

## No. 4.

### 경골에 시행한 유리 생 비골 및 피부편 이식

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저자들은 1982년 5월부터 1997년 1월까지 광범위한 경골 결손 및 주위 연부조직 결손을 동반한 46례의 환자에 대하여 유리 생 비골 및 피부편 이식술을 시행하였으며 그 결과를 추적 관찰하였다.

수술시 피부편의 크기, 이식 비골의 길이, 문합 혈관, 단혈 시간 및 총 수술시간 등을 측정하였으며, 수술 후 이식 비골의 유합 시기, 이식 비골의 비후량을 방사선 추적관찰을 통하여 측정하였다. 또한 수술에 따르는 합병증 및 이의 치료를 위한 방법 등을 연구하였다.

2례의 지연유합 및 1례의 불유합을 제외한 43례에서 술 후 평균 3.75개월에 일차적인 이식 비골의 유합을 볼 수 있었다. 44례의 피부편이 생존하였으며 2례의 피부편은 심부 감염 및 정맥의 혈류 부전으로 괴사되었다. 괴사된 피부편은 유리 광배근 이식 및 가자미근 회전 피판술로 재 피복이 가능하였다.

수술에 따른 가장 흔한 합병증은 이식 비골의 골절(15례)이었으며 평균 술 후 9.7개월에 발생하였다. 이식 비골의 골절에 대해서는 석고 붕대 고정이나 내고정 및 해면골 이식술을 시행하여 골유합을 얻을 수 있었다. 이식 비골의 골절을 줄이기 위해서는 유리 생 비골 및 피부편 이식 시, 수여부 비골에 불유합된 골절이 있는 경우, 이의 내고정 및 골 이식술을 통하여 수여부 비골 골절의 유합을 얻는 것이 이식 비골에 가해지는 부하를 줄여 이식 비골의 골절예방에 도움이 되리라 사료된다.

## No. 5.

### 측두두정근막 유리피판과 견갑부근막 유리피판의 임상 및 조직학적 비교

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사지의 다양한 연부조직 결손을 재건하는 데 있어 노출된 건이나 골의 기능을 유지하면서 얇은 피판으로 여러 윤곽부위에 적용이 용이하며, 미용적으로도 술후 공여부 이환을 줄이기 위해 피판 공여부를 반흔이 잘 보이지 않는 곳으로 선택하고 있는데 최근에는 유리 근막피판과 천공지(perforator)들을 이용한 유리 근막 피부피판 등의 이용이 증가되고 있다.

이에 저자들은 측두두정근막 및 견갑부근막 유리피판을 사용하여 사지 연부조직 결손을 재건하였는데, 각 피판의 조직학적 특성과 함께 술후 공여부의 미용적인 결과를 고려한 임상적인 적용을 비교하였다.

두 유리피판에서 모두 노출된 건이나 골을 얇게 피복하여 연부조직 결손을 재건하고 술후 결손부 기능의

femoral artery which supplies the proximal 1/3 of this muscle is a dominant one and this is used for the microscopic anastomosis of muscle or musculocutaneous flap. The minor vascular pedicles which enter the distal 1/3 of this muscle are branches of the superficial femoral artery and it is 0.5mm in diameter, 2cm in length with two venae comitantes. These minor pedicles supplies distal half of the gracilis muscle. This island musculocutaneous flap using distal vascular pedicle can be used to cover the defect of soft tissue around the distal femoral supracondylar area, knee joint and proximal tibial condyle area which cause limitation of motion of knee joint, or in the cases that usual skin graft is impossible. The important operative procedure is as follows; The dissection is carried proximally and distally and the entire gracilis muscle including proximal and distal pedicle is completely dissected. After temporary blocking of the proximal vascular pedicle, the adequate muscle perfusion by the distal pedicle is identified and it is rotated to the recipient site around knee joint. The advantages of this procedure are simple, no need of microscopic vascular anastomoses and no significant functional loss of donor site. Especially in the cases of poor condition of the recipient vessel, this procedure can be used effectively. From 1991 to 1996, we performed 4 cases; complete survival of flap in 3 cases and partial survival of flap with partial necrosis in 1 case.

This procedure is thought to be useful in the small sized soft tissue defect of distal femoral supracondylar area, knee joint and proximal tibial condyle area, especially in the defect of anterior aspect which expected to cause limitation of motion of knee joint due to scar contracture. But the problems of this procedure are the diameter of distal vascular pedicle is small and the location of distal vascular pedicle is not constant. To reduce the failure rate, identify the muscular perfusion of distal vascular pedicle after blocking the proximal pedicle, or strategic deally will be helpful.

#### **No. 4.**

### **Free Vascularized Osteocutaneous Fibular Graft To The Tibia**

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We evaluated the results following 46 cases of free vascularized osteocutaneous fibular graft transfer to the tibial defect combined with skin and soft tissue defect, which were performed from May, 1982 to January 1997.

During the operation, flap size, length of the grafted fibula, anastomosed vessels, ischemic time and total operation time were measured. After the initial operation, time to union of grafted fibula and the amount of hypertrophy of grafted fibula were measured through the serial X-ray follow up. Complications and their treatment methods were evaluated also.

In the 46 consecutive procedures of free vascularized osteocutaneous fibular graft, initial bony union were obtained in the 43 grafted fibulas at average 3.75 months after operation. There were 2 delayed unions and 1 nonunion. 44 cutaneous flaps were survived but 2 cases were necrotized due to deep infection and venous insufficiency. One necrotized flap was treated with latissimus dorsi free flap and the other was treated with soleus muscle rotational flap. Grafted fibulas have been hypertrophied during the follow up periods.

The most common complication was the fracture of grafted fibula (15 cases) and occurred at average 9.7 months after the operation. Fractured fibulas were treated with the cast immobilization or internal fixation and conventional cancellous bone graft. We think that in the cast of presence of nonunited fibula fracture at the recipient site, initial rigid internal fixation and bone graft for that is the one of the method to prevent fracture of grafted fibula.

**Key Words :** Free Vascularized Osteocutaneous Fibular Graft

## **No. 5.**

### **A Histologic and Clinical Study between Temporoparietal Fascia and Scapular Fascia Free Flap**

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Fascia and fasciocutaneous free flaps(using perforators) are best reconstructive methods with aesthetic and functional advantages, particularly for reconstruction of variable soft tissue defects of the extremities.

Although various donor sites have been used for these concerns including temporoparietal fascia, scapular fascia, fascial component of lateral arm and posterior calf fascia.

The authors used temporoparietal and scapular fascia as a free flap for coverage of soft tissue defects and we compare two flap mainly their histologic studies and clinical applications.

In our experience, both fascia provide thin, pliable coverage for exposed bone & tendons and provide good postoperative functional restoration on the recipient area, Histologically temporoparietal fascia flap has more rich blood supply and scapular fascia flap is rich in adipose tissue in their composition.

In donor site morbidity, both flap can bring satisfactory results about the donor sites, but the donor site of the temporoparietal fascia flap sometimes revealed conspicuous linear scar and transient alopecia in short-haired patients and the scapular fascia flap has a tendency to be wider and thicker in obese patients.

After successful application of the both fascia as a free flap in 30 patients(18 temporoparietal, 12 scapular fascia) since 1995; authors recommend using the temporoparietal fascia flap for women, who tend to have more fat and longer hair, and the scapular fascia flap for men, who tend to be lean & shorter hair.