

Ankle sprains: who needs x-rays?

Ankle sprains are exceptionally common and range in severity from a very mild injury that is shrugged off and forgotten about within a few minutes, to a disabling incident that can have you on crutches for weeks.



BY DR PETER GENDALL

Serve ankle sprains can be disabling

Most ankle sprains, or 'rolled ankles', result from inversion at the ankle joint. This mechanism of injury puts a strain on the lateral structures. Such sprains are common in all running sports, particularly when there is a rapid change in direction. They can be particularly severe when the rolled ankle occurs after jumping. Netball contributes a significant number of major ankle sprains to our local clinics; some of the worst of these occur on landing a jump or leap.

Rule out broken bones

Who needs further investigation after an ankle sprain? Our initial concern is to rule out a broken bone or dislocation. Thankfully there are several useful sets of rules and many good indications of fracture that our emergency doctors know all about. Among them are the Ottawa rules. This set of simple rules is used in accident and medical

departments to determine who should have an ankle x-ray. These rules are very sensitive and only of moderate specificity, meaning that almost everybody with a fracture is picked up. Many without fractures also fit the rather simple criteria. Most of those x-rayed will not have fractures.

Most don't have breaks

Useful as they are, the Ottawa rules do not fit all situations. In particular they are not validated for younger children. Actively growing bones of young children have different fracture patterns from adults. In order to pick up these fractures the percentage of children needing an x-ray after a rolled ankle is higher than adults.

Children have different fracture patterns from adults

We need to find who has a fracture to ensure they get the correct treatment.

If there is no fracture or separation of the ankle bones most patients will go on to be treated for an ankle sprain and will progress well, usually getting back to normal activities somewhere between three and six weeks.

If recovery is delayed further investigation with ultrasound and/or MRI can be very useful. The ultrasound is sensitive in detection of ligament and tendon tears and assessment of their severity. MRI is also useful in detection of these tears, and, in addition, can assess joint and bone damage which may not be visible on x-ray.

When recovery is slow these techniques usually tell us why and can give some idea of how long it might take to get back to normal activity. For instance it will obviously take longer to recover from multiple high-grade ligament tears than a single simple ligament strain. Identifying the exact reasons for prolonged disability can also help us select the best ongoing treatments.

Ankle sprains, simple to complex. When you are not progressing further, imaging can help determine why.

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