The Bone & Joint Journal

Journal club: Orthopaedic Twitter journal club, 8 June 2015

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Twitter metrics: Twitter hashtag: #gsttjournalclub: 110 tweets
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Hutchison AM, Topliss C, Beard D, Evans RM, Williams P. The treatment of a rupture of the Achilles tendon using a dedicated management programme. *Bone Joint J* 2015;97-B:510–515.

Introduction: The paper describes a case series of 273 patients with acute Achilles tendon ruptures that that were managed with accordance to strict protocol.
The patients all underwent an ultrasound scan, the result of which dictated the management.
Aim

- To assess the benefits of ultrasound usage in the decision on whether to manage an Achilles tendon rupture operatively or not.

Inclusion criteria

- Patients with acute Achilles tendon ruptures that that were managed with accordance to strict protocol
- Use of ultrasound to dictate management of rupture

RESULTS
There was a large reduction in surgical repair rates when compared to pre-protocol management. This led to a perceived cost saving.
The journal club felt this was an impressive change of local service that had led to large cost savings.

CRITIQUE
Strengths of the study

Significant reduction in surgical repair rates when compared to pre-protocol management.

A perceived cost saving.

Methodological concerns

There was debate in the club over the actual details of the cost saving. During the cost analysis, an ultrasound was costed at £60, which seems rather cheap. A surgical repair was assumed to always require an overnight stay at £400, however in many institutions an Achilles repair is a day surgery procedure.

The cost benefit was for the whole of the NHS rather than the individual hospital, as the hospital itself lost the income for the surgical procedure and the generated coding.

The routine use of ultrasound to dictate treatment could overload some ultrasound services.

The outcome measures used were discussed, and there was some concern that one measure was modified by the research team. This limits the validity of that outcome measure.

The rehabilitation protocol was seen to be quite conservative.

DVT prophylaxis was also considered. The patients in this case series were only given pharmacological thrombo-prophylaxis if they had additional risk factors, which was felt to be quite conservative, but the rates of DVT and PE seemed acceptable for a high-risk group.

Clinically discharged patients were not routinely scored. This would effect the outcome scores achieved at time intervals further from surgery, probably leading to a poorer than true observed score.

Overall conclusion

The group felt this was a very interesting study and that it adds to the total body of evidence. It was felt that it would not necessarily influence the initial decision on whether to manage an Achilles tendon rupture operatively or not. The group felt that any patient aiming for conservative management could be offered an ultrasound scan to look for tendon end gaping. The ultrasound cut off for surgery was a gap of over 1 cm in full plantar flexion. This was discussed with reference to inter- and intra-observer error, plastic deformation of a failing tendon and haematoma formation. The group couldn’t decide if this was an appropriate cut-off. If there was no gap, then this rehabilitation protocol could be used.