

Specific Question:

In adults with chronic shoulder pain is a nerve ablation procedure (for the suprascapular nerve) as effective in reducing pain, in the long term compared with usual care?

Clinical bottom line

There is limited evidence to answer this question, so results should be viewed with caution. One small, well conducted RCT indicates that radiofrequency suprascapular nerve ablation is less effective than cortico-steroid injection into the shoulder complex (ACJ, GHJ and SAB) for pain and function. Injection techniques were fluoroscopy guided and undertaken in a theatre setting.

Why is this important?

We have previously identified that temporary suprascapular nerve (SSN) blocks are effective in reducing pain in the short term (EBP@keele) for patients with a diagnosis of osteoarthritis or frozen shoulder. Consequently this procedure is offered as part of our Musculoskeletal Interface Service pathway.

Until recently, our service had access to a clinician who undertook an ablation procedure to the suprascapular nerve for longer term pain relief. This was offered as part of a stepped care approach. This has recently ceased as the clinician in question changed roles.

Nerve ablation procedures (pulse Radiofrequency denervation for the SSN) are offered currently in the secondary care, but only by one clinician. It is not offered through our radiology department. Clinical leaders of secondary care pain and rehabilitation services locally are not convinced by the evidence for the efficacy or longevity of the procedure. Longer lasting SSN blocks can be undertaken using phenol, through (pulsed) radio frequency ablation or through surgery.

Due to the variation in practice, different service constraints and clinical opinion, it is important for our service to be aware of the best evidence and to be able to influence pathways of care.

Search timeframe –last 10 years

Date of search-

May 2017

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Date CAT completed: June 2017
Date CAT to be reviewed: June 2020

Getting Evidence into Clinical Practice:
Musculoskeletal Research Facilitation Group (CAT Group)
Date: June 2017

Inclusion Criteria

	Description	Search terms (In the final document this should be a combination of your clinical and librarian search terms)
Population and Setting	Adults with chronic shoulder pain	OA Frozen shoulder Chronic pain Chronic, shoulder Chronic rotator cuff syndrome Non surgical
Intervention or Exposure	Permanent suprascapular nerve block	Phenol Radio frequency ablation Ablation Nerve block
Comparison, if any	Usual care, temporary nerve block Other intervention	Steroid, local anaesthetic, usual care, temporary nerve block, analgesia, surgery Physiotherapy
Outcomes of interest	pain	Pain, function
Types of studies	SR RCT	

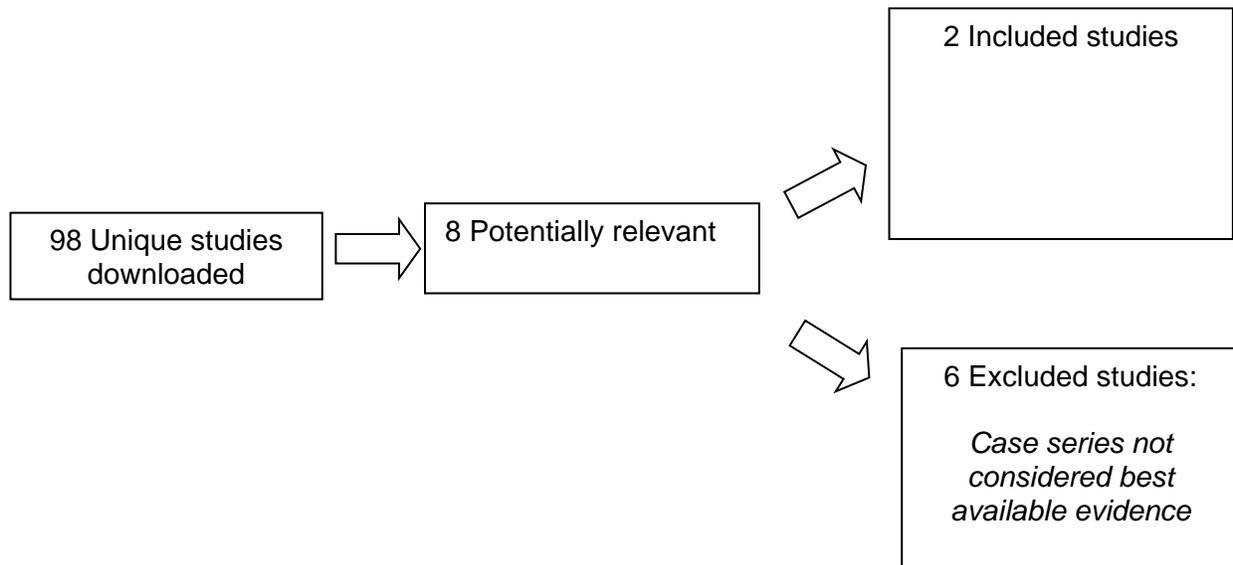
Routine Databases Searched

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 discuss and Pub med

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Results of the search



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Table 1- Detail of included studies

First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
<p>Eyigor et al 2010</p> <p>Single blind RCT</p>	<p>Shoulder pain over 3 months or with cuff pathology identified on ultrasound scan months</p> <p>Age 18-80</p> <p>Undertaken in Department of Anaesthesiology and Pain, Turkey</p>	<p>50 patients randomised by random number table into 2 groups</p> <p>Group 1- Fluoroscopy guided injection in theatre into 3 areas of the shoulder (ACJ, SAB, GHJ).</p> <p>Group 2- Pulsed radiofrequency performed in theatre, fluoroscopy guided</p>	<p>Both groups identified significant improvements in VAS, Range of Motion (ROM) and SPADI at all time points when compared to pre-treatment measures</p> <p>When groups were compared with each other, significant difference found between the groups in favour of Group 1 in terms of VAS at night (weeks 1, 4 and 12), VAS at rest (weeks 1) and VAS during movement (week 1)</p> <p>No difference in the groups in improvement in movement</p> <p>Significant different in SPADI in favour of groups 1 (1, 4 and 12 weeks)</p> <p>Paracetamol use, patient and clinician satisfaction better in Group 1</p>	<p>Clear inclusion and exclusion criteria</p> <p>No loss to follow up</p> <p>No intention to treat analysis</p> <p>Small numbers</p> <p>Appropriate outcome measures (VAS, SF36, SPADI)</p> <p>Not UK study</p> <p>Some aspects do not represent UK practice e.g. injections undertaken in theatre setting</p>
<p>Gofeld et al 2013</p>	<p>Shoulder pain over 3 months, included adhesive capsulitis, cuff tears, tendinosis. Failed conservative treatment</p> <p>Canadian study</p>	<p>22 patients randomised by labelled sealed envelopes</p> <p>Group 1- lidocaine alone, fluoroscopy guided</p> <p>Group 2 – Lidocaine and pulsed radio frequency</p>	<p>No statistical difference between the groups over three months</p>	<p>Small numbers (n=22)</p> <p>High drop outs (50% in Group 1, 33% in Group 2)</p> <p>Increased chance of type 1 error</p>

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Summary

Both of the identified studies were undertaken outside of the UK, this may affect the generalisability of the findings. Injections in both studies were undertaken in a theatre setting and via the use of fluoroscopy, this may not reflect current UK practice. The Canadian study had very small numbers with a very high drop out rate so conclusions cannot be drawn from the data.

Implications for Practice/research

Based on the best available evidence, there appears to be little additional value in patients receiving radiofrequency nerve ablation for their chronic shoulder pain. Better improvement in pain and function have been observed by injecting three areas of the shoulder with steroid and local anaesthetic.

Patients may be offered steroid and local anaesthetic injection to the shoulder complex as part of a package of care, or indeed a suprascapular nerve block (see ebp@keele for evidence). There is no convincing evidence that they should be offered radiofrequency nerve ablation as the next step in the pathway.

What would you tweet? (140 characters)

Radiofrequency suprascapular nerve ablation not as good as steroid injection for chronic shoulder pain

References

Eyigor C Eyigor S Korkmaz OK Uyar M 2010 Intra-articular cortico steroid injections virus pulsed radiofrequency in painful shoulder:a prospective randomised single blind study Clinical Journal of pain Vol 26, number 5 June

Gofeld M Restrepo-Garces CE Theodore BR Faclier G 2013 Pulsed radiofrequency of suprascapular nerve for chronic shoulder pain: a randomised double blind active placebo controlled study Pain Practice Vol 13 Issue 2 96-103