

Report for Intracranial Stent Meeting 2009 (ICS09)

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Introduction of ICS

The focus of Intracranial Stent Meeting (ICS) is to develop intracranial stent as a flow diverter or a flow controller for promoting safe and less invasive endovascular treatments. The first international Intracranial Stent Meeting (ICS04) was held in Geneva, Switzerland, 2004 organized by Prof. Daniel A. Rüfenacht together with Prof. Pedro Lylyk and Dr. Makoto Ohta. The concept of this congress is to include not only people from medical fields but also people from engineering fields such as numerical simulation, biological response or regulation. ICS05 was held in Buenos Aires by Prof. Pedro Lylyk. ICS06 was held in Geneva again. ICS07, the 4th International Intracranial Stent Meeting was held in Kyoto by Prof. Waro Taki. And ICS08 was held in Ankara organized by Prof. Saruhan Cekirge Satci.

Topics of ICS

ICS involves the following topics for promoting safer, more accurate and definitive, more effective treatment of cerebral aneurysms.

- 1) Hemodynamics in cerebral aneurysm with or without stent.
- 2) Risk assessments of rupture of aneurysm.
- 3) Update or the state of the art for a. diagnosis of aneurysm, b. device and method of endovascular treatment, c. image analysis.
- 4) Development of medical devices for treatment of aneurysms such as stent or coil as flow diverter.
- 5) Engineering techniques and methods for quantitative investigations related to hemodynamics or lesion and/or thrombus formation.
- 6) Materials for medical device of endovascular treatment.

All topics are linked together and we hope that we find the optimized way to treat aneurysm using the best stent.

ICS09

The 7th International Intracranial Stent Meeting (ICS09) was held in Sendai on August 5-7, 2009 chaired by Prof. Akira Takahashi and Prof. Makoto Ohta. In this year, we set following as a theme "Tidal wave from coil to prosthesis, from embolization to reconstruction", as these seems well the situation in clinical and investigational direction

and these were taken as a slogan of ICS09. 27 invited speakers have come and we got more than 180 attendances from 14 countries.

Support from 31 companies and several governmental funds was appreciated.

Topics of ICS09

In this year, we have seen the integration of ICT(Information and Communication Technology), especially computational fluid dynamics into treatments. We will get a new computer assisted diagnosis, and may see the control of blood flow to avoid rupture or find the formation of an aneurysm near future.

Such as clinical and engineering investigations to develop new effective, accurate and definitive devices including flow diverting stents (Pipeline (trademark) and SYLK (trademark)), we have also observed several new ideas to develop new design and/or production of stents.

The mechanism of relation between arterial wall and blood flow is gradually clear.

VISC09

Virtual Intracranial Stent Challenge (VISC) was started three years ago as one of the most important sessions in ICS. The encouragement of increasing technologies for computational simulation through a competition is the principal purpose of VISC. At VISC09, participants competed for branch selection based on the results of computational simulation for the stent placement and through many discussions with medical doctors.

Acknowledgment

We are thankful for prof. Hiroaki Shimizu and prof. Toshio Nakayama as secretary and Dr. Yasushi Matsumoto as treasurer and appreciate our laboratory members for supporting this congress.