Abstract

Introduction:
Improvement in survival and patient outcomes following regionalization of trauma care services has been demonstrated by strong evidence. The implementation of integrated regional trauma care systems has involved changes aimed at combining all services within a region in a coordinated network assuring that patients are treated at appropriate facilities by experienced personnel. This has led to the development of specialized trauma centres within regional trauma systems.

Purpose:
The purpose of the study was to measure i) short-term survival, ii) post-operative complications, and iii) immediate re-intervention rates of digital replantation surgeries following the implementation of a regionalized program aimed at covering the Quebec population.

Methods:
Prospective cohort study including all patients with amputated and/or devascularized digits/extremities in the province, over a 5-year period. All patients were surgically managed by the microsurgeons of the Quebec Replantation Program team.

Results:
From April 2004 to March 2009 four hundred and twelve patients with 785 fingers with suspected vascular compromise were surgically treated. There were 410 amputated and 346 devascularized digits managed surgically. A total of twenty-four major injuries proximal to the wrist were managed in the same period. Approximately half of all injuries were work related. The short-term success, complications and re-intervention rates of reimplanted digits were 81%, 25.4%, 28% respectively, and 93%, 25%, 13% respectively in revascularized digits. High success rates were identified in thumb and in avulsion injury categories. Time to definitive care was decreased following regionalization.

Conclusion:
Immediate outcomes are comparable to the literature and sustained over a 5-year period, with superior outcomes reported in thumb and avulsion injuries. Complication and re-operation rates were similar to other centres of excellence. Regionalization of microsurgical cases is paramount in providing medically optimal care in replantation surgery.

References:

Disclosure/Financial Support
None of the authors has a commercial/financial interest in any of the products, devices, or drugs mentioned in this manuscript.