

INTERVENTIONAL SERVICES EXPANDED

With the opening of our second office at 44-01 Francis Lewis Blvd, a new interventional suite was designed to provide minimally invasive vascular procedures on an outpatient basis. Since October 2002, our interventional team has successfully performed more than 1600 procedures.

Recently, we have expanded our hours, providing service from 8 a.m. to 6 p.m. Monday through Friday.

The Interventional Radiology section mainly performs procedures in two areas: Dialysis access management (treating of failing or thrombosed AV grafts and fistulas), and oncological venous access (placement of infusions). A board-certified, fellowship-trained Interventional Radiologist with Certificate of Added Qualification (CAQ) in Vascular and Interventional Radiology performs every procedure. A full time ACLS trained nurse monitors the patient during the

procedure. In addition, an experienced interventional radiology technologist assists in every procedure. A set-up and monitored recovery area is also available.



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DIGITAL X-RAY AND FLUOROSCOPY TO BE INSTALLED

MSR has purchased digital X-ray and fluoroscopy unit to replace our current standard analogue unit. Installation should be finished by October.

There are numerous advantages to digital radiography, which will improve our service to both the patient and referring physician.

The exam time will be shortened as the patient does not have to wait for film development. As the images are immediately available to the radiologist, reports will be generated even faster. The referring physicians may also view studies through the internet. In addition, there is no possibility of lost or misplaced films.

Also, patients and physicians may obtain original-quality films.

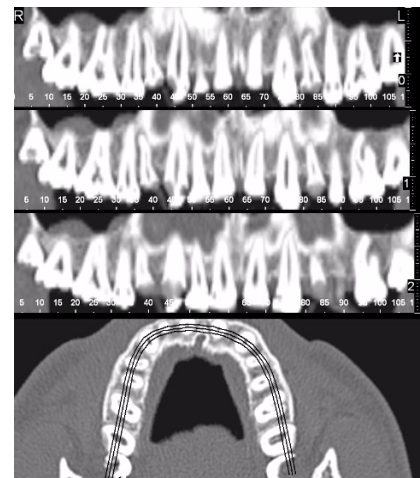
Digital X-ray is a step closer in our efforts to have a 100% digital practice. With installation of digital mammography in the near future, our goal will be accomplished.

DENTA-SCAN NOW AVAILABLE

Main Street Radiology-Bayside recently installed the complete Sim-Plant dental CT program including editing from **Columbia Scientific**, a *Materialise Company*. Installation of the **Denta-scanning** package was completed in June, and MSR is now a certified *Materialise* Sim-Plant processing site.

With a state-of-the-art 16-detector spiral CT, we are able to provide accurate 2D and 3D images of the maxilla and mandible needed for implant surgery. With interactive features of Sim-Plant technology, "virtual surgery" can be performed.

All Denta-scans at MSR are interpreted by one of our three board-certified, fellowship-trained neuro-radiologists.



CASE OF THE MONTH

OSTEOCHONDRAL LESION OF THE TALUS

History: 23 year old male with left ankle pain. The patient was referred to Main Street Radiology-Bayside for a non-contrast ankle CT

Findings: There is a 2.3cm osteochondral lesion at the dome of the talus medially, with a 1.3cm loose fragment depressed within the defect. In addition, cyst formation is seen beneath the loose fragment within the body of the talus. (Figure #1 Coronal Image) (Figure #2, Sagittal Image) (Figure #3 Axial Image) (Figure #4 3D Image)



Figure 1

Discussion: Osteochondral lesion of the talus is considered the chronic phase of a compressed or avulsed talar dome fracture. The most common sign/symptom is persistent ankle pain after an inversion injury. The clinical profile includes chronic ankle pain/sprain, stiffness, swelling, ecchymosis, clicking, locking, giving way, and reduced motion.

The average age at presentation is 25 years, but is also known to occur in the fifth and sixth decades. The lesion is not common in children. The lesion is more common in males (67%) than females (33%).



Figure 2

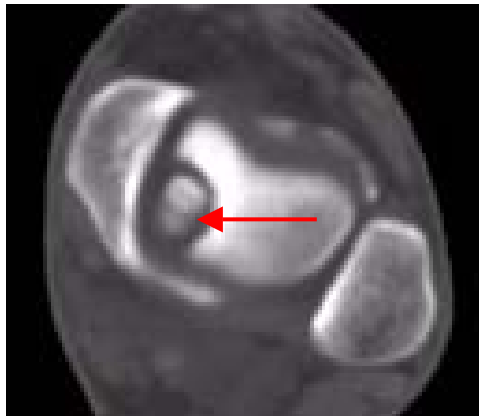


Figure 3



Figure 4

The etiology of the lesion is thought to be related to direct trauma or repetitive microtrauma. Trauma and a predisposition to talar dome ischemia with increased joint pressures, forces synovial fluid into the fracture site and prevents healing. The subchondral fracture is then susceptible to avascular necrosis.

The natural history and prognosis, without treatment, include joint stiffness, ankle instability and

degenerative arthritis. There is a staging pattern based on non-contrast CT criteria which includes:

Stage I: A cystic lesion with an intact roof.

Stage IIA: A cystic lesion with communication with the talar dome.

Stage IIB: An open articular surface lesion and nondisplaced fragment.

Stage III: A non-displaced lesion and lucency.

Stage IV: A displaced fragment.

Both conservative and/or surgical treatments are available. Conservative treatment is utilized with Stage I and II lesions. They include reduced activity, with limited ankle motion for Stage I lesions. Casting is performed with acute Stage II lesions. Surgical treatment is performed with Stage III + IV lesions. They included free fragment excision, curettage, drilling, and abrasion arthroplasty.

At MSR-Bayside, joint and extremity CT examinations are performed on a 16-detector spiral CT utilizing 0.75 mm slices. The acquisition of sub-millimeter slices results in near-isotropic resolution, which enables reconstruction of images at any plane or angle from the original data set without losing resolution. Sagittal, coronal and 3D images are routinely generated from the original axial scan. With older technology, to obtain high quality images at a different plane, second set of images must be obtained after repositioning the patient, resulting in higher radiation dose to the patient. This new technology available at MSR results in highest quality images with less radiation to the patients.

(Case prepared by Anthony Italiano, M.D.)

