# Head & Neck Surgery, Plastic Surgery and Dental Divisions

## Introduction

The goal of head and neck cancer treatment is to improve the patient's survival while preserving the significant functions including speech, mastication, swallowing, and cosmetic appearance. In order to achieve this goal, we have tried to select the best treatment modality and devise new surgery based on the clinicopathological findings and large database of our head and neck cancer patients.

We have developed and performed original surgical procedures of partial laryngectomy for newly and radiation failed early glottic cancer, partial hypopharyngectomy for early hypopharyngeal cancer and total glossectomy without total laryngectomy for advanced tongue cancer. These therapies can be performed without sacrificing the larynx. Compared with the results of conventional surgery, the wound apparently heals with fewer complications. Patients can resume social activities more easily when they maintain their ability to communicate by speech.

We have recently started a new treatment trial of chemo-radiotherapy for advanced and inoperable head and neck cancer in cooperation with clinical oncologists at the National Cancer Center Hospital East.

## Routine Activities

The head and neck division of NCCH consists of a head and neck surgeon, a plastic surgeon, and a dentist as regular staff. Four head and neck surgeons of NCCHE are also engaged in routine outpatient activities, including regular follow-up care, general and local anesthetic operations, and supportive care of the inpatients. Several major microsurgical reconstructive procedures under general and local anesthetic are still performed at NCCH, but most of the head and neck service has moved to the NCCHE 11 years ago.

In 2003, 168 patients with head and neck tumors underwent surgery under general anesthesia in our division. Thirty-three of these patients were over 75 years old, ranging from 75 to 88. The oldest patient who was operated on microsurgical reconstructive surgery was 78 years old. There were no serious postoperative complications. With the increasing number of high-risk patients, we need to establish a treatment policy for these patients in due course.

We performed neck dissection, total pharyngo-laryngo-esophagectomy with or without micro-surgical reconstructive surgery and various kinds of surgery in cooperation with other divisions. We have operated on 25 patients for other divisions in 2003, and the case load is increasing.

Our outpatient service is available from Monday to Friday, and the total number of newly registered patients exceeded 200 annually. The number of new patients in 2003 was about same as last year (about 330 patients). Endoscopic examinations, cervical echography, and pharyngo-radiography are routinely performed once a week. A weekly clinical head and neck conference is held among the head and neck surgeons, radio-oncologists, and plastic surgeons to discuss challenging cases in NCCHE. A clinico-pathological meeting is held every Friday to clarify and comprehend the oncological behavior of head and neck tumors.

At the NCCH, the dentist, in the head and neck division, provides the roles as a maxillofacial prosthodontist, oral surgeon, and general practitioner. He provides the after-care, improving the quality of life after patient in post-ablative head neck surgery using maxillofacial prostheses. Prosthetic rehabilitation is included in the oral and maxillary cancer treatment. This year, an oral hygiene program was set up in Bone Marrow Transplant ward to reduce or to prevent severe odontogenic infection following bone marrow transplantation, and in our ward to

reduce local infection after reconstructive surgery for oral cancer.

The plastic and reconstructive surgery division plays an important role in restoring patients' natural appearance and maintaining postoperative functions following head and neck surgery and various kinds of operation of other divisions (see the description of the Plastic and Reconstructive Surgery Division of the NCCHE).

## Research Activities

We are taking part in multi-institutional studies related to neck dissection and the standardization of function preservation therapeutic strategy for head and neck carcinoma. Although neck dissection in our field is a very surgical procedure, the standard therapy has not been established until recently. We are currently investigating the neck dissection area and recurrences of oropharyngeal carcinoma. There is currently no established standardized function preservation treatment for head and neck carcinoma that will have an improvement on survival, loco-regional control, and preservation of various functions necessary for life. We conducted a research on the relationship between treatment procedures and the pattern of recurrence/ metastasis of various primary sites of head and neck carcinoma, and came up with the best treatment method with function preservation for each patient.

## Clinical Trials

We report that we were able to perform partial laryngectomy in 2 cases of recurrent glottic carcinoma and partial hypo-pharyngectomy with free jejunum transplantation in other 2 cases of posterial wall and pyriform sinus hypopharyngeal carcinoma. The voice function was preserved in all the cases.

Since 2000, over ten advanced cases of hypo-pharyngeal or laryngeal carcinoma (T3, T4) have been treated with esophageal carcinoma using chemo-radiotherapy (CDDP+5-FU+RT) in cooperation with gastrointestinal oncology division. Total laryngectomy had been the treatment choice in such cases. However, since the hypo-pharyngeal and laryngeal carcinomas respond well to chemo-radiotherapy, the larynx (voice and laryngeal function) was preserved in these cases. Over the period of 30-40 months observation, the patients were able to enjoy improved quality of life. Even if the tumor recurs, salvage surgery is still possible in these patients.

● W. Ohyama ●

Number of Operations

| | 2002 | 2003 |
|---|---|---|
| General anesthesia | 172 | 168 |
| Local anesthesia | 80 | 112 |
| Total | 252 | 280 |
| (major microanastomosis | 14 | 26 |

Number of New Patients Including Secondary Cases or Follow-up Only Cases

| Primary site | No. of patients |
|---|---|
| Tongue | 34 |
| Oral cavity excluding the tongue | 39 |
| Larynx | 31 |
| Nasopharynx | 17 |
| Mesopharynx | 26 |
| Hypopharynx | 26 |
| Nasal cavity & paranasal sinuses | 22 |
| Thyroid gland | 82 |
| Major salivery gland | 36 |
| Primary unknown neck metastasis | 8 |
| Others | 9 |
| Total | 330 |