Critical Seconds Saved During Brain Aneurysm Procedure with Pre-Surgery Rehearsal

Surgical Theater

Surgical Theater's Surgical Rehearsal Platform (SRP) provided neurosurgeons the opportunity to rehearse a complicated cerebral case before entering the operating room, saving the surgical team critical seconds on a time-sensitive procedure.

Recently, a patient was transferred to University Hospitals Case Medical Center for treatment of a ruptured middle cerebral artery aneurysm. While the patient was being prepared for surgery, neurosurgeons were able to upload the patient's CT and MRI scans onto the SRP and determine how best to clip the aneurysm before stepping into the operating room, something not possible until earlier this year.

"When an aneurysm ruptures, it is a critical and emergency condition. Once a rupture is diagnosed and the patient is rushed to the hospital there is also risk of a second rupture that is often fatal. The second rupture can also occur during surgery which makes each second in the OR crucial for a successful outcome," said Dr. Warren Selman, Chairman, Department of Neurological Surgery at University Hospitals Case Medical Center and Case Western Reserve University School of Medicine in Cleveland. Dr. Selman is a co-originator of the SRP's development.

Dr. Selman adds, "The Surgical Rehearsal Platform allowed me to save crucial time in the OR. The "mental picture" and "muscle memory" gained from the brief SRP rehearsal maximized the use of pre-surgery information and allowed me to analyze and 'dry run' the optimal treatment beforehand, which led to a safe and effective clip placement without need for further adjustment, while minimizing the temporary occlusion time."

University Hospitals Case Medical Center was the first hospital to utilize the SRP and SRP's are now being installed at five additional medical centers in the country.

Surgical Theater aims to allow each and every neurosurgeon the ability to "Pre-Live the Future" with an SRP. Using the SRP supports every neurosurgeon's goal of providing their patients with the best possible outcome from what can often be delicate and complicated brain surgery.

Using standard scanned images from any patient, the FDA-cleared SRP generates 3D patient specific and accurate models showing the interaction between life-like tissue and surgical instruments. The tissue responds "realistically" to actions taken by the surgeon, enabling accurate pre-surgery planning and rehearsal. The unique software utilizes flight simulator technology to permit the remote connection of multiple SRPs; participants anywhere in the world can simultaneously work together

and practice the same case with real-time feedback and collaborate on the planning of a specific surgery case.

University Hospitals Case Medical Center is currently conducting an Institutional Review Board approved study to evaluate the efficacy of the SRP in cerebral aneurysm cases.

For more information visit www.surgicaltheater.net [1].

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