

November 2012

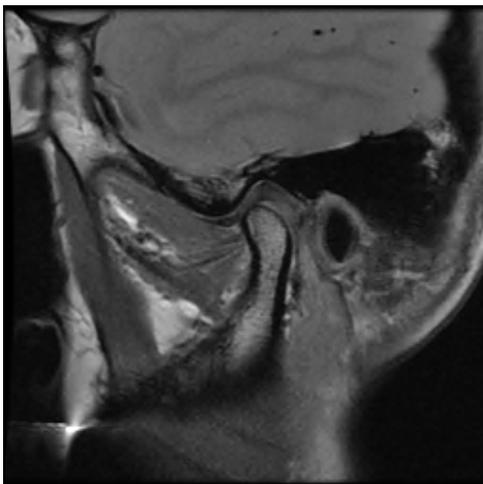
Temporomandibular Joint Imaging

The temporomandibular joint (TMJ) is a synovial joint enabling mandibular movement. It can be affected by a wide variety of conditions including congenital anomalies, arthrosis, ankylosis and internal derangement of the disc. TMJ complaints are common, affecting up to 28% of the population. Females are more commonly affected than males.

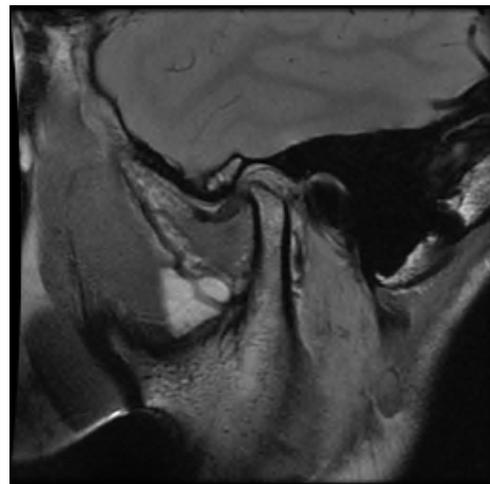
The TMJ is composed of the condyle of the mandible, the articular fossa of the temporal bone and the articular disc along with its attachments and capsule. The disc is attached anteriorly to the lateral pterygoid tendon and posteriorly to the temporal bone via a band of elastic connective tissue called the bilaminar zone. The disc divides the joint into the superior and inferior compartments; the superior allows anterior and posterior translation and the inferior compartment allows rotation. In mouth opening the mandibular head rotates under the articular disc, which in turn translates anteriorly in relation to the temporal articular fossa. This process is commonly called disc recapture or reduction and the process is reversed on mouth closing.

The two most common patterns of disc derangement are anterior dislocation with recapture on mouth opening and anterior disc dislocation without recapture.

Depending on the underlying pathology and its severity treatment can be either medical or surgical, with a variety of surgical options including joint replacement.



Normal recapture of the articular disc on mouth opening



No recapture of the articular disc on mouth opening

Imaging:

Plain film and to a greater extent CT are able to provide detail of osseous contour, degree of anterior translation of the mandibular head and an estimation of cartilage thickness. However, neither enable visualization of the internal joint structures, in particular the articular disc which is vital in evaluating joint integrity and function.

TMJ MRI has essentially replaced TMJ arthrography and is able to provide exquisite detail of the internal joint structures in particular the articular disc. Using a combination of T1, T2 and Proton density imaging, the articular cartilage, subchondral bone, articular disc, capsular structures and adjacent muscular attachments can be assessed. Furthermore the movement of the articular disc can be visualized with static closed and open mouth views or even cine MRI to assess disc movement in real time. In addition 3T imaging provides even better detail of the internal joint structures than 1.5T or lower field strength MRI.

Dr ANDREW SMITH

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Fluoroscopic Services Offered at ARG

At our rooms at 101 Remuera Rd we perform a full range of fluoroscopic procedures including barium swallows and meals, arthrograms and fluoroscopic guided injections.

Our rooms on Wairau Rd perform arthrograms and fluoroscopic guided injections.

We also offer a hysterosalpingogram (HSG) service at our rooms in Royal Oak.

Please call us with any inquiries or to make an appointment.

101 Remuera Rd: Ph 529 4850 press 1 for appointments

212 Wairau Rd: Ph 442 2962 press 1 for appointments

Royal Oak: Ph 624 3023

Intelerad

ARG is now up and running with a new PACS (Picture Archiving and Communication System). Intelerad is a market leader in providing imaging solutions for healthcare and its advanced software allows users access to their patients' images with the right tools to operate the system.

For most users the IntelConnect web-portal is an ideal solution, allowing display of images with specialist radiologist reports attached to each case. For users with more sophisticated demands the full functionality of IntelViewer is also available.

The advantages of the system include easy access from any computing device with access to the internet, including access over the cell phone network on smartphones and tablets. This allows both referrers and radiologists instant access to images allowing greater flexibility and responsiveness, all aimed at patients and referrers receiving timely and accurate specialist radiologist reports on their imaging.

Our IT department is currently in the process of switching users over to Intelerad. If you require more information or help with the use of Intelerad please do not hesitate to contact us on....

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