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Free tissue transfer in hand surgery – essential step in hand transplantation

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Introduction: The development of microsurgery allowed huge advancements in the reconstructive surgery of the upper limb. The use of free digital transfer started a true revolution for the reconstruction of the mutilated, functionally compromised hand, with multiple amputations. Slowly, surgeons started using free tissue transfers in other reconstructive procedures of the hand, forearm and arm. This way they avoided amputating a limb and they realized quality reconstructions in a single surgical step in cases in which classical methods did not apply. We shouldn't neglect to mention that free tissue transfers, along with hand replantation, represent an important step for microsurgery centers in preparing the hand transplant.
Material and methods: There have been 48 cases of free tissue transfers of the upper limb in the Plastic Surgery Department of the "Bagdasar-Arseni" Emergency Hospital between 2000 and 2010, of which 18 free digital transfers, 11 free tissue transfers of the hand, 15 transfers of the forearm and 4 of the arm.
Results and discussion: Of the total 48 cases we studied, 4 have been total failures and 6 cases presented partial necrosis of the transferred tissue, all of which have been managed with ulterior corrective procedures. We used free tissue transfer in cases where there was no other surgical option and also in cases where other methods applied, but free tissue transfer provided a superior quality solution.
Key words: tissue transplant, upper limb reconstruction, hand transplant

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