

# Plastic and Reconstructive Surgery

## Introduction

Plastic surgical procedures fall into two major subdivisions: reconstructive and cosmetic. In our institution, reconstructive procedures are the main operations. In order to restore a natural appearance and to maintain postoperative function after ablative surgery, we use several methods consisting of microsurgical free tissue transfer, pedicled flap, local flap, skin graft, etc. Among these procedures, microsurgical transfer techniques are frequently used because of advantages such as reliable vascularity, less infection, better postoperative function and wider resection of advanced lesions. Therefore, applications are increasing in various areas of tissue defects and now more than a hundred microsurgical operations, including cases in the National Cancer Center Hospital(NCCH) in Tsukiji, are performed per year.

## Routine Activities

Three plastic surgeons cover reconstructive operations both in the NCCH East in Kashiwa and the NCCH in Tsukiji, and train the residents in the two hospitals. Every week three to four reconstructive operations are performed.

We opened a microsurgical laboratory for research and training programs in 1996.

Type of tissue defects are shown below in relation to several regions.

### 1) Head and Neck Regions

Tissue defects of tongue, oral cavity, mesopharynx, hypopharynx and cervical esophagus, mandibular bone, facial skin and facial nerve etc.

### 2) Orthopedic Regions

Tissue defects of extremities including bone, muscle, nerve, skin, vessels etc. and large tissue defects of the body.

### 3) Breast Regions

Deformity of breast tissue.

- 4) Hepatobiliary and Pancreatic Surgical Regions  
Microvascular reconstruction of the arterial system of the intra-abdominal organs.
- 5) Esophageal and Thoracic Surgical Regions  
Tissue defects of esophagus and chest wall.
- 6) Colorectal Surgical Regions  
Tissue defects of abdominal wall.
- 7) Dermatological Regions  
Tissue defects after ablative surgery of skin cancer.
- 8) Neurosurgical Regions  
Tissue defects of scalp, skull and skull base region.
- 9) Gynecological Regions  
Reconstruction of perineal region.
- 10) Ophthalmological Region.  
Eye-socket reconstruction.
- 11) Urological Region  
Reconstruction of erectile function using free nerve graft.

## New Developments

1. The patients who underwent ablative surgery of the prostate cancer often loose erectile function. To reconstruct the erectile function we have applied the free sural nerve graft in some cases.
2. The palliative reconstruction to increase the quality of remained life was continuously applied in some patients with unresectable tumor.
3. We have established measures to prevent postoperative complications after mandibular reconstruction using free fibular graft.
4. Reconstruction after salvage esophagectomy for recurrent tumors following the definitive chemotherapy and radiotherapy was continued.

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Primary Sites	
Primary Sites	No. of cases both in NCCHE and NCCH
Head and neck regions	
Tongue	3
Hypopharynx	31
Cervical esophagus	10
Mesopharynx	9
Oral floor	13
Gingiva	19
Buccal mucosa	8
Salivary glands	5
Maxillary sinus	8
Retromolar	6
Skull base	0
Others	31
Orthopedic regions	28
Breast regions	0
Hepatobiliary and pancreatic regions	2
Esophageal and thoracic regions	23
Colorectal regions	4
Urological regions	3
Dermatological regions	8
Neurosurgical regions	1
Gynecological regions	1
Thoracic regions	1
<b>Total</b>	<b>233</b>

NCCH, National Cancer Center Hospital;  
NCCHE, National Cancer Center Hospital East.

Reconstructive Methods	
Reconstructive Methods	No. of cases both in NCCHE and NCCH
Free flap	
Rectus abdominis M.C.	57
Jejunal graft	46
Anterolateral thigh	26
Fibula bone	14
Radial forearm	7
Scapular bone	0
Latissimus dorsi M.C.	8
Iliac bone	1
Others	5
Other microsurgical procedures	21
Pedicled flap	
Pectoralis major M.C.	9
Latissimus dorsi M.C.	5
Dertopetroal flap	2
Others	10
Local flap	19
Others procedures	22
Out patients surgery	10
<b>Total</b>	<b>262</b>

M.C., musculocutaneous.