Medical Imaging Northwest News

Technology in touch with you…

July 2007

MultiCare Tacoma Outpatient Imaging Department Opens July 23, 2007

Allenmore Hospital's new 65,000-square-foot 'C' Building, will house a comprehensive outpatient imaging center. This imaging center is MultiCare's first full-service, dedicated outpatient medical Imaging service in Tacoma. The building is scheduled to be completed by July 23, 2007.

With the opening of this new center, patients will have the option of an outpatient setting rather than a hospital for their imaging exams. The imaging center will offer general services in Nuclear Medicine, CT, MRI, Radiology (excluding Fluoroscopy), and general ultrasound.

Joe Larson
MultiCare TG/MB-CHC Medical Imaging Manager
Imaging Center Project Manager of C Building

When asked about the imaging center project, Joe Larson, Medical Imaging Manager, at Tacoma General and Mary Bridge Children's Health Center said, "I am very excited about the opening of this new outpatient center. For the first time we will be able to provide full-service medical imaging services that will be focused on and dedicated to meeting the needs of our community. This center will offer easy access to parking and a comfortable medical office-like setting to our patients. New furniture in a beautiful new building will create a more relaxed environment for patients."

When asked about the specialties moving into the building, Joe said, "There will be a new surgical group, a family practice and an internal medicine group joining us in the building. In August, MultiCare Breast Health will be moving to 'C' Building and we will provide digital mammography, breast ultrasound and bone density (DEXA) testing under the management of Marcy Parson."

Andrew R. Levine M.D.
Board Certified Radiologist

"We look forward to continuing our long-standing partnership with MultiCare and the physicians and other healthcare providers around the Allenmore campus. Our new Outpatient Imaging department will offer more comfort and convenience to our patient's and their families, without the competition for resources experienced in the hospital environment. The complete 'digital environment' (non-film) will allow images to move to radiologists with different areas of expertise for interpretation, also improving patient care."

Right MCA Infarct-Imaging Study for July

Allenmore Radiology Department

The middle cerebral artery (MCA) is by far the largest of the cerebral arteries and is the vessel most commonly affected by cerebrovascular accident: the sudden death of brain cells due to lack of oxygen when the blood flow to the brain is impaired by blockage or rupture of an artery to the brain. The MCA supplies most of the outer convex brain surface, nearly all the basal ganglia, and the posterior and anterior internal capsules. Infarcts that occur within the vast distribution of this vessel lead to diverse neurologic sequelae. Understanding these neurologic deficits and their correlation to specific MCA territories has long been researched. More recent research has focused on the presence of specific neurologic deficits after MCA stroke and correlation to outcomes and prognosis. Such efforts are important in enabling emergency department physicians to ascertain who may benefit from emergent antithrombotic therapies. Furthermore, these research efforts may later allow physiatrists to target rehabilitative efforts more effectively in appropriately selected patients who may derive benefit.

Jonathan M. Kell M.D.
Board Certified Radiologist

Advances in CT have led to the development of CT angiography (CTA) and CT perfusion (CTP). These minimally invasive imaging modalities are rapidly developing into powerful tools for the diagnosis and treatment of both ischemic and hemorrhagic stroke. They hint of a future in which diagnostic catheter angiography may be virtually eliminated, and only therapeutic procedures will be invasive.

CT Angiogram of the Head

There is an acute to sub-acute infarction within the right MCA territory, predominately involving the right temporal lobe and insular cortex, as well as the globus pallidus.

222 Professional Center
222 15th Ave SE, Puyallup, Washington

Evening Appointment Hours:
MRI | Mon-Fri Last Appointment 6:30pm
Mammo | Mon-Fri Last Appointment 6:50pm

Sunrise Imaging Center
11212 Sunrise Blvd, Suite 200, Puyallup, WA

Evening Appointment Hours:
MRI | Mon-Fri Last Appointment 7:00pm

Medical Imaging Northwest News is a monthly publication designed to tell the community about our physicians' expertise and imaging studies done at Medical Imaging Northwest's outpatient centers and partner sites.

If you have questions, comments or ideas for future publications, you may contact Vicki Brown, Marketing Communications Manager at Vbrown@minw.com 253-841-4353.

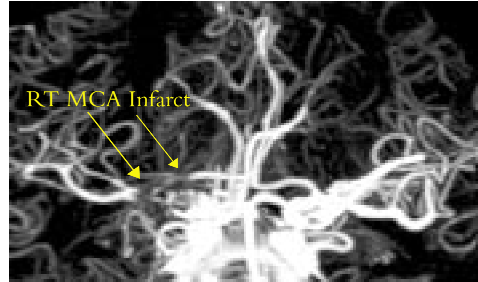
Thank you for your interest.

Post-contrast images demonstrate occlusion of the distal supraclinoid right internal carotid artery, with "tram-track" sign indicative of acute intraluminal thrombus. This occlusion extends into the proximal M1 and A1 segments on the right side. The more distal branches of the right MCA and right AVA opacify with contrast, indicating incomplete occlusion or cross-filling.

Conclusions:

Right MCA Infarction. Apparent acute thrombosis of the supraclinoid right internal carotid artery, with extension into the proximal M1 and A1 segments. Opacification of distal MCA branches suggest partial occlusion of this vessel. Distal opacification of the right ACA branches suggest partial occlusion/cross-filling from the left side.

Right MCA Infarct:
Dr. Jonathan Kell, Neuroradiologist, on CTA:



"CT angiography is an extremely powerful tool in the workup of cerebral vascular accidents, and is often under-utilized, due to adherence to outdated algorithms," states Dr. Jonathan Kell, Medical Imaging Northwest Neuroradiologist. "We shouldn't wait for study data to come out to modify our workups of stroke and TIA, when the benefits are obvious. We did not wait to prefer CTA to V/Q scans for pulmonary embolism, although the study data was slow to confirm what was obvious clinically. Technology moves too fast, and our patients deserve the best study available.

In the neck, CTA is superior to both ultrasound and MRA, with higher resolution, and improved evaluation of plaque calcification. Evaluation of luminal stenosis is superior on CTA compared with MRA, and most operators consider it slightly superior to ultrasound as well," says Kell. "CTA is also superior to ultrasound in its ability to evaluate all four vessels throughout their extent, and is superior to MRA at the vessel origins in both the chest and neck. Being faster, multidetector CTA is also less susceptible to patient motion than is MRA, a common problem in patients with altered mental status. I feel that CTA should basically replace MRA in the neck, at least for symptomatic patients.

In the brain, CT angiograms can help distinguish between thrombosis and embolus, and it also identifies aneurysms and vascular malformations with improved sensitivity and specificity. Some vascular malformations are poorly assessed with MRI/MRA due to slow flow, especially within draining veins.

Lastly, there is likely a place for CTA in the work-up of patients with non-traumatic subarachnoid hemorrhage, since sensitivity for small aneurysms is quite good, even compared to the gold standard of angiography. These patients can often be at least risk-stratified by CTA, helping prioritize access to invasive conventional angiography," states Dr. Kell

Stroke is the leading cause of morbidity and the third-leading cause of mortality in the United States. It is also the most common neurologic reason for hospitalization. Although we have made great strides in the treatment of stroke, the overall incidence will continue to rise as our population ages. Primary and secondary prevention of stroke is important to decrease its incidence and its associated morbidity.

More than 700,000 people in the U.S. suffer a stroke each year, of which approximately 80% are ischemic and 20% are hemorrhagic. Historically, little could be done to reduce the morbidity and mortality associated with stroke; new treatment strategies, such as thrombolysis therapy, have been shown to improve patient outcomes.

It is extremely important to be aware that, clinically:

- It is hard to distinguish between bleed and infarct.
- It is hard to distinguish between embolus and thrombus.
- It is often difficult to distinguish between lesions of the anterior circulation and of the posterior circulation.
- It is often difficult to determine if a TIA is merely reversible ischemia or a completed stroke with rapid recovery.

Risk factors for stroke include the following:

- hypertension
- smoking
- alcohol abuse
- hypercholesterolemia.

Stroke: Know the signs and act in time:

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden, severe headache with no known cause