

Cutting edge technology improves neurosurgery at Sacred Heart

By STAN GOULD
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EAU CLAIRE – Sacred Heart Hospital recently made a significant improvement to their neurological health care by implementing high-technology equipment to provide state-of-the-art treatment for neurosurgery, spine and trauma patients.

Smart OR, as it is generally referred to, is a configuration of advanced imagery and mapping technology that helps neurosurgeons perform complex brain, spine and trauma procedures more effectively.

Sacred Heart is the first hospital in the country to use this configuration for both surgery and diagnostics. It is also the first hospital of its size to have BrainSUITE technology with the IMRIS iMRI (intra-operative magnetic resonance imaging) operating suite and the iCT (intra-operative computed tomography) operating suite. The hospital is also one of only 17 hospitals in the world to offer this technology configuration for patients.

Smart OR has demonstrated its effectiveness on the 14 patients that have used the technology since its November inception. According to Dr. Ka-



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Last November Sacred Heart Hospital in Eau Claire began using a specialized neurosurgical suite, known as Smart OR, which has led to significant improvements in neurosurgery. Smart OR is a configuration of advanced imagery and mapping technology that helps neurosurgeons perform complex brain, spine and trauma procedures more effectively.

mal Thapar, Marshfield Clinic neurosurgeon and director of the Brain & Spine Institute at Sacred Heart, “In every one of these patients, we were able to remove the tumor completely.”

Thapar compared the delicacy of brain and spine surgery to a high-wire act. “Imagine navigating a tightrope blindfolded. If you deviate off the path, even slightly, you fall. In surgery, the Smart OR is the ultimate tool ensuring that we don’t fall,” he said.

“The technology goes beyond what the human eye can see, removing that blindfold,” he explained. “It provides real-time, high-definition data, allowing us to chart an exact path to tumors during operations – so surrounding, healthy tissue is not damaged.”

One distinguishing element of the Smart OR is that the iMRI unit moves to and from the patient – helping to keep them still, and lessening the risk of complications that can occur

with movement.

Real-time imagery is available during surgery to ensure tumors are entirely removed, before the patient leaves the operating table. Prior to this technology, standard MRI scans could only be done before and after the surgery. Conducting an iMRI scan while the patient is still in surgery drastically reduces the need for follow-up surgery.

“We have been able to get complete tumor resection in 13 of the 14 patients with the use of the iMRI,” said Thapar. “So, it really had an important effect in eliminating the need for additional surgery.” He added that the 14th patient’s tumor was surgically complicated and multiple operations were required.

In addition, real-time images are captured with the VectorVision Sky, considered the global positioning system (GPS) for the brain, and the high magnification Zeiss OPMI Petro C Microscope.

All of this imagery is managed via the BrainSUITE surgical mapping system. This tool provides easy access to data throughout procedures, allowing the surgical team to reference information quickly on flat

screens mounted in the operating room.

“Patients entrust us with their lives, and we owe it to them to invest in the world’s best technology and treatment options,” said Steve Ronstrom, Chief Executive Officer of Sacred Heart Hospital. “The Smart OR is an innovative tool that helps our neurosurgeons perform operations with greater accuracy and precision.”

Thapar said that the first thing he does after an operation is to visit the family in the waiting room, where the very first question they always ask is: “Doctor, did you get out all of the tumor?” Instead of answering that we will know in a day or so after further tests, Thapar and his associates can now tell the family, “Yes, the tumor is completely removed.”

Thapar said the new technology fits in well with the mission of Sacred Heart Hospital. “Because of its Franciscan mission, we care for anybody who requires the care whether they have the means to pay or not. To be able to take somebody who is essentially destitute and provide them with the best care on the planet is fulfilling what the mission of Catholic healthcare is,” he said.



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