

Tri-City offers new imaging technology

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OCEANSIDE — Physicians at Tri City Medical Center are the first in the region, and the medical center is one of only seven in the nation, to introduce a new technology that standardizes the medical imaging process and yields unprecedented views of the spine in motion to facilitate diagnosis and treatment of lower back pain. The Vertebral Motion Analysis (VMA) technology, developed by OrthoKinematics, is an FDA-cleared, noninvasive, painless test that uses fluoroscopy to capture real-time images of the spine while the patient is guided through a pre-set range of motion. The technology is ideal for assessing patients with suspected instability of the lower lumbar spine.

The new VMA used a Motion Normalizer device that guides the patient through prescribed bending patterns. Images are captured, processed and analyzed by advanced computer technology to produce information the physician uses to facilitate treatment options. The VMA requires about 30 percent less radiation than the current standard of care of end-range x-rays. This level of radiation is well below that associated with other commonly-prescribed diagnostic procedures. VMA testing takes approximately 30 minutes and can assess patients in a weight-bearing or non-weight-bearing posture.

“VMS technology,” said Dr. Neville Alleyne, president of Tri-City Medical Center’s Orthopaedic and Spine Institute’s Board of Directors and an orthopedic spinal surgeon at the hospital, “is an important advancement over static end-range bending X-rays, currently the most widely used method for measuring spinal instability, which provides only limited information about the patient’s spine function and can yield highly variable results.”

Alleyne noted that when a patient is in pain, he or she bends differently. Controlling the patient positioning of the VMA system greatly reduces test variability and eliminates differences in tests conducted by different radiologic technologists,” he said.

He added that the use of fluoroscopy in place of x-rays means that physicians receive video consisting of hundreds of individual still images when a VMA test is performed versus just three still images of flexion, extension and center from the standard x-ray procedure to evaluate the lower spine. Image recognition software locates the vertebrae on each frame and plots the degree of trunk bending for each level of the spine. A set of biomechanical measurements is overlaid on the video images to provide physicians with expansive data at a glance.

“This gives us more information as a baseline pre-operatively to help physicians determine if patients are good candidates for various surgical procedures,” said Dr. Alleyne “Post-operatively, we can really see if mobility has improved in conjunction with pain relief.”

Larry Anderson, president of Tri-City Medical Center, said, “Helping to bring this new technology from concept to reality is the latest achievement in Tri City Medical Center’s commitment to provide the community with the most innovative approaches to comprehensive spine care. It’s an important addition to highest level of technology and care we provide through the hospital’s Orthopaedic and Spine Institute.”