Modified Wrap-around Flap Incisional Method and Observation of Donor Foot Effects

Sir,

To repair degloving injury of thumb, wrap-around flap is an ideal method. By this method, not only the thumb reconstruction looks good, but also the number of toes does not change. At the same time, it is difficult to dissect the nail body by traditional operation, and it is difficult to care and treat the postoperative wound on the foot, which leads to obvious defects such as secondary injury of the graft body and donor foot, and eventually affects the postoperative walking speed and distance of the patients.

In our hospital, from December 2009 to March 2017, 23 patients with thumb defects underwent wrap-around flap transplantation by modified incision – partial removal of the distal phalanx and preservation of the weight-bearing area of the sole. The follow-up of nail nutrition and donor function was carried not for 12 months to 2 years.

The innovative point of modified wrap-around flap incisional method is that it removes the nail body and the end of the first phalanges completely, and it keeps the middle thong of the palm of the toe (Figure 1). What is special about modified wrap-around flap incisional method is that the nail flap is excised with the distal part of the first toe (about 1/2 of the distal part of the toe) without separating the nail from the toe bone. The distal part of the toe bone, which is cut together, is transplanted into the defect area of the thumb. Preservation of fibular vascular nerve bundles in the flap, is more advantageous for the thumb to grasp and recover the sensory function when the peroneal nerve remains in the radial volar side of the thumb after the skin flap transplantation (Figure 2). Postoperatively the patient's nail body and foot supply remain in good condition (Figure 3).

Using the modified wrap-around flap incisional method for thumb reconstruction is safe and feasible, satisfactory, transplanted nail body can be obtained, and most of the complications of the donor feet can be significantly reduced.

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REFERENCES


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