

Department of Anesthesiology

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General Summary

The functions of the Department of Anesthesiology are to provide quality patient care, to teach, and to perform research in perioperative medicine, intensive care medicine, and comprehensive pain management. In 2017 we made further advances and great achievements with the support of our faculty, institutional administration, and the Dean of The Jikei University. Below we highlight some of our research achievements in 2017.

Research Activities

Research continues as a growing and important component of the department's activities. The department is committed to enhancing academic productivity and resources by dedicating time to research and granting clinical access to research cases.

The investigators have been successful each year in obtaining peer-reviewed research grants. For one thing, Grants-in-Aid for Scientific Research (*kakenhi*) were awarded to five members of our Faculty in 2017. The department continues to build on the strengths of several outstanding programs: cardiovascular anesthesia, thoracic anesthesia, pediatric anesthesia, regional anesthesia, neuroanesthesia, obstetric anesthesia, intensive care medicine, and comprehensive pain management.

Our faculty and residents were both well represented at the Japanese Society of Anesthesiologists' annual meeting in Kobe and the American Society of Anesthesiologists' annual meeting in Boston. In addition, members of the department continue to be invited as visiting professors or guest speakers at national and international meetings.

Listed below are some of the ongoing research projects in which the principal investigators are faculty members of the Department of Anesthesiology.

Doctors Uezono and Kida have been investigating the protective effects of sedatives in ischemic encephalopathy. Doctor Shimoyama's research has been focused on the mechanism of mitochondria dysfunction-induced peripheral nerve injury. She also has been working to elucidate the mechanism of chemical induced neuropathic pain, which may lead to new therapeutic interventions for this type of pain.

In clinical medicine, several principal investigators from the Department of Anesthesiology deserve mention. Doctor Kondo has been interested in the concept of goal directed

therapy and its application to fluid management during surgery for cancers of the head and neck. Doctor Uchino continues to be active in clinical research in the intensive care unit and has been extremely productive in the field of acute kidney injury. As an interim chief of the chronic pain clinic Dr. Uezono has been trying to establish a new practice of pain management by embracing more invasive therapeutic interventions such as spinal cord stimulation. Members of the pain clinic continued to play a pivotal role in establishing practice guidelines for patients with various types of chronic pain.

The appended bibliography of the department shows that a wide range of investigative and scholarly activities were conducted over the past year.

Publications

- Kondo I, Kobayashi H, Suga Y, Suzuki A, Kiyama S, Uezono S.** Effect of availability of video laryngoscopy on the use of fiberoptic intubation in school-aged children with microtia. *Paediatr Anaesth.* 2017; **27**: 1115-9.
- Fukushima T, Uchino S, Fujii T (Kyoto Univ), Takinami M, Uezono S.** Intraoperative hydroxyethyl starch 70/0.5 administration may increase postoperative bleeding: a retrospective cohort study. *J Anesth.* 2017; **31**: 330-6.
- Kobayashi H, Uchino S, Takinami M, Uezono S.** The Impact of Ventilator-Associated Events in Critically Ill Subjects With Prolonged Mechanical Ventilation. *Respir Care.* 2017; **62**: 1379-86.
- Kubo Y, Kiyama S, Suzuki A, Kondo I, Uezono S.** Use of Supraglottic Airway Devices in the Prone Position. *J Anesth Clin Res.* epub 2017; **8**: 12.
- Eto K, Kondo I, Kosuge M, Ohkuma M, Haruki K, Neki K, Sugano H, Hashizume R, Yanaga K.** Enhanced Recovery After Surgery Programs for Laparoscopic Colorectal Resection May Not Need Thoracic Epidural Analgesia. *Anticancer Res.* 2017; **37**: 1359-64.
- Bagshaw SM¹, Darmon M², Ostermann M³, Finkelstein FO⁴, Wald R⁵, Tolwani AJ⁶, Goldstein SL⁷, Gattas DJ⁸, Uchino S, Hoste EA⁹, Gaudry S¹⁰ (Univ Alberta, ²Hop Nord, ³St. Thomas Hosp, ⁴Yale Univ, ⁵St. Michael's Hosp, ⁶Univ Alabama, ⁷Cincinnati Children's Hosp Med Center, ⁸Univ Sydney, ⁹Ghent Univ, ¹⁰Hopital Louise Mourier).** Current state of the art for renal replacement therapy in critically ill patients with acute kidney injury. *Intensive Care Med.* 2017; **43**: 841-54.
- Iizuka Y^{1,2}, Sanui M¹, Sasabuchi Y³, Lefor AK¹, Hayakawa M⁴, Saito S, Uchino S, Yamakawa K⁵, Kudo D⁶, Takimoto K^{7,8}, Mayumi T⁹, Azuhata T¹⁰, Ito F¹¹, Yoshihiro S¹², Hayakawa K¹³, Nakashima T¹⁴, Ogura T¹⁵, Noda E¹⁶, Nakamura Y¹⁷, Sekine R¹⁸, Yoshikawa Y⁶, Sekino M¹⁹, Ueno K²⁰, Okuda Y²¹, Watanabe M²², Tampo A²³, Saito N²⁴, Kitai Y¹, Takahashi H¹⁰, Kobayashi I²⁵, Kondo Y²⁶, Matsunaga W¹, Nachi S²⁷, Miike T²⁸, Takahashi H²⁹, Takauji S³⁰, Umakoshi K³¹, Todaka T³², Kodaira H³³, Andoh K³⁴, Kasai T³⁵, Iwashita Y³⁶, Arai H¹, Murata M³⁷, Yamane M³⁸, Shiga K³⁹, Hori N⁴⁰ (Jichi Med Univ, ²Shonan Kamakura General Hosp, Kamakura, Japan, ³Univ Tokyo, ⁴Hokkaido Univ, ⁵Osaka General Medical Center, Osaka, Japan, ⁶Tohoku Univ, ⁷Osaka Univ, ⁸Kameda Medical Center, Kamogawa, Japan, ⁹Univ of Occupational and Environmental Health, Kita-Kyushu, Japan, ¹⁰Nihon Univ Sch Med, ¹¹Ohta General Hosp Foundation, Ohta Nishinouchi Hosp, Koriyama, Japan, ¹²JA Hiroshima General Hosp, Hiroshima, Japan, ¹³Saitama Red Cross Hosp, Saitama, Japan, ¹⁴Wakayama Medical Univ, ¹⁵Japan Red Cross Maebashi Hosp, Maebashi, Japan, ¹⁶Kyushu Univ, ¹⁷Fukuoka Univ, ¹⁸Ibaraki Prefectural Central Hosp, Kasama, Japan, ¹⁹Nagasaki Univ, ²⁰Tokyo Medical Univ, ²¹Kyoto Daiichi Red-Cross Hosp, Kyoto, Japan, ²²Saiseikai Yokohamashi Tobu Hosp, Yokohama, Japan, ²³Asahikawa Medical Univ, Asahikawa, Japan, ²⁴Nippon Med Sch, ²⁵Asahikawa Red Cross Hosp, Asahikawa, Japan, ²⁶Univ of the Ryukyus, ²⁷Gifu Univ, ²⁸Saga Univ, ²⁹Steel Memorial Murooran Hosp, Murooran, Japan, ³⁰Sapporo City General Hosp, Sapporo, Japan, ³¹Ehime Univ, ³²Tomishiro Central Hosp, Tomishiro, Japan, ³³Akashi City Hosp, Akashi, Japan, ³⁴Sendai City Hosp, Sendai, Japan, ³⁵Hakodate Municipal Hosp, Hakodate, Japan, ³⁶Mie Univ, ³⁷Gunma Univ, ³⁸KKR Sapporo Medical Center, Sapporo, Japan, ³⁹Seirei Mikatahara General Hosp, Hamamatsu, Japan, ⁴⁰Hyogo Coll Med).** Low-dose immunoglobulin G is not associated with mortality in patients with sepsis and septic shock. *Crit Care.* 2017; **21**: 181.
- Yamaguchi T, Uchino S, Kaku S, Teshigawara A, Nishimura K, Takinami M, Murayama Y, Uezono S.** Delayed Airway Obstruction after Craniotomy in the Park-Bench Position: Two Case Reports. *Journal of Anesthesia & Pain Medicine.* 2017; **2**: 1-4.
- Hamaguchi T, Suzuki N, Kondo I.** A case of anesthesia mumps that required postoperative re-intubation. *JA Clinical Reports.* 2018; **4**: 22.
- Hoshino R, Kamiya Y, Fujii Y, Tsubokawa T**

(**Niigata Univ**). Lipid emulsion injection-induced reversal of cardiac toxicity and acceleration of emergence from general anesthesia after scalp infiltration of a local anesthetic: a case report. *JA Clin Rep*. 2017; **3**: 9.

Reviews and Books

Uchino S. Kidney-specific severity scores. In: Ronco C, Bellomo R, Kellum J editors. *Critical Care Nephrology*. 3rd edition. Canada: Elsevier, 2017. p. 29-34.