Simulation Model for Microsurgery Training

Andrew Adams, MD

The traditional model of surgical education has been based on the Halstedian apprenticeship system in which surgical technique was taught by “the orderly exposure to graduated clinical experience in the operating room during several years of residency under the close tutelage of dedicated senior attending surgeons.” However, due to many factors, in recent times there has been a shift to the increased use of simulation training in a skills lab environment. Simulation training has become popular because it facilitates teaching of the requisite material in a “safe” environment, with no time or patient availability limits. However, in the field of microsurgery, the adoption of simulation training has been in a haphazard, non-standardized way, leading to training methods that have not taken advantage of the full potential of simulator use. The major strengths of simulation training are that it is so ideally suited to standardization, reproducibility and objective scientific study.

We are embarking upon a study designed to make use of simulation training to teach microsurgery skills.

With this project we aim to develop a comprehensive, proficiency-based curriculum for the teaching of microvascular anastomosis technique which can be incorporated into plastic and general surgery residency programs. The data obtained from this project will provide insight into how the use of simulation impacts the acquisition of microsurgical skills. We will also be able to obtain valuable information about the transfer of these skills to the clinical setting.