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

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 pot treated in anyway before reinjection

Inclusion Criteria

Search (2005-2015)
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10 year search

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	Description	**Search terms**
Population and Setting	Adult Chronic tendinopathy	
Intervention or Exposure (ie what is being tested)	Autologous blood injections, excluding PRP	
Comparison, if any	Steroid, usual care	
Outcomes of interest	Pain, function, quality of life	
Types of studies	SR, RCT	

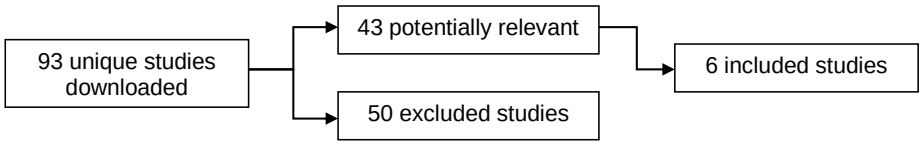
Routine Databases Searched

Clinical Knowledge Summaries, PEDro, BMJ Updates, Clinical Evidence, TRIP, Database,NICE,HTA,Bandolier,The,CochraneLibrary,Medline,Cinahl,Embase,PsycInfo, Professional websites. Joanna Briggs Institute, Web of science, Sports discus and Pub med

Date of search

March 2015

Results



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First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
Sayegh 2015 Systematic review	Chronic Lateral epicondylitis Search date: Dec 2013	Included injections: steroid, platelet rich plasma (PRP), autologous blood, sodium hyaluranate, glycosamineoglycan and physiotherapy, shock wave, laser, ultrasound, iontophoresis, topical GTN	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	Assessed quality of included studies using CONSORT checklist Includes forest plots
Sandray 2014 Systematic review	chronic tendinopathies Searched in 2009	Autologous blood and PRP injections	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	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).
Sims et al 2014 Systematic review	Patients with lateral epicondylitis. Searched 'earliest records to Feb 2013'	Variety of treatments including autologous blood injections, corticosteroid injections, ,iontophoresis, botulium toxin,, prolotherapy,, bracing, physical therapy, shock wave therapy, laser therapy.	58 studies included only 7 trails 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	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
Creany et al 2015 double blind RCT	150 Patients with Lateral epicondyitis who have failed conservative treatment	2 groups: PRP (n=80) and autologous blood injection (n=70)_. Had 2 injections, second one at one	At 6 months 72% improvement in autologous blood group, this was not statistically significant, compared to baseline higher conversion to surgery in this	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

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		month. Both delivered by ultrasound guidance	group	1 month, 3 and 6 months patients randomised by sealed envelope, Included ITT but data missing for 13%
Arik et al 2014 RCT	80 patients with lateral epicondylitis in Finland	2 groups: autologous blood (n= 40) or corticosteroid injection (40)	Autologous blood more effective at follow up than corticosteroid	Outcomes were VAS for pain. Function PRTEE (Turkish version) questionnaire, grip strength at 15,30 and 90 days. And 6 month telephone VAS. Unsure of symptom duration Low numbers

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

Sayegh ET and Strauch RJ. Does non surgical treatments improve longitudinal outcomes of lateral epicondylitis over no treatment? A meta analysis. Clin Orthop Relat Res 2015;473:1093-1107.

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Creany L, Wallace A, Curtis M, Connell D. Growth factor-based therapies provide additional benefit beyonf physical therapy in resistant elbow tendinopathy: a prospective, single blind, randomised trial of autologous blood injections versus platelet rich plasma. Br J Sports Medicine 2015;45:966-971.

Arik HO, Kose O, Guler F, Deniz G, Egerci OF, Ucar M. Injection of autologous blood versus corticosteroid for lateral epicondylitis; a randomised controlled study. Journal of Orthopeadic Surgery 2014;22(3):333-337.

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