Issue: 6 Date: September 14, 2007

On The Horizon

HORIZON MEDICAL SERVICES LTD.

PRESS RELEASE, MAY 2007, FROM CANON MEDICAL ANNOUNCING THE PURCHASE OF 14 CANON DR PLATES FROM HORIZON MEDICAL, BRINGING A TOTAL 50 PLATES SOLD TO CANADIAN CUSTOMERS BY HORIZON.

Canadian Radiology Partnership Installs 14 Canon CXDI-40EG General and CXDI-50G Portable DR Systems Onto New and Existing X-Ray Equipment

Lake Success, N.Y., May 16, 2007 - - Canon U.S.A, Inc., today announced that the Canadian-based EFW Radiology Partnership, Specialists in Diagnostic Imaging, has installed new Canon CXDI-40EG General Digital Radiography (DR) systems and Canon CXDI-50G Portable DR systems into EFW facilities in Calgary, Alberta.

A total of 14 Canon DR systems, purchased from Horizon Medical Service, an authorized Canon dealer in Mississauga, were installed at EFW clinics. Eight of the Canon DR systems were installed in new general radiology rooms in the Beddington and Gulf EFW clinics. The six other Canon DR systems were placed in other EFW clinics, including single-plate solutions in Northhill and Southport, and dual-plate solutions in Airdrie and Foothills. EFW Radiology Partnerships owns and operates twelve clinics, and provides radiology services at the High River Hospital and Foothills Medical Centre, in the greater Calgary area.

"The new Canon DR systems will give EFW greater flexibility in the types of x-ray images that can be taken in its facilities, while helping to improve productivity, patient throughput and enhancing the overall exam experience for patients, technicians and doctors alike," said Tsuneo Imai, director and general manager, Medical Systems Division, Canon U.S.A., Inc.

"We chose Canon CXDI systems because we could retrofit our existing equipment and have DR at a CR price," says Marc Galeski, Chief Operating Officer. "Our techs love the new Canon systems, which are having positive repercussions throughout our firm."

The flexibility of the Canon solutions allows for both upgrading existing equipment with Canon DR technology or including Canon DR as part of a completely new system. The Canon CXDI-40EG General DR system provides a large imaging area of 17-inches x 17-inches, and lets you capture desired anatomical views for both large and small format X-rays in portrait or landscape orientation without having to rotate the detector unit. This system can retrofit onto almost any new or existing bucky table, upright tilting wall stand, universal or ceiling suspended multi-positioning unit.

Canon was the first in the industry to deliver a portable DR system in 2001. One of its newest portable DR systems – the Canon CXDI-50G DR system – is a lightweight, large imaging area (17-inches x 14-inches) DR system designed for diverse applications including

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What's On the Horizon:

" Laughter is a tranquilizer with no side effects."

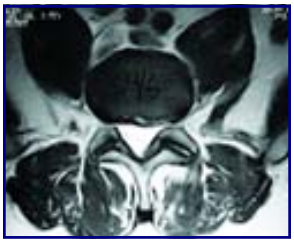
~Arnold Glasow~

MRI of the Weight-Bearing Spine: Potential Benefits

by Robert J. Longenecker, DC, DACBR

From Chiropractic Products Magazine, March 2006

Weight-bearing MRI opens new possibilities for the evaluation of structural, positional, and kinetic changes of the spine



Weight-bearing magnetic resonance imaging (MRI) of the spine has been accomplished with axial compression devices, modified magnets allowing standing or seated positions, and dedicated magnets allowing standing, seated, and kinetic positions.

The configuration of the magnet that is open in the front and on the top allows a patient to be imaged in a weight-bearing position, seated or standing, and positions the patient in a physiological position of pain. This may include kinetic positions of flexion, extension, rotation, lateral bending, or any other combination of these positions.

The potential advantages of weight-bearing MRI as compared to conventional recumbent supine MRI include physiological and pathological changes in the relationships of the intervertebral disks, ligamentum flavum, articular facets, central canal, neural foramina, and segmental instabilities.

Technical Considerations

The only dedicated weight-bearing MRI unit is a 0.6 T electromagnet with a horizontal magnetic field that is transverse to the longitudinal axis of the patient's body. The configuration of the magnet is open on the top and front with a retractable tilting table, allowing images to be obtained from 180° horizontal to 90° vertical. This configuration permits imaging in seated, standing, kinetic, and recumbent positions.

Results and Review of Literature

Weishaupt et al evaluated whether weight-bearing MRI of the lumbar spine can demonstrate nerve root compromise not visible in conventional MR images with the patient in the supine position. Thirty patients with chronic low back or leg pain unresponsive to a trial of conservative treatment for more than 6 weeks were included in their study. All 30 patients underwent weight-bearing MRI in seated neutral, flexed, and extended positions and were compared to conventional supine MR images. The results of this study have shown that the cross-sectional area of the dural sac significantly decreased between the supine neutral and weight-bearing extended position. Another significant finding was a statistically significant relationship between increased pain intensity using the visual analogue scale (VAS) and simultaneous foraminal narrowing supporting the concept of dynamic foraminal stenosis. This contradicts previous assumptions that correlation between foraminal stenosis and symptoms is poor.

A prospective analysis was conducted of cervical and lumbar MRI examinations performed in weight-bearing and kinetic positions, with weight-bearing MRI compared to conventional supine MRI. The results included correction of the sagittal cervical and lumbar lordosis in the weight-bearing positions compared to recumbent MRI, increased severity of focal posterior disk herniation on the extension weight-bearing positions compared to supine and neutral weight-bearing, increased severity of central canal and foraminal stenosis in weight-bearing positions (most severe in extension and least severe in flexion and supine positions), and translational instabilities in weight-bearing positions compared to supine MRI.

It is well-documented that narrowing of the spinal canal is provoked by axial loading, especially in combination with extension of the spine. Willen et al evaluated patients with sciatica after conventional MR and compared the findings with axial-loaded supine MR technique. Seventy-seven percent of the patients examined had a significant reduction of the dural sac cross- sectional area at one or more lumbar levels during the axial-loaded MR technique.

Schmid et al, Danielson et al, and Danielson et al demonstrated changes of the spinal anatomy under weight-bearing conditions. The changes become more evident when weight-bearing is combined with additional flexion or extension of the spine. In general, when the spine is moved to the extension position, a reduction takes place in the cross-section diameter of the central canal and neural foramina. Several factors influencing the reduction in size of the central canal and neural foramina include increases in the size of the ligamentum flavum due to buckling, increase in size of disc protrusions, and decreased disc space height.

Myelography

Myelography has been established as an imaging procedure for assessment of the positional component of weight bearing on the dural sac and the neuroforamina. It is documented that narrowing of the spinal canal is produced by axial loading, especially in combination with extension of the spine. However, myelography is an invasive procedure.

Wildermuth et al performed a study that compared findings of weight-bearing MRI of the lumbar spine and myelography. The sagittal diameter of the lumbar dural sac was shown to have good correlation between the two procedures.

Based on this data, the conclusion can be made that myelography and weight-bearing MRI are comparable for quantitative assessment for sagittal dural sac diameter in the upright neutral, flexed, and extended positions.

Imaging Protocol

Imaging protocol for the cervical spine includes sagittal T1 and T2-weighted 4-mm thickness with the patient in the weight-bearing neutral position, sagittal T2-weighted weight-bearing extension, axial gradient echo 4-mm thickness contiguous from C2 through T1, with the patient in the weight-bearing neutral position.

Thoracic spine imaging is performed with the patient in the weight-bearing neutral position. Sagittal T1 and T2-weighted and axial T2-weighted sequences are performed.

Lumbar spine sequences include sagittal T1 and T2-weighted 4-mm thickness in the weight-bearing neutral position, sagittal T2 weighted in the extension position.

Axial T1 and T2-weighted sequences are performed from L1 through S1 with the patient in a weight-bearing neutral position. Axial T2-weighted parallel with the disc spaces of L1-2 through L5-S1 with the patient in a weight-bearing extension position is also performed.

The potential benefits of weight-bearing MRI include unmasking of occult pathology in the supine recumbent position, including disc protrusion and herniation, central canal and foraminal stenosis, and translational instability.

Weight-bearing MRI opens new possibilities for the evaluation of structural positional and kinetic changes of the spine. Indications for weight-bearing MRI may include inconclusive conventional MRI, suspected positional dependent nerve root compression, clarification of true sagittal spinal lordosis, unmasking of weight-bearing and kinetic dependent degenerative spinal disease, and the potential to scan a patient in a position of clinically relevant pain.

Robert J. Longenecker, DC, DACBR, is in private practice in Irving, Tex. He is a postgraduate instructor at Parker College of Chiropractic in Dallas. Contact him at rjldc@yahoo.com.

On The Horizon: *Our Newest Addition*

We are pleased to announce the appointment of Douglas (Doug) Anderson as Vice President -Sales and Marketing for Horizon Medical Services Ltd. as of 17 September, 2007.

Over his 27-year career, Doug has worked for many of the top companies in the Diagnostic Imaging field including Elscint (Canada) Limited, Toshiba Medical Systems Division and most recently, Siemens Canada Limited as a Sr. Account Manager. Prior to switching to Sales a number of years ago, Doug was a CT Service Engineer for Horizon Medical Services Limited.

Doug lives and works in Atlantic Canada based out of Moncton, NB. He is well known across the country thanks to his years with Elscint as the National CT Product Specialist. He has developed strong relationships with customers, throughout his years, and looks forward to continuing to do so representing Horizon Medical Services on a national basis. We plan to continue increasing our product offerings to take Canada's largest Independent Service Organization to the next level as a premier supplier of equipment, services and solutions for the Canadian Medical Imaging Market.

Horizon Medical and EFW Radiology join forces for large Canon DR installation

(Continued from Cover Story)

trauma and bedside exams.

Optical and Imaging Heritage of Canon

Canon has a strong optical and imaging heritage. This heritage has allowed Canon to make a significant mark in the medical imaging market, particularly when it comes to high-quality, affordable DR solutions and innovations. With its solid heritage and expertise as a foundation, Canon continues to develop and deliver medical imaging solutions that will support its status as an industry innovator for years to come.

Since 1997, Canon Medical Systems has introduced eight generations of flat panel sensors (the Canon CXDI-11/22, Canon CXDI-31, Canon CXDI-40G, Canon CXDI-50G, Canon CXDI-40C, Canon CXDI -40EG, the Canon CXDI-50C and the Canon CXDI-40EC flat panel sensors), offering a full range of DR system solutions for various applications.

Canon Medical Systems has installed more than 1,400 DR sensor panels throughout Canada, the United States and Latin America, part of more than 3,500 DR systems that have been installed worldwide by the Canon family of companies.

A portable Canon DR Plate with a Large (14" x 17") Imaging Area

Don't forget to check out Horizon Medical's New Website:

www.horizonmedical.com

MRI from a different point of view:

Horizon Medical and Esaote have partnered with Hamilton Health Sciences to install the Esaote G-Scan for research and clinical applications

A Dedicated Weight Bearing MRI

The G-scan is an innovative MRI platform for the examination of all musculoskeletal applications.

The weight bearing , 0.25T ESAOTE G -Scan can tilt from 90 to 180 degrees

The 0.25 Tesla, open and tilting design is the new and innovative way of doing MRI in which the position of the patient becomes an integral part of the outcome of the examination

Imaging the spine in its natural, weight-bearing position has been one of the targets of MRI development. There are significant biomechanical changes from the recumbent to the weight-bearing position and several pathologies are affected by these mechanical changes. MR imaging of the spine in the natural standing position is therefore the most logic solution and that is exactly what G-scan is about, to give you the different view.

Simply push the button of joint under examination Fast and easy patient positioning with:

Instant Positioning

Another unique feature is "Instant positioning". Once the patient has been positioned on the table, just press the button of the joint under investigation, which automatically moves the patient and coil in the isocentre.

Real-Time MR

G-scan comes with the real-time MR feature. Using a fast acquisition sequence, the display on the gantry will show in real-time the MR image of the joint assuring fast and accurate positioning.

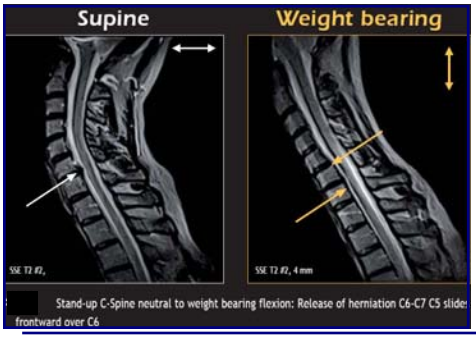
G-scan is a musculoskeletal MRI system specifically developed to perform this kind of examinations.

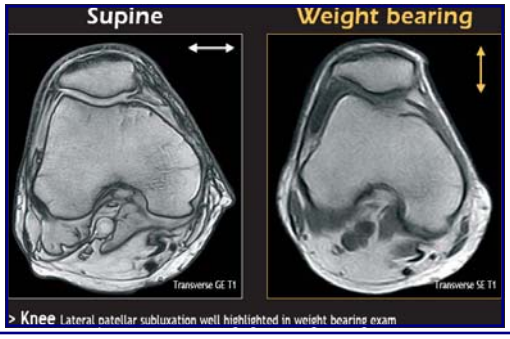
Unlike a multi purpose MRI, all aspects of the G-scan system, from coils to user interface, have been developed and optimized to perform in the most efficient and comfortable way for musculoskeletal MRI examinations. A single radiologist or technician therefore can do system handling and patient positioning.

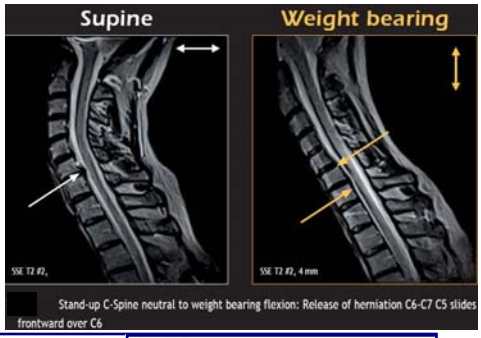
Thanks to the G-Scan's unique tilting design, the gantry can be rotated to move the patient in a true weight-bearing position. Normally the patient will be imaged, first in the traditional supine position and then in the upright weight-bearing position also to make differential diagnosis possible.

User Interface is very simple and user friendly

The user interface is very simple and user friendly, routine exams can be performed by just a few mouse clicks. Also the most expert user will be fully satisfied as all scanning parameters can be personalized and the custom sequences can be stored and integrated in the normal menu structure for subsequent use.







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Integrating Diagnostic Imaging Solutions

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