

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 (ICLS)
6. Managing the course of Japan Advanced Trauma Evaluation and Care
7. Providing logistical support to the Japan Boxing Commission
8. Basic research of traumatic brain injury
9. Basic and clinical researches of oxidative stress and emergency medicine
10. Advice to local authorities on plans for disaster medicine
11. Creation of DMAT (Disaster Medical Assistance Team) deployment system
12. Management of hospital emergency response drill including Code Blue (Stat Call) and Rapid Response System (RRS)
13. Managing the Jikei Airway Management course for Patient safety (JAMP)
14. Providing logical support for the Japan AED Foundation

Research Activities

1. Supervision and development of ultrasound devices in the diagnosis and treatment of cerebrovascular disorders
2. Director of 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. Published 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 of traumatic brain injury and oxidative stress
10. Basic research of heat stroke and neuronal injury
11. Development of anti free radical therapy in patients with acute neuronal conditions
12. Development of educational system in Emergency Medicine including usage of simulation training

Publications

Wang Z, Komatsu T, Mitsumura H, Nakata N, Ogawa T, Iguchi Y, Yokoyama M. An uncovered risk factor of sonothrombolysis: Substantial fluctuation of ultrasound transmittance through the human skull. *Ultrasonics*. 2017; **77**: 168-75.

Wang Z, Sawaguchi Y, Hirose H, Ohara K,

Sakamoto S, Mitsumura H, Ogawa T, Iguchi Y, Yokoyama M. An In Vitro Assay for Sonothrombolysis Based on the Spectrophotometric Measurement of Clot Thickness. *J Ultrasound Med*. 2017; **36**: 681-98.