SHOULDER IMPINGEMENT SYNDROME (SIS)

Clinical Tests
And
Treatment
Introduction

- Shoulder pain is the second most common MSK disorder.

- SIS Occurs in up to 60% of cases of shoulder pain.
Csp published Evidence-Based Clinical Guidelines 2004 – Shoulder Impingement Syndrome.

This is an excellent well researched resource.

I have also looked at the current literature to establish which clinical tests and treatments are considered to be best practice for SIS.
Clinical Tests

- What tests are we all using currently?

- CSP 2004
- Neers (80% sensitivity/40% specificity)
- Hawkins-kennedy (88% Sensitivity/ 40% Specificity)
- Painful Arc
Later 2008 systematic review similar outcomes.

2009 study of testing subjects at an orthopaedic clinic prior to surgical intervention found empty can and painful arc were most reliable.

2010 study U/s followed by ortho testing found Hawkins Kennedy most accurate followed by empty can.

2012 U/s study. Asymptomatic shoulders 98% had abnormalities.
Its been recognised not possible to make a definitive diagnosis, with the clinical tests currently used (Hegedus, et al, 2008).

This conclusion appears to be unanimous.

A 2007 study looking at clinical test reliability, advises that tests with a high sensitivity but a low specificity, can reproduce symptoms. However, the structure causing the symptoms cannot be identified (Lewis J and Tennent D, 2007).

In recent systematic review and meta-analysis carried out this year, it is recommended that clinical test should be used as an indication of diagnosis only (Algunaee, et al, 2012).
There was also an agreement that three positive tests could be useful, in confirming a diagnosis of SIS (Michener, et al, 2009)

Most reliable tests currently are:-

- Painful arc
- Neers test
- Hawkins-kennedy test
- Empty Can
Treatment - Ultrasound

- 2004 CSP Evidence based clinical guidelines
- Not recommended except for calcific tendonitis.
- High intensity continuous u/s daily for 3 weeks
- Then alternate days for 3 weeks.
- Later study 2011 comparing U/s and exercise compared to lazer and exercises and exercise alone found no difference in any of the groups.
DTFM

- 2002 cochrane review No evidence proving efficacy of DTFM.
- Joseph el al 2011 – Anecdotal evidence supports efficacy of DTFM.
- PEMF – Not considered beneficial for SIS.
Lots of +ve evidence for this CSP 2004 guidelines recommend strengthening, stretching, restoring range and scapulohumeral rhythm.

More currently studies have found combination exercises and manual therapy to GHJ gets better results (Holmgren et al 2012, Sebursa et al, 2012).
2011 – Other recent studies combine cuff strengthening/stretching and scapula control with T/spine mobs and got good results (Tate et al 2011).
POSTURE

- CSP 2004 Guidelines recommend that forward head posture is addressed during treatment.

- 2005 Study looking at muscle imbalance found that forward head posture did not follow a set pattern as described in the literature (Lewis, et al, 2005).

- Another study taping of shoulder to alter postural position. Pain free movement was increased but intensity of pain did not change. Supports changing posture can help.
2010 – Ultrasound based motion analysis study found that impingement patients had significantly reduction in T/spine mobility especially T5-T8.

Mobilisation T/spine should be considered seriously if T/spine dysfunction found (Theisen et al 2010).

This also follows the regional interdependence model where treating the area above and below the dysfunction can help symptoms (Bialosky, J et al, 2007).
Neer's Test
Neers test

Test Movement
- From the starting position the examiner internally rotates the patient's arm and forcefully moves the arm through the full range of forward flexion or until reports of pain.

Positive Test
- The Neer test is considered positive if pain is reported in the anterior-lateral aspect of the shoulder.
Empty can test
Empty can test

- The patient is tested at 90° elevation in the scapula plane and full internal rotation.

- Patient resists downward pressure exerted by examiner at patient's elbow or wrist.
PAINFUL ARC
The end
REFERENCES


