
hand replantation by microsurgical technique

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Replantation of the amputated hand couldn't be possible without the introduction of microsurgical techniques which enable the specialized surgeons to successfully anastomose small vessels even those less than 2 mm in diameter. Therefore a good knowledge of the anatomy of these vessels and nerves supplying the hand is essential for the microvascular surgeon, especially during preparation of the amputated part and the stump in order to identify the vessels and nerves to be anastomosed. For dissection and anastomoses of those small vessels the microvascular surgeon has to be familiar with the microsurgical instrumentation, and he should have a good experience in dealing with those fine instruments in a microsurgical lab before playing a role in a microvascular surgery. Transportation of the patient and amputated part should be done carefully by using special methods. When the patient arrives at the microsurgical center he should have a complete physical examination together with the routine different investigations. After an initial assessment of the patient's injuries, other factors influencing the outcome of replantation are evaluated in the development of a rational decision about replantation. The replantation candidate is then transferred to the microsurgical operating theater where repair is done in the following order: 1-Bone shortening and fixation. 2-Repair of extensor tendons. 3-Repair of flexor tendons. 4-Repair of arteries. 5-Repair of nerves. 6-Repair of veins. 7-Closure and coverage of the wound. After completing the surgical procedures a strict post operative management together with close observation and monitoring of the microcutaneous circulation are critically essential for the success of the procedure, followed by an effective rehabilitation program to assume a good functional results. Finally, after the tremendous success in replanting the amputated parts in many microsurgical centers, still the majority of the public are unaware of how to keep and transport the amputated parts, and even most of them don't have any idea about the possibility of replanting the amputated parts. That is why it may be necessary for the microsurgical centers to throw the lights on the success of the replantation procedure through the different media, and to give the public a good knowledge about how to care with the amputated part and preserve it till they reach the microvascular center.