

Department of Emergency Medicine

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General Summary

1. Education system for junior residents in emergency medicine
2. Establishing a database of severe traumatic brain injury in Japan
3. The etiology of syncope
4. Research on laboratory assessment of myocardial infarction in the emergency room
5. Managing the course of Immediate Cardiac Life Support
6. Managing the course of Japan Advanced Trauma Evaluation and Care
7. Providing logistical support to the Japan Boxing Commission
8. Basic research on traumatic brain injury
9. Basic and clinical research on oxidative stress and emergency medicine
10. Advice to local authorities on plans for disaster medicine
11. Creation of the Disaster Medical Assistance Team deployment system
12. Management of the hospital emergency response drill, including Code Blue (Stat Call) and the Rapid Response System
13. Managing the Jikei Airway Management course for Patient safety (JAMP)

Research Activities

1. Supervision and development of ultrasound devices for the diagnosis and treatment of cerebrovascular disorders
2. Director of the Japan Neurotrauma Data Bank Committee
3. Prognostic value of heart fatty acid-binding protein for patients with chest symptoms in the emergency room
4. Research committee on higher cerebral function after traumatic brain injury
5. Research committee on impact biomechanics in automobile accidents (Society of Automotive Engineers of Japan, Inc.)
6. Publication of a revised edition of *Guidelines for the Treatment and Management of Severe Head Injury* (The Japan Society of Neurotraumatology)
7. Research group on cerebrospinal fluid in cases of traumatic intracranial hypotension
8. Management of the Japan Advanced Trauma Evaluation and Care Course
9. Basic research on traumatic brain injury and oxidative stress
10. Basic research on heat stroke and neuronal injury
11. Development of therapy against free radicals in patients with acute neuronal conditions
12. Development of educational system in emergency medicine, including usage of simulation training

Publications

Dohi K, Kraemer BC, Erickson MA, McMillan PJ, Kovac A, Flachbartova Z, Hansen KM, Shah GN, Sheibani N, Salameh T, Banks WA.

Molecular hydrogen in drinking water protects against neurodegenerative changes induced by traumatic brain injury. *PLoS One*. 2014; **9**: e108034.

Tsumuraya T, Ohtaki H, Song D, Sato A, Watanabe J, Hiraizumi Y, Nakamachi T, Xu Z, Dohi K, Hashimoto H, Atsumi T, Shioda S.

Human mesenchymal stem/stromal cells suppress spinal inflammation in mice with contribution of pituitary adenylate cyclase-activating polypeptide (PACAP). *J Neuroinflammation*. 2015; **12**: 35.

Miyamoto K, Tsumuraya T, Ohtaki H, Dohi K, Satoh K, Xu Z, Tanaka S, Murai N, Watanabe J, Sugiyama K, Aruga T, Shioda S. PACAP38 suppresses cortical damage in mice with traumatic

brain injury by enhancing antioxidant activity. *J Mol Neurosci*. 2014; **54**: 370-9.

Deguchi A, Moriyama T, Ito K, Uzura M, Njshikawa K, Mashio K. An examination of the current state of the specialist accreditation system for Onsen-Ryoho-Specialist (in Japanese). *Nihon Onsen Kiko Butsuri Igakkai Zasshi*. 2015; **78**: 147-51.

Reviews and Books

Ohtani K, Kameoka Y, Ohtaki Y, Nameki T, Okuno K, Dohi K, Takeda S, Hiranuma K, Uzura M, Ogawa T. The evaluation of our clinical pathways for upper gastrointestinal bleeding (in Japanese). *Nihon Rinsho Kyukyū Igakkai Zasshi*. 2015; **18**: 49-55.