# Anesthesiology and Intensive Care Unit

## Introduction

Perioperative care for cancer patients with limited vital organ function is a major challenge for anesthesiologists as, in general, anesthesia and surgery may further deteriorate physiological functions. Perioperative impairment of vital organ function has traditionally been defined as surgical stress determined quantitatively by measuring the physiological parameters representing the corresponding organs. Recent evidence suggests that such a stress response to surgery involves not only vital organs but also the neuro-endocrine-immune system and persists for several days after surgery. Thus, the aim of our anesthetic management is to protect patients from surgical stress by blocking the noxious influences of surgical trauma. This is achieved by regarding the anesthetic management as perioperative care.

## Routine Activities

As stated above, our colleagues ( three staff anesthesiologists and two to three residents ) are working as anesthetists and intensive care physicians.

In 2003, we performed 2159 anesthetic procedures. The annual number of patients admitted to the intensive care unit (ICU) amounted to 1065. Our concern in ICU management is not only postoperative cardiorespiratory care but also the critical care of patients who have developed organ failure after medical or surgical cancer treatment. The cumulative number of patients with organ failure treated in the ICU since the establishment of the National Cancer Center Hospital East is 353.

An outpatient clinic system was introduced in 1997 to improve preoperative evaluation of anesthetic risk in surgical patients and to participate in the management of intractable pain. In 2003, we performed analgesic nerve blocks in 4 cases. This system will further improve patient safety and the quality of pain control.

Daily activity starts with ICU rounds and pre-anesthesia case presentation. ICU rounds are also made every evening after the completion of elective surgical procedures. A journal club is held twice a week to maintain up-to-date knowledge of recent advances in anesthesia and critical care medicine.

## New Developments in 2003

Ongoing clinical studies ;

1) Establishment of perioperative management for abdominal surgery patients with severely limited pulmonary function.

2) Establishment of airway and respiratory management for patients with upper airway obstruction.

3) Development of perioperative management for free-tissue transfer surgery patients with head and neck tumor

Future research activities will be directed toward the establishment of new methods of perioperative care in the field of surgical oncology.

● A. Kohchi ●

Number of Patients Managed Under General or Spinal/Epidural Anesthesia

| Year | Total | no.Emergency cases |
|---|---|---|
| 1995 | 1524 | 83 (5.4%) |
| 1996 | 1594 | 62 (3.9%) |
| 1997 | 1624 | 51 (3.1%) |
| 1998 | 1642 | 45 (2.6%) |
| 1999 | 1563 | 49 (3.1%) |
| 2000 | 1742 | 62 (3.6%) |
| 2001 | 1972 | 68 (3.4%) |
| 2002 | 2041 | 82 (4.0%) |
| 2003 | 2159 | 114 (5.3%) |

Number of Patients Admitted to ICU

| Year | No.of Cases | (Cases per month) |
|---|---|---|
| 1995 | 671 | (55.9) |
| 1996 | 704 | (58.7) |
| 1997 | 755 | (62.9) |
| 1998 | 887 | (73.9) |
| 1999 | 959 | (79.9) |
| 2000 | 1027 | (85.6) |
| 2001 | 1127 | (93.9) |
| 2002 | 1042 | (86.8) |
| 2003 | 1065 | (88.8) |

Prognosis of Organ Failure Treated in ICU (1992.7. – 2003.12.)

| Primary malignancy | No. of pts | Discharge* | Death* |
|---|---|---|---|
| *Postoperative Patients* | | | |
| Stomach | 36 | 24 | 12 |
| Pancreas & Biliary tract | 45 | 15 | 30 |
| Colorectal | 31 | 19 | 12 |
| Esophagus | 26 | 12 | 14 |
| Head & Neck | 34 | 24 | 9 |
| Liver | 16 | 7 | 9 |
| Panperitonitis | 7 | 2 | 5 |
| Lung | 27 | 10 | 17 |
| Others | 9 | 5 | 4 |
| Post-chemo-radiotherapy | | | |
| Head & Neck | 20 | 4 | 15 |
| GI tract | 24 | 6 | 18 |
| Lung | 29 | 11 | 18 |
| Others | 49 | 20 | 28 |

*Discharge is defined as discharge from the hospital. Death includes patients who recovered from organ failure but subsequently died from the primary disease during hospitalization.