Supination injuries of the ankle ligament are among the most common injuries. They account for about 25% of all injuries in the musculoskeletal system. The most commonly injured part of the lateral ligament complex is the anterior talofibular ligament. In case of a multiligament rupture apart from the anterior talofibular ligament the calcaneofibular ligament is ruptured concomitantly. The calcaneofibular ligament apart from stabilising the ankle joint is a primary stabiliser of the subtalar joint as well. Theoretically a subtalar instability is present in this situation.

Subtalar instability

In case of a multiligament rupture apart from the ATFL the calcaneofibular ligament is ruptured concomitantly. Theoretically a subtalar instability is present in this situation. Apart from this combined problem subtalar instability can also be an isolated problem. In the acute phase the combined ligament rupture resembles the isolated ATFL rupture with swelling, haematoma discoloration, pain on palpation and positive ADT. The chronic subtalar instability presents late with complaints of persistent instability. The clinical examination includes local pain over the sinus tarsi and increased inversion to the hindfoot and increased external rotation or medial translation of the calcaneus only described by very experienced examiners.

There are several methods described for imaging subtalar instability, like stress tomografy, subtalar arthography, Broden stress view, CT scanning and more recently MRI and diagnostic subtalar arthroscopy. Arthrography and arthroscopy are invasive procedures with accompanying risks at complications. The stress radiography is still in favor because subtalar instability is a dynamical problem. However in recent literature no gold standard has been described.

Acute multiligamentair leasions are treated the same way as ATFL leasions. There is no evidence for primary surgery. Like other hindfoot injuries, many patients improve with conservative measures. Proprioceptive training and peroneal strengthening gave better results than casting or taping and ROM exercises.1

There is not enough evidence in the literature for clinical and radiological diagnostics of subtalar instability, but because the treatment and final results resemble those of the isolated ATFL rupture diagnostics in the acute situation can be limited to diagnostics for the ATFL.

Discussion

In recent literature we didn’t find any new evidence about physical examination of the ankle or diagnosis of the sprained ankle.

Delayed physical examination still provides a diagnostic modality with a high sensitivity and specificity. This strategy has been confirmed to be the strategy of choice in an editorial in the British Journal of Bone and Joint Surgery.

References:


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<th>Comparison</th>
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<tr>
<td>Delayed physical examination versus arthrography</td>
<td>3 CTs all of moderate or large size proved no difference in outcome</td>
<td>Grade A1</td>
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<tr>
<td>Physical examination &lt;48 hours versus arthrography</td>
<td>5 CTs 2 of large size pooled in favor of arthrography</td>
<td>Grade A4</td>
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3 Multiple Choice Questions

1. The diagnosis of acute lateral ankle ligament rupture is based on:
   a. result of physical examination
   b. result of physical exam + stress X-rays
   c. result of physical exam + arthrography
   d. result of physical exam + echography
   e. stress X-rays, arthrography or echography

2. The outcome of physical examination for detection of an acute lateral ankle ligament rupture is based on:
   a. inspection
   b. palpation
   c. manual anterior drawer test
   d. A+B+C
   e. Talar tilt test

3. The best available treatment for an acute lateral ankle ligament rupture is:
   a. supervised neglect (=no treatment)
   b. elastic support
   c. inelastic tape bandage
   d. brace
   e. operative treatment
The right answers are: 1 – a, 2 – d, 3 - e