



METADATA

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Abstract

By microsurgery we mean surgery with enlargement of the surgical field. Although enlargement of the surgical field is necessary in many surgical specialties (plastic surgery, ophthalmology, otolaryngology, orthopaedics, neurosurgery), the term microsurgery refers mainly to surgery of small vessels and nerves and refers to reconstructive surgery. The purpose of this textbook is to transfer from theory to practice of microsurgical suturing techniques. The topics covered in the book initially include some introductory elements, the early historical applications of microsurgery, as well as the use of magnifiers and the microscope, special instruments and sutures. A detailed description is given of the training methods for learning microsurgical techniques, which are performed first on synthetic materials, then on non-living biological tissues and finally on living

experimental animals (guinea pigs). Microsurgical sutures are described in detail, including arterial end-to-end anastomosis, venous end-to-end anastomosis, end-to-side suturing, use of venous graft, free flap transfer, end-to-end nerve suturing and nerve suturing with venous graft and nerve conduits. A detailed description of all suturing methods shall be given and a schematic or video demonstration of each of them shall be provided. To complete the training, the preparation of the experimental animals and a description of the anaesthesia administered shall be given. Finally, the clinical applications of microsurgery are described, mainly concerning the coverage of large tissue defects using free flaps, cases of reattachment of amputated limbs, breast reconstruction after mastectomy, treatment of lymphedema and tissue allotransplantation (facial, hand, etc.).

