Special Contribution

The Sugita System — Now and in the future

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Although doctors of my generation were not able to study directly under Dr. Sugita, I learned the surgical philosophy that has been passed down through the years, along with his excellent surgical equipment, in the clinical setting of the everyday operating theater. Rather than a competition of individual skill levels, his philosophy was about the series of thought processes, starting with thorough preparation, then calm decision-making during surgery, then post-operative reflections.

In my opinion, this should be known as the Japanese philosophy of neurosurgery, which puts the highest priority on safety, reproducibility, and educational value. The essence of the Sugita system is that it does not depend on individual proficiency, but rather ensures the highest safety standards based on anatomical knowledge by providing a set procedure that can be followed by anyone. Especially from the viewpoint of educating young doctors, this idea is very attractive, because it provides a reliable set of guidelines for less experienced surgeons that allows them to learn the required approach and build up their technical understanding step by step.

The common principle underlying the Sugita system is that a surgeon does not need to be an outstanding practitioner with the so-called "hands of God." Any surgeon, with the appropriate education and training, can learn to perform surgical procedures to the required level of safety. The principles of not being reliant on individual skills, sharing information about therapeutic decision-making, and ensuring that surgical procedures are reproducible, are closely intertwined with the modern-day concepts of medical safety and team-based health care. As such, these are likely to become increasingly important in developing the next generation of neurosurgeons.

The Sugita Clip is a typical example of a medical instrument that concretely embodies these principles. Not just a simple aneurysm clip, the Sugita Clip is designed to be part of a larger system that helps surgeons to make more consistent and reliable decisions in surgical procedures. It provides strong and stable grip strength over a long period of time, and is highly reliable even in cerebral aneurysms with deep or atherosclerotic lesions. In addition, it is available in a wide variety of shapes and sizes to suit all aneurysm profiles and anatomical conditions. In addition, the dedicated applier and remover make it easier to readjust or remount the clip as required, providing intuitive and reliable performance that feels like an extension of the surgeon's hand, even in deep surgery. These represent a direct outcome of the unique approach taken by Japanese manufacturers, with their commitment to ongoing improvement in response to input from Japanese medical professionals. I fully expect that this will provide an important foundation for clinical practice and education into the future.

Dr. Horiuchi with Dr. Sugita's handprint at the Shinshu University Department of Neurosurgery

Devices such as the Sugita Clip, and the underlying philosophy that supports them, continue to be the important foundation that secures the safety and educational value of direct surgery to this day. The modern era has brought tremendous advances in the field of endovascular treatment; we now see direct surgery existing alongside endovascular treatment. The philosophy of direct surgery typified by the Sugita system is not a legacy of the past; rather, it has universal value that should be passed on to the next generation. The tradition of the Sugita system transcends the physical instruments themselves; the idea is to continue pursuing the key objective of ensuring a guaranteed level of medical safety regardless of the practitioner, through educational initiatives and ongoing practice by young doctors. We trust that Japan will continue to make an important contribution to medical technology and innovation in the field of neurosurgery.