**Specific Question:**
Does autologous blood injection provide more pain relief and functional improvements in adults with chronic tendinopathy when compared to usual care?

**Clinical bottom line**
There is no high quality evidence to support the use of autologous blood injections in the treatment of chronic tendinopathy. One very small RCT (Arik et al 2014) saw some improvement in patients with lateral epicondylitis but the numbers in the study were low.

NICE suggests evidence on efficacy of autologous blood injection is inadequate in quality and quantity and should only be used with special arrangements made for clinical governance, consent, audit or research.

**Why is this important?**
Chronic tendinopathy is common complaint in primary care settings. The most effective treatment is still under debate. Autologous blood injections can be offered in a variety of care settings for this population. A CAT undertaken in 2013 found no evidence to support their use. This is an update of that evidence.

Platelet rich Therapy (PRT) has been excluded as it is not offered within our services

**Definitions**

- Autologous blood injection - patient blood is taken and injected into the injury/painful site. It is not treated in anyway before reinjection

**Inclusion Criteria**
Search (2005-2015)

- 10 year search
Musculoskeletal Research Facilitation Group (Cat Group)
Critically appraised topic and clinical bottom line
July 2015

CAT Lead: Kay Stevenson
Email: kay.stevenson@uhns.nhs.uk
Date CAT completed: July 2015
Date CAT to be reviewed: July 2018

<table>
<thead>
<tr>
<th>Description</th>
<th>Search terms</th>
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<tbody>
<tr>
<td>Population and Setting</td>
<td>Adult Chronic tendinopathy</td>
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<tr>
<td>Intervention or Exposure (ie what is being tested)</td>
<td>Autologous blood injections, excluding PRP</td>
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<td>Comparison, if any</td>
<td>Steroid, usual care</td>
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<td>Outcomes of interest</td>
<td>Pain, function, quality of life</td>
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<td>Types of studies</td>
<td>SR, RCT</td>
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Routine Databases Searched
Clinical Knowledge Summaries, PEDro, BMJ Updates, Clinical Evidence, TRIP, Database, NICE, HTA, Bandolier, The Cochrane Library, Medline, Cinahl, Embase, PsycInfo, Professional websites, Joanna Briggs Institute, Web of science, Sports discus and Pubmed

Date of search
March 2015

Results

93 unique studies downloaded

43 potentially relevant

50 excluded studies

6 included studies
<table>
<thead>
<tr>
<th>First Author, year and type of study</th>
<th>Population and setting</th>
<th>Intervention or exposure tested</th>
<th>Study results</th>
<th>Assessment of quality and comments</th>
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<tr>
<td>Sayegh 2015 Systematic review</td>
<td>Chronic Lateral epicondylitis Search date: Dec 2013</td>
<td>Included injections: steroid, platelet rich plasma (PRP), autologous blood, sodium hyaluronate, glycosaminoglycan and physiotherapy, shock wave, laser, ultrasound, iontophoresis, topical GTN</td>
<td>22 RCTs (n=2280) Pooled data indicated a lack of intermediate to long term clinical benefit after non surgical treatments of lateral epicondylitis compared to observation or placebo</td>
<td>Assessed quality of included studies using CONSORT checklist Includes forest plots</td>
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<td>Sandray 2014 Systematic review</td>
<td>chronic tendinopathies Searched in 2009</td>
<td>Autologous blood and PRP injections</td>
<td>Identified 11 studies, 6 were observational, 5 controlled trials, only 2 of which had proper randomisation. Evidence to suggests no evidence for use in Plantar fasciitis</td>
<td>Most studies poor quality, assessed by 2 reviewers, a third used for disagreements. PEDro score used, average was 3.4. (below 6 is considered low quality).</td>
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<td>Sims et al 2014 Systematic review</td>
<td>Patients with lateral epicondylitis. Searched ‘earliest records to Feb 2013’</td>
<td>Variety of treatments including autologous blood injections, corticosteroid injections, ,iontophoresis, botulium toxin, ,prolotherapy, ,bracing, physical therapy, shock wave therapy, laser therapy.</td>
<td>58 studies included only 7 trials looked at PRP Gave a narrative overview of study results with respect to each treatment e.g. steroid injection. No pooling of data Suggested that there was no convincing evidence for one method of non surgical management</td>
<td>Assessed quality according to randomisation, blinding outcomes measures and loss to follow up. No tool was used Narrative review, no meta analysis. This approach was not not justified</td>
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<tr>
<td>Creany et al 2015 double blind RCT</td>
<td>150 Patients with Lateral epicondylitis who have failed conservative treatment 2 groups: PRP (n=80) and autologous blood injection (n=70) Had 2 injections, second one at one</td>
<td>At 6 months 72% improvement in autologous blood group, this was not statistically significant compared to baseline higher conversion to surgery in this</td>
<td>Outcome measure used Patient Related Tennis Elbow Evaluation (PRTEE) Taken at baseline Commented [JJ1]: Compared to what baseline or improvement in control group Commented [k2R1]: Hi Linda can you double check, difficult to find in the article</td>
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Summary

Most of the evidence explores the use of autologous blood injections in chronic tennis elbow. Sayegh 2015 includes many other treatments commonly used in practice to treat tennis elbow and found no evidence of effect to support the use of any non surgical techniques. There is a consistent message in the literature that larger trials need to be undertaken, as most are of poor quality and have small numbers.

Implications for Practice/research

There is little evidence to support the use of autologous blood injections in patients with chronic tendinopathies. Most of the research has focussed on lateral epicondylitis (tennis elbow). NICE guidance should be adhered to in clinical services. It states it should only be used with special arrangements made for clinical governance, consent, audit or research. If this treatment is offered, a discussion with the patient should include the evidence behind the intervention.

References


