

## Introduction to Radiology for Physiotherapists

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I had the opportunity to attend an MACP led course designed to advance the knowledge and skills of higher level physiotherapists in interpreting radiology. The course was split into 3 days focusing on: knees; spine and shoulders. It was led by three Physiotherapists of ESP and Consultant level currently working in extended roles with knowledge and experience of reviewing imaging. This was a huge draw towards this course as it allowed me to understand the level of knowledge and reasoning required to fulfil an extended role.

The first day focused on the knee but began with an introduction to the legislation required for non-medical practitioners to refer for imaging. There was highlighting of the potential dangers and level of radiation exposure associated with imaging. Also time was spent on discussing the contraindications for referral and the main indications. I took from this session the necessity of ensuring that patients are only referred for imaging if this will impact on their future management.

The second aspect of day one focused on imaging within the knee. We began by assessing the various views associated with plain film radiographs and the pros and cons to ordering the various views. This progressed to reviewing MRI views and initially establishing a 'normal' knee and then comparing this with pathology. Our main focus centred on the menisci and cruciate ligaments. A normal meniscus should represent as a bow tie with disruption of this potentially indicating pathology. We were warned of the dangers of seeing a meniscal tear in a normal image that actually showed the transverse ligament. In terms of reviewing the cruciate ligaments the area of focus was whether a fibrous strong band of ligament was visible in the sagittal views. We finished the day discussing case studies in small groups firstly discussing what the image was and which view and secondly discussing the pathology seen.

The second day looked at the lumbar spine. We re-iterated the indications for referral for imaging and in the case of the lumbar spine this covered trauma, suspected bony pathology/injury, bone pain, structural deformity, congenital anomalies and spondyloarthropathy. We looked at a structured way to assess a lumbar spine X-Ray initially with the lateral views assessing the anterior and posterior lines along with the spinolaminar line to determine instability. Then AP views were assessed to look for the 'owls face'. The owls face was made up of the pedicles representing the owl's eyes, the transverse processes the ears, the spinous process the nose and the intervertebral space as the mouth. Changes to this 'owls face' would likely indicate pathology particularly in the presence of a winking owl which could indicate a metastatic tumour. Other pathologies were discussed with relevant imaging to show how these patients present. These include spondylosis, Arthrosis, spondylolysis, spondylolisthesis, pars defect, sacroiliitis, Ankylosing spondylitis, infection and discitis. We continued the day discussing MR imaging of the lumbar spine with a revision session on normal anatomy before moving to pathology. The day ended with case studies.

The third day was centred on the shoulder and followed the same format as the previous two days. There were images initially of plain film radiology or normal shoulders then pathological shoulders before looking at MR imaging. The day also ended with a look at relevant case studies.

Overall I would fully recommend this course to others looking to progress their knowledge and skills in imaging. It covers the expectations and legal requirements for those referring with a particular focus on clinical reasoning. It then covers how to review those images with a systematic approach. All lecturers emphasised that this course did not enable participants to report on imaging and that this must be completed by a radiologist in line with the royal college of radiologists guidance.

I would like to thank the MACP for providing a thoroughly enjoyable and rewarding course and for awarding me the CPD bursary to help fund the course.

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