

From July 2010 to July 2014, 24 patients with lower extremity soft tissue defects were collected. The wounds of the lower limbs were debridement, and the wounds of the lower limbs could not be repaired by direct suture and skin grafting. The experimental group (n = 12) was treated with modified retrograde sural neurofasciocutaneous flap, and the control group (n = 12) was treated with traditional retrograde sural neurofasciocutaneous flap.

1. The traditional retrograde sural neurofasciocutaneous flap was cut. The patient was in prone position. The line from the midpoint of popliteal fossa to the midpoint of the line between Achilles tendon and lateral malleolus was the axis of the flap (i.e. the route of sural nerve). Before operation, the lowest muscular septal perforator of peroneal artery (5 cm above the posterior malleolus) was used as the rotation point. The corresponding flap was designed according to the size and shape of the defect area. The sural nerve was separated under the deep fascia. The small saphenous vein and sural nerve were included in the flap. Attention should be paid to prevent the deep fascia from detaching from the subcutaneous tissue. The subdermal vascular network flap was lifted from the pedicle 1.5-2.0 cm below the dermis to form a subcutaneous fascial pedicle containing sural nerve with a width of more than 3 cm. The perforating vessels were carefully found at the rotation point, and the saphenous vein was ligated about 1 cm near the rotation point. The skin was cut off at the far side of the rotation point, the skin between the rotation point and the wound was cut, and the flap was rotated 180 degrees ° To the recipient area, suture. In general, the donor site can not be sutured directly, and the thick skin graft is closed. The flap area was slightly compressed during bandaging.

2. The modified retrograde sural neurofasciocutaneous flap was cut. In the prone position, the line from the midpoint of popliteal fossa to the midpoint of the line between Achilles tendon and lateral malleolus was the axis of the flap (i.e. the route of sural nerve). We lowered the axis to expose the main peroneal artery. The proximal part of the peroneal artery was cut off at the root of the perforating branch, and the distal part of the peroneal artery was dissected to form a lower fulcrum. Dissection was performed until the flap extended to the distal edge of the defect. The subdermal vascular network flap was lifted from the pedicle 1.5-2.0 cm below the dermis to form a subcutaneous fascial pedicle containing sural nerve with a width of more than 3 cm. If the distance between the last perforator root and the actual fulcrum is 2cm, the flap will be extended for another 4cm. Rotate 180 ° Then the flap was sutured to the defect. The donor site was closed with primary suture or full-thickness skin graft.

3. The modified or traditional reverse sural neurofasciocutaneous flap was cut to repair the soft tissue defect of lower limbs. The patients were followed up for 2 years. The survival rate, function and complications of the flap were evaluated. The modified or traditional retrograde sural neurofasciocutaneous flap was used to repair the soft tissue wounds of lower limbs.

(1) According to the operation method, the position of perforator and rotation point of modified and traditional sural neurofasciocutaneous flap were recorded. The distance between the perforator vessels and the tip of the lateral malleolus, the distance between the rotation point of the modified and traditional sural neurofasciocutaneous flap and the tip of the lateral malleolus, and the cutting area of the modified and traditional sural neurofasciocutaneous flap

were recorded.

(2) The survival rate of the flap was recorded. The patients were followed up for 2 years. The primary survival rate, partial necrosis rate and marginal necrosis rate of the flap were recorded.

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