



Thank you to Sahaj Singh, Chief Radiographer at PRP Moore Park for contributing this issue.

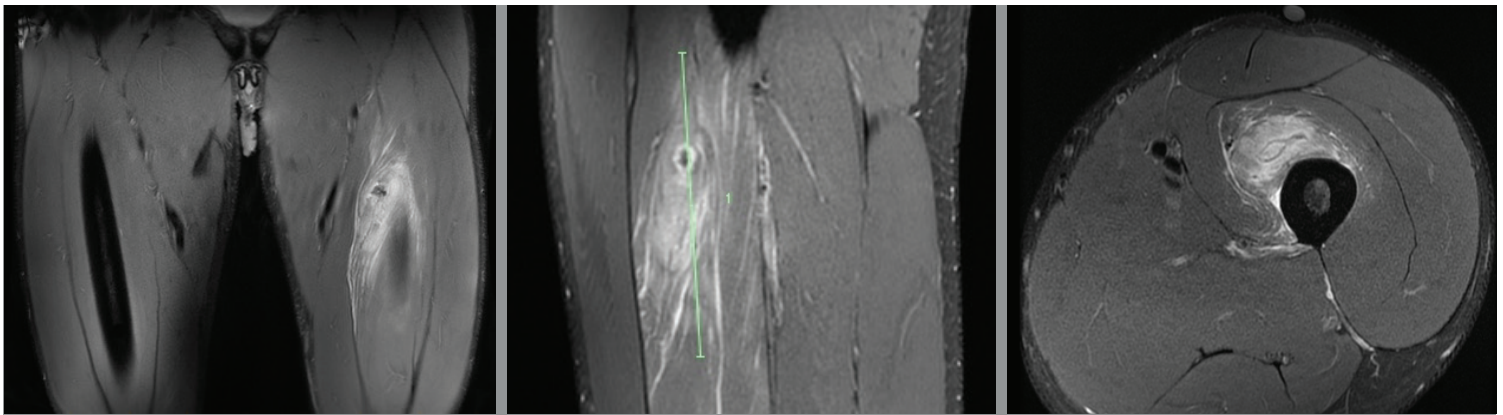
THE ROLE OF MRI IN ASSESSING SPORTS INJURIES

CLINICAL HISTORY

A 27 year-old professional AFL player presented to our department for investigation of a suspected vastus intermedius muscle strain that occurred 10 days earlier. The patient demonstrated moderate swelling and pain in the anterior left thigh.

IMAGING FINDINGS

3 Tesla (3T) Magnetic Resonance Imaging (MRI) was performed.



Coronal, sagittal and axial PD FS MRI images demonstrating the 14 cm vastus intermedius contusion, together with an area of early myositis ossificans.

DISCUSSION

- Sport players that commonly present to our department cannot always recall 'cork' type injuries as they often receive multiple contusions during their day-to-day training and matches. This patient also stated that his quadriceps muscle felt stiff and was feeling gradually worse over the past week. This was due to blood products being contained intramuscularly. Pressure is commonly built up within the muscle restricting its function.
- Stretching and contraction can be quite painful causing recovery time to be delayed.
- The early characteristics of myositis ossificans in the athlete is a result of the body incorrectly laying down nonneoplastic bone recovery cells within the muscle tissue. Although most common in muscles, myositis ossificans can also present within tendons, joint capsules, ligaments and fascia. The swelling and solid bony lump within the anterior thigh can be seen in an X-ray and also on MRI approximately 1.5 weeks following injury. The bony formation will inhibit muscle function and causes rigidity.

TREATMENT PLAN

Now that the sporting team's medical staff are aware of the diagnosis from the scan, they will be monitoring the patient's quadriceps closely over the upcoming weeks, ideally hoping that the body reabsorbs the abnormal bony growth. If this is not the case, surgical removal may be necessary.

PRACTICE POINTS

This case study exemplifies the ongoing contribution that MRI can make in the differentiation of muscle strains versus contusions, whilst efficiently diagnosing complications such as myositis ossificans. At PRP Diagnostic Imaging, MRI is offered at almost all of our practices.