

Critical Care Medicine

1. Staffs and Students (April, 2009)

Associate Professor	Chieko MITAKA
Assistant Professor	Yasuaki NAKAJIMA (Critical Care Medicine) (2005.7.1~) Kenro KAWADA (Intensive Care Unit) (2007.4.1~) Masahiro ISHIZUKA (Intensive Care Unit) (2009.4.1~2009.9.30) Yoshitoshi KOMAZAKI (Intensive Care Unit) (2009.10.1~)
Hospital Staff	Hirokazu NAGASAKI (Intensive Care Unit) (2008.11.1~) Yutaka MIYAWAKI (Intensive Care Unit) (2009.4.1~)

2. Purpose of Education

Undergraduate education

Lectures: Fourth-year medical students

- 1) Cardiopulmonary resuscitation (Otomo)
- 2) Shock and fluid (Aiboshi)
- 3) Treatment of trauma (Otomo)
- 4) Trauma (Isotani)
- 5) Burn (Kaji)
- 6) Acute toxicosis and renal replacement therapy (Syouko)
- 7) Acute respiratory failure and mechanical ventilation (Mitaka)
- 8) Sepsis and multiple organ dysfunction syndrome (Mitaka)
- 9) Disaster management (Otomo)
- 10) Disaster management simulation (Otomo)
- 11) Infection (Tosaka)
- 12) Examination of critical care medicine

Clinical clerkship III: Fifth-year and Sixth-year medical students

Critical care medicine is a branch of faculty of medicine which deals with monitoring and care of critically ill patients. Main objective of critical care medicine is to provide students opportunity to study diagnosis and treatment of critically ill patients in the intensive care unit (ICU). Students are taught on clinical practice in the ICU. Students take charge of 1-2 patients with attending physician and intensivist. Students check clinical data every morning and evening and make system-oriented presentation at ICU rounds.

Conference: Students are assigned to read recent articles of critical care medicine and make presentations by power point at the conference.

3. Research Subjects

- 1) Treatment and prevention of ischemia/reperfusion injury of lung
- 2) High tidal volume ventilation and remote organ injury
- 3) A selective inhibitor for inducible NO synthase in endotoxic shock
- 4) Blockade of NF- κ B activation in endotoxic shock
- 5) Treatment of septic shock by inhibition of (ADP-lypase) synthetase
- 6) Clinical study of atrial natriuretic peptide

4. Clinical Services

Critical care medicine provides intensive care and treatment of critically ill patients. The role of intensivists take charge treatment of critically ill patients in the ICU. To treat critically ill patients, intensivists have to catch the changes of the patients' condition by monitoring and evaluation, and practice appropriate therapy. It is important that intensivists practice minute-to-minute titration therapy in cooperation with attending physician. The purpose of critical care medicine is to treat and improve the serious condition by maintaining the patients' hemodynamics to be stable.

Critical care medicine includes intensive care for various types of shock, acute respiratory distress syndrome/acute lung injury, sepsis, multiple organ dysfunction syndrome, abnormal acid-base balance, abnormal electrolyte, acute kidney injury,

central nervous system dysfunction, and hospital-acquired infection, mechanical ventilation, pharmacological support, cardiopulmonary support system, blood purification, and nutrition support.

5. Publications

【Original Article】

1. Mitaka C, Tsuchida N, Kawada K, Nakajima Y, Imai T, Sasaki S. A longer duration of polymyxin B-immobilized fiber column hemoperfusion improves pulmonary oxygenation in patients with septic shock. *Shock* 32:478-483, 2009

【Conference】

1. Mitaka C, Ishizuka M, Kawada K, Nakajima Y, Arai H. Human atrial natriuretic peptide and renal function in patients with acute kidney injury after cardiothoracic surgery. 22th Annual Congress of European Society of Intensive Care Medicine, Poster presentation, Vienna, Austria, October 13, 2009
2. Kenro Kawada, Kagami Nagai, Tomoyoshi Suzuki, Takuya Okada, Akihiro Hoshino, Yutaka Miyawaki, Yasuaki Nakajima, Tetsuro Nishikage, Tatsuyuki Kawano. Magnifying Endoscopy combined with Flexibe Spectral Imaging Color Enhancement(FICE) for early carcinoma of the head and neck. Oral presentation 2nd IAEO July 10,2009, Toronto, Canada
3. Yutaka Miyawaki, 17th European Association Endoscopic Surgery Two cases of Chylothorax after thoracoscopic thoracic duct ligation by surgical clipping technique June 2009, Prague, Czech Republic