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Title

Variants of microsurgical reconstruction of the thumb for children (25 years of experience)

Purpose

Function restoring of the thumb is one of the most important conditions for the normal development of the child. One of the most effective methods of the thumb reconstruction is microsurgical toe to hand transfer. To apply this operation, there must be strict indications. An effective alternative to this method is operation of pollicization and the transposition of other fingers of the hand.

Methods

In the past 25 years, 128 toe-to-hand transfers, 355 pollicizations, 28 finger transpositions have been performed at the our department. As autografts for the thumb reconstruction we used second toe of the foot - in 109 cases; the fifth finger (from congenital cleft foot) - 16 cases; the thumb (also from the cleft foot) - 2 cases; additional great toe with congenital duplication - 1 case.

Results

Six grafts (4.7%) did not survive because of the disturbance of the blood supply. Among them 5 were fifth toes and one was second toe. The analysis of the results showed good and excellent functional and cosmetic results in 76.5% of cases. X-ray studies showed the continued growth of the toe, which was transferred to the hand, we observed both acceleration of growth and its slowing down. I think that this effect should be investigated in the future.

Conclusion

Microsurgical toe-to-hand transfer to the thumb position is the most effective method of treatment, because it provides a strong, moving, sensitive and stable thumb. The method of choice is the pollicization or transposition of other fingers of the hand.