problem to hand surgeons.1 Collagen nerve wraps have been used in revision surgery to help prevent the recurrence of scarring.2 Adipofascial flaps have been used to improve nerve gliding and promote neovascularization.3 Both modalities have been used separately with moderate success for revision carpal tunnel surgery. The