

Muscular branch를 준 후 작은 Cutaneous twig가 광배근 및 삼각근을 뚫고 후방으로 나와서 back의 midline 피부로 분포하는 것으로 되어 있는데, 이 중에서 삼각근을 뚫고 나와서 back의 midline으로 가는 신경을 추적한 결과 2-3개의 피하신경이 삼각근을 통과하여 유리견갑피판에 해당하는 피부로 분포할 수 있는 가능성을 발견 하여 해부학적 접근을 시도한 결과 각 신경은 2-4개의 Fascicle을 갖으며 비교적 충분한 pedicle길이를 갖는 감각신경으로 이를 응용하면 유리견갑피판을 감각화 시킬수 있을 것으로 기대된다. 지적할수 있는 문제점으로는 견갑 피부면의 혈관경(vascular pedicle)이 피부면의 외측(Lateral side)에 위치하는데 반하여 신경의 pedicle은 내측(Medial)방향으로 정반대 방향을 취하고 있어 수여부와의 미세혈관 문합 및 신경봉합시 다소 번거로울수 있다는 점이나 충분한 nerve pedicle을 확보한다면 별 문제 없을것으로 사료된다.

No. 24

유리 전거근 피판의 다양한 임상적 이용

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전거근은 흉곽의 측면을 덮고 있는 넓은 근육으로 1982년 Takayanagi와 Tsukie가 흉배동맥(thoracodorsal artery)을 피판경으로하는 하부 전거근 유리전이를 발표한 이후, 최근들어 두경부와 사지의 연부조직 결손을 재건하는데 전거근 단독 혹은 광배근과 함께 많이 사용되어 왔다.

본 교실에서도 1994년 5월부터 1996년 6월까지 15례의 유리 전거근 피판을 이용하여 다양한 부위의 연부조직 결손을 재건하였고, 기능과 외관상 만족할 만한 결과를 얻었다. 본 교실에서 시행한 피판술은 족부의 연부조직 결손 재건이 7례, 하지 경골부의 복합 골절후 연부조직 결손 재건이 4례, 안면부 재건이 2례, 그리고 전완부와 골반부의 연부조직 결손재건이 각각 1례였으며, 2례에서는 광배근을 포함하여 광범위한 부위의 많은 연부조직 결손을 재건하였고, 다른 2례에서는 늑골 이식을 같이하여 골과 연부조직 결손을 동시에 재건하였다. 수술후 피판의 생존은 100%였으나 1례에서는 피판의 부분괴사와 이식된 피부의 소실이 있었고, 모든 례에서 공여부의 장애는 없었다.

이 전거근 피판은 비교적 일정한 피판경을 갖고, 혈관의 길이가 길고 직경이 굵어 혈관 문합이 쉬우며, 혈관이 전거근의 표재층에 위치하여 혈관 손상없이 거상이 용이하다는 장점들이 있다. 또한 늑골이나 광배근을 함께 전이할 수도 있어 넓은 결손부나 골의 결손도 동시에 해결할 수도 있다. 따라서 작거나 중간 크기의 연부조직 결손을 재건할 때 선택적으로 다양하게 사용하여 좋은 결과를 얻을 수 있어 문헌고찰과 함께 보고하는 바이다.

replace the original tissue of the defect. Each free flap has there own advantages and disadvantages. Surgeon should deeply consider choosing kind of flap in every instance.

Among many kinds of introduced free flaps, scapular free flap is one of the most popularly using modalities in fasciocutaneous defect coverage with minimal donor defect and esier procedure and constant vascular patterns of the donor. Many surgeons who had experience of this flap pointed out deficit of the reliable sensation of the transplanted flap is the main shortcoming of the scapular free flap. If we can subjugate that point, scapular free flap is the most excellent procedure in such a cases as heel pad reconstruction and hand reconstruction which are relatively importhant to have skin with protective sensation.

Author performed anatomical literature review, cadaveric dissection and clinical dissection in five cases. In surgical anatomical aspect, the lower six dorsal rami of the thoracic nerves have medial branches which pierce Longissimus thoracis and Multifidus muscle with small cutaneous twig which pierce Latissimus dorsi and Trapezius muscle. Among that cutaneous twigs, several twigs distribute to the skin of the back from midline to lateral aspect which teritory is identical to scapular free flap.

We performed dissection for discovering that neves, we can get several results of dissection as follows :

- 1) Two to three cutaneous twigs which pierced from the Trapezius muscle over the scapular free flap.
- 2) Each twigs has two to four nerve fascicles with small artery.
- 3) The nerve distributed to the ordinary scapulr free flap and large enough size and pedicle length to neurorrhapy with various recipient site nerves.
- 4) The inconvenience of this procedure is the vascular pedicle and nerve pedicle have opposite directions, vascular pedicle of that comes from latral direction from subscapular vessels, but neve pedicle comes from medial direction from trapezius muscle.

The inconveniences comes from directional differences of pedicles can solve harvest longer neural pedicle and change direction of the nerve pedicle to " U " shape fashion cross the flap and get together to the vascular pedicle. If we can endure these inconveniences, we can add profitable tool to reconstructive microsurgical field. We don't have enough follow-up and evaluation of the nerve function of this procedure, we need continuous research works to application of this procedure

No. 24

The Versatility of Free Serrayus Anterior Muscle Flap

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The serratus anterior muscle is a large located on the lateral aspect of the thorax. After first trasferred as a free flap by Takayanagi and Tsukie in 1982, it has recently been used for reconstruction of the soft tissue defect of head and neck lesions as well as extremities injury. It also has been transferred in combination with latissimus dorsi muscle, bone, and skin in reconstructing extensive compound defects.

Authors were treated with free serratus anterior muscle free flap in 15 cases of skin and soft tissue defect from May 1994 to June 1996, and then the patients were satisfied with functional result and contour correction. The

sites of reconstruction were lower extremities in 11 cases, face in 2 cases, forearm and pelvis in each 1 case. The causes of soft tissue defect were chronic osteomyelitis combined with soft tissue defect in 4 cases, traumatic soft tissue and skin defect in 5 cases, hypertrophic scar contracture 3 cases, tumor 3 cases, and cavernous hemangioma 1 case. We also have transferred combination flaps of latissimus dorsi muscle in 2 cases and rib bone graft in 3 cases. Overall success was 100 percent, with a single flap partial necrosis. No patient noticed any change in upper extremity function. The advantages of free serratus anterior muscle flap are 1) reliability with long, consistent, and large diameter pedicle, 2) easy flap dissection, 3) combined transfer, 4) less donor site morbidity, and 5) less postoperative bulkiness. Accordingly, it was flap of choice for small to moderate sized soft tissue defects in various site reconstruction.

No. 25

A Case Report of "Hypothenar Hammer Syndrome"

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Ulnar artery thrombosis is the most commonly encountered arterial occlusive disorder in the upper extremity. This condition was called "hypothenar hammer syndrome" because of its frequent occurrence among hammer workers.

Patients often are seen initially because of ischemic pain in the ulnar digits. This pain is exaggerated when patients are exposed to cold environment.

We experienced a 15 years old boy, who was suffering from same symptoms without any previous specific traumatic episodes. On the angiography his ulnar artery was totally obstructed from the distal area upon the hamate to the beginning of superficial palmar arch.

Upon the diagnosis of ulnar artery thrombosis, we excised the thrombotic artery and performed end to end anastomosis with autogenous vein graft.

After following-up for a year, his symptoms were improved and the grafted vessel was patent on the post-op angiography. We are assured of the infrequency of this pathology, so willing to report this case.