

LOW BACK PAIN AND FOOTBALL

Edwards T

Unisports medicine, FIFA Medical Centre of Excellence,
Auckland, New Zealand



Lumbar injuries in football have been shown to occur in 5% of players in UEFA Champions League from 2001-2012. Acute injuries occur at similar rates in other studies also. Research looking at the rate of chronic back pain in the younger footballer has reported an incidence of around 28% of young players but with a reported lifetime prevalence of low back pain ranging from 30% to 74%. The most common diagnosis is of non-specific muscular injury, but in those who present with structural change, the return to play period was longer. In the younger footballer, stress fractures of the pars inter-articularis are well described and not to be missed. In overhead sports like tennis and in cricket fast bowlers, pars inter-articularis fractures are usually described in the non-dominant side. This relationship is yet to be proven in football players and research to date has been of small cohorts. As the player ages, disc and facet joint degenerative changes become more common. In the adolescent player consideration should be given to the possibility of Scheuermann's Disease or an adolescent disc prolapse, as part of the differential diagnosis. Scheuermann's disease may affect the thoraco-lumbar junction where it may present as pain and stiffness in the adolescent player. The prevalence rate of Scheuermann's disease is between 0.4-8% in the general population and so this is reflected in the football population. Adolescent disc prolapse is a relatively uncommon condition (between 0.2-3.2% of the population) but is markedly debilitating and needs to be fully investigated. The pain may be predominantly back pain rather than leg pain in this age group. It may be initially managed conservatively but surgery may however required if pain is debilitating and neurological symptoms predominate. Establishing the diagnosis in the footballer's lumbar pain is important in establishing return to play guidelines and the clinical management of the athlete's problem.

The differential diagnosis may include:

- Acute trauma, e.g. fracture
- Disc injury, e.g. annular tear or herniated nucleus pulposis
- Painful motion segment
- Spondylolysis / Spondylolisthesis
- Spinal stenosis
- Sacroiliac pain
- Other, e.g. tumour, inflammatory arthritis

Appropriate use of radiological imaging may expedite establishing the diagnosis and also aid in the development of a management plan. Minimising the cumulative effect of radiation in the professional athlete needs considering, in an effort to reduce this risk over a long career. Plain films remain the initial baseline investigation but Magnetic Resonance Imaging (MRI) is the obvious "non-radiation imaging" modality and has become the next investigation of choice in most cases. There can be cases where scintigraphy can help form a diagnosis, followed by Computed Tomography scanning. However, with the improvements in modern MRI, these modalities are becoming less commonly used. It is also imperative that the Sports Physician also considers the possibility of inflammatory arthritis in more chronic lumbar or sacroiliac pain. Young football athletes are in the age group where these conditions may present, e.g. Ankylosing Spondylitis. It is important to consider this diagnosis in the differential. Sacroiliac pain, or sacroiliitis on imaging, would be a trigger to instigate a full inflammatory screen. Tumours are also seen in the young athlete and need to be considered and are not to be missed. In summary, lumbar pain is a significant issue in football. Accurate diagnosis, optimal investigation, and leading edge management guided by best research, are the keys to returning the athlete to play in the shortest time.