

No. 16.

상완 신경총 손상의 수술적 치료

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저자들은 1988년 1월부터 1994년 2월까지 상완총신경손상으로 고려대학교의료원 정형외과에 내원하여 수술적 치료 후 1년 이상 추시가 가능했던 19명의 환자를 분석하여 다음과 같은 결과를 얻었다.

1. 연령분포는 19세에서 44세로 평균 32.4세였으며 성별분포는 남자 14명 여자 5명이었다.
2. 가장 많은 손상원인은 교통사고였다(12례, 52.6%).
3. 손상형태는 whole arm 형이 가장 많았으며 손상부위별로는 쇄골상부가 15례 쇄골하부가 4례로 쇄골상부병변이 더 많았다.
4. 수술적 치료방법으로는 신경봉합술 신경박리술, 신경이식술, 신경문합술 등의 1차 신경수술방법과 근건이전술, 신경문합술 및 유리근 이전술 등의 2차 신경복원술이었다.
5. 추시기간은 1년부터 4년 6개월로 평균 2년 5개월이었다.
6. 저자들은 19례중 13례에서 만족할만한 결과를 얻었다.

No. 17.

내시경을 이용한 유리 광배근판 전이술

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내시경 수술은 minimally invasive technique을 열망하는 많은 외과의들에 의해 연구 발전되어 왔으나 성형외과 영역에서는 수술 자체의 특성과 특수장비의 요구로 적용이 다소 지연되었다. 성형외과 영역에서의 내시경 수술은 안면부 및 진두부의 주름제거 성형술 등 주로 미용분야에 사용되어 왔으며, 최근 정비의 개발과 수술 수기의 향상으로 근육, 근막, 신경, 혈관 등의 박리가 가능함에 따라 재건분야에도 그 이용 범위가 날로 확대되고 있는 추세이다.

광배근(Latissimus dorsi muscle)은 1970년대 초 유방재건에 이용된 것을 시작으로 흉벽, 두경부 등의 재건에 사용되어 왔고 미세수술에 의한 유리조직 전이술의 발달로 신체 연부조직 결손의 개건을 위한 공여부로도 많이 이용되어 왔다.

본 교실에서는 1994년 12월부터 1995년 7월까지 족부의 연부조직 결손 6례, 하지 연부조직 결손 2례, 총 8례를 대상으로 내시경을 이용한 유리 광배근판 전이술을 시행하였다. 8례 모두 남자였으며 연령별로는 8세부터 62세까지 다양하였다. 저자들은 액와부에 평균 6cm 정도의 작은 절개를 통하여 혈관경을 박리한 후 내시경을 이용하여 광배근판을 채취하는 open and closed technique을 사용하여 최대 15×22cm 넓이의 근육을 채취할 수 있었다. 이 방법은 공여부의 반흔이 현저히 적고, 술후 통증이 적은 장점이 있으며, 특히 어린이나 여성 그리고 비후성 반흔의 경향이 있는 경우에 권장할 만한 방법으로 사료된다.

No. 15.

Flow-Through Flaps for Soft Tissue Coverage with Revascularization of Extremities

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Introduction

Severe traumatic damage in the extremities often creates deep defects with exposure or loss of deep structures and major vascular damages that may result in ischemia or chronic infection of the distal portion. In such cases, without an interpositional vein graft to bridge the vascular gap, one stage reconstruction of both soft tissue coverage of the defects and revascularization of the extremities is a challenge for reconstructive microsurgeons. In 1983, the concept of flow through circulation in the free flaps was suggested by Soular et al for reconstruction of head and neck defects, then various Flow-Through flaps were applied. We would like to present our experiences of simultaneous extremity reconstruction with several flow through free flaps.

Material and methods

Over the past 4 years, 14 patients with soft tissue defects and major vascular damages were treated various flow-through flaps; 2 instep flaps, 2 temporoparietal flaps, 2 radial forearm flaps, 3 lateral arm flaps, 3 venous flaps and 1 adipovenous flap. The affected areas were 7 hands or forearms, 4 fingers and 3 feet or legs. One patient presented with high flow AVM in palm, another patient electric burned wound on his forearm and the remaining 12 patients had crushing wound on their extremities.

Results

One patient with near total amputated finger was reconstructed with small temporoparietal fascial flow-through flap, however the flap was necrosis, we have reconstructed the finger with flow-through island flap.

The remaining 13 flaps survived and the injured major vessels were revascularized.

Conclusion

The various flow-through flaps can be applied in soft tissue reconstruction and revascularization in extremities, the advantages of flow-through flaps are ; the damaged vessels with skin defects can be reconstructed at the same time and enhance chronic wound healing.

No. 16.

Surgical treatment of Brachial plexus injury

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The authors have reviewed 19 patients of brachial plexus injury who treated by operative methods at Department of orthopedic Surgery, Korea University Hospital during their period from January 1988 to February 1994. All of these patients were followed up more than one year and following results were obtained.

1. The age range of patient was from 19 to 44 years (mean age was 32.0 years) and there were 14 male patients and 5 female patients.

2. The most common cause of injury was traffic accidents, which occurred in 12 cases(52.6%).

3. The whole arm type injury was most common(7 of 19 patient) and supraclavicular lesion was more frequent than infraclavicular lesion (15 and 4, each).
4. The operative treatment were primary neural surgeries consist of neuroorrhaphy neurolysis, nerve grafting, and neurotization and secondary reconstructive procedure consist of musculotendinous transfer, free muscle transfer with neurotization,
5. The patient followed up more than one year to four years and six months, average being two years and five months.
6. We have obtained satisfactory results in 13 patients among 19 patients.

No. 18.

Efficacy of FK-506 and Rapamycin in Prolongation of Allograft Rat Limb Survival

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Free vascularized composite tissue transfer is more frequently underwent for reconstruction of complicated tissue defects with the recent advance of microsurgery. But postoperative result was not satisfactory because of donor site morbidity, flap bulkiness and cosmetic problem. So would no longer be a problem if we can obtain the exact donor tissue required for the recipient site as allotransplantation and designing the flap.

Allotransplantation has been resolved with the recent development of immunosuppressive agents, while reconstruction has made great progress with the refinement of microsurgical techniques in the last 20 years.

The final success or failure of the operative procedure in transplantation is so utterly dependent no the availability of strategies that can control the immune system effectively, selectively, safely to allow allotransplantation of a nonvital body part. I used 2 strains of rats, BUF and LEW, for the limb allotransplantation as a composite tissue transfer. The primary goal of this program is to improve results in clinical transplantation by accelerating the transformation of new immunological knowledge into useful medicine. Two of the most promising new immunosuppressive compounds are FK-t06(FK) and rapamycin(RPM). Both drugs are antibiotic macrolide fungal fermentation products that presumably suppress the immune system in ways similar to cyclosporin(CyA).

This study shows that two new immunosuppressive drugs compare the immunosuppressive activity and effectiveness of FK-506 and RPM for prevention of the limb allograft rejection in the rat. Additional experiments investigate the dose, route of administration and histologic findings. These data demonstrates that rapamycin is far more potent and effective than FK-506 when both compounds are administered by the intraperitoneal route, as well as prolonged graft survival significantly in a dose-route dependent manner.

These results lead to the view that vascularized allograft composite tissue transfer can become a reality with the expectation of possible future application in reconstructive surgery of humans.

Key Words : FK-506, Rapamycin, Immunosuppression, Allograft, Rat limb, Microsurgery

No. 19.

Long-Tem Result of The Epiphyseal Transplantation in Distal Forearm

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