**AHPS CLINICAL WEEKLY**  
*85th Edition 29.4.16*

**#PODCASTTUESDAY** By Em and Em  
W/C 25.4.16  Glenohumeral Kinematics with RTC Tears. *PT Inquest*. Part 2  
[https://www.mixcloud.com/ptinquest/080-glenohumeral-kinematics-with-rtc-tears/]  

Glenohumeral kinematics with RTC Tears Part 1 26 minutes in.

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**Alterations in Glenohumeral kinematics in patients with Rotator Cuff Tears measured with Biplane Fluoroscopy – Millett et al (2015)**

- Level 3 comparative study
- Group with full thickness rotator cuff tears (14 subject) vs control group with no tear (10 subjects)
- Arm elevation – scaption
- Biplane fluoroscopy whilst going through movement – 2 view real time image of what scapula and humerus doing as arm going up and creating a picture of that movement to see what translation was occurring between 20 and 150 degrees
- Found that those with full thickness rotator cuff tears had more inferior translation!!
- No differences in anterior and posterior translation
- Goes against theory – surprising result, opposite of previous research and what we thought
- Disproved papers hypothesis
  - Hypothesis – Rotator cuff tear in supraspinatus and / or infraspinatus you don’t get dynamic stability / stability of humeral head causing a superior translation of the humeral head
  - This paper confirmed full tear, so no attachment of cuff
  - Used true abduction in scapula plane (different for every individual). In this plane scapula not there to guide humeral head into glenoid
  - Showed statistically significant inferior translation than control group
  - In none of the 14 cases they had no superior translation
- Termed these patients as ‘copers’
- A lot of people do have full thickness tears with no pain
- Didn’t measure pain, patients did have pain though
- 11 of patients had chronic tears >90 days

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**#WHATSNEWFRIDAY- SIJ Provocation Tests by Jessica Miller**

This week links in to the Lateral Epicondylalgia podcast we were listening to in #PODCASTTUESDAY. The manual techniques mentioned were:
- MWM’s
- Self MWM’s
- PA glide on radial head
- Lateral glide of ulnar and radius on the humerus
As mentioned in the podcast, we can use some of these manual techniques to change pain during the session to improve patient compliance with Physiotherapy. It is suggested that we perform 5-6 repetitions and if the positive response starts to diminish, stop performing the MWM. Measure pain free grip strength with a dynamometer before and after the treatment as an outcome measure. You can use a seatbelt to create a sustained lateral glide during the techniques (see pictures). The patient can then perform their aggravating activity while the glide is applied e.g. gripping. Patients can also perform self MWM’s by using a wall to block their humerus and performing a lateral glide on the radius/ulna.

Although manual therapy can help to relieve patients’ symptoms and therefore be a useful adjunct, the rehabilitation of extensor muscles is key to the management of lateral epicondylalgia.

For the next #WHATSNEWFRIDAY- As seen on the recent Neurodynamics podcast- the Leeds Assessment of Neuropathic Symptoms and Signs (LANSS) Pain Scale.
http://www.endoexperience.com/documents/Apx4_LANSS.pdf

Please note my email address has now changed to Jessica.z.miller@ahp-suffolk-cic.nhs.uk so please send any comments or pictures to this address from now on, thanks! 😊
I saw this picture this week and thought I would include it as a reminder that any evidence can be viewed from different viewpoints depending on hypothesis and aim. Equally the size of any results can be interpreted differently too. It is important to be conscious of this when making evidence based clinical decisions.

#AHPSJournal feedback
Thank you to all that joined in with the first ever AHPS online journal club. Some great points were made. The next one will be held in May. Hopefully we will see even more people joining in and getting some extra CPD under their belts. Until then below is a short summary of what was discussed.
- Extrinsic factors such as muscle length and posture affect sub-acromial space differently in different populations
- We suspect this is due to motor control
- Motor control needs to be investigated more thoroughly for conclusions on this to be made
- Assessment of theses extrinsic factors could be better in clinical practice, no standardised methods
- This research provides good direction for further study, but has little implication on clinical practice other than directing sole treatment away from the discussed extrinsic factors

#News of the week
1. Spontaneous disc resolution
I am not sure what they are putting in the water at the moment but I have had 2 days of solid sciatica (and nope I am not part of the BANS team). This popped into my twitter feed and is a case study of a significant disc herniation which was treated conservatively. The herniation had almost completely resolved 5/12 after the initial MRI. She certainly had back and leg pain but importantly she had no red flag symptoms. They suggest that most sciatica will follow this course given time. [http://www.nejm.org/doi/full/10.1056/NEJMc1511194](http://www.nejm.org/doi/full/10.1056/NEJMc1511194)
2. Walking for persistent MSK pain
We are huge proponents for using exercise in people with persistent pain. Walking has always been a mainstay of this treatment. O'Connor et al. published a systematic review of this last year. Subsequently an update and meta-analysis has also been published this month. They show that walking helps pain in the short, medium and long term as long as maintained vs control groups.

http://bjsm.bmj.com/content/early/2016/04/13/bjsports-2016-096245.full?hwoasp=authn%3A14617414623%3A4073209%3A136778166%3A0%3A0%2BoFEy%2FBGWt0GC1YfzyVww%3D%3D

3. Are we getting it all wrong preventing LBP?
Us at AHP probably aren’t but as a profession we might be. Thanks to Simon Fabb for highlighting this article to me. It’s a recent systematic review looking at the prevention of low back pain. They concluded that exercise alone and with education are the only preventative predictors of pain. Classically employed interventions such as manual handling training, ergonomic assessment and adjustments and insoles have minimal or no evidence that they play a role in preventing back pain. Exercise is certainly something that we have been attempting to promote and it is great to be able to use this research to further emphasise our point.

bit.ly/1rjQpWF

#COURSEOFTHEWEEK – Cervical Spine with Dr Toby Hall
Upper cervical spine Mulligan techniques
- Intermittent pain
  - Apply flexion rotation test, if +ve then apply C1/2 self-snag
    - Pic is an example of limitation to the left.
    - The strap or towel is palced on the posterior arch of C1 on the right side just below mastoid process.
    - The patients right hand will gently hold the strap and the left hand will pull on the strap to force rotation at C1/2 motion segment
    - The movement is carried out to the end of the range with gentle pain free overpressure
    - If pain arises from cervical levels below C2 than a different snag can be utilised – at these levels the direction of the facet plane changes so direction of glide is towards patients eye (45 degrees)
- Constant pain
  - HA snag
    - Stand in walk stance position
    - Place little finger on posterior aspect of spinous process of C2
    - Apply pressure to little finger using thenar eminenceof opposite hand – pressure applied horizontally forward along upper cervical facet plane and sustained for 10 secs.
  - Head remains in same position, I pain is reduced repeat up to 6 times.
  - Can be performed at home with towel
• Reverse HA snag
  o Stand in the same position as above however this time direction of the snag is reversed.
  o C2 is stabilised with the lower hand around the anterior aspect of the transverse process.
  o The upper hand will pull the head forward with C2 fixed, again along horizontal plane sustained for 10 seconds.
  o If pain is reduced the technique may be repeated up to 6 times.

• Upper cervical traction
  o Patient must have head in neutral or slightly extended position
  o Radius of left hand is placed up against occiput with forearm slightly supinated.
  o The right hand will fix the skull by preventing upper cervical flexion.
  o The therapist will pronate forearm to achieve traction.
  o The patient can mimic something similar at home using towel placed distal to occiput. Patient must then drop a little into extension. Can sustain for 1-5 mins depending on patients tolerance.

Pain must be present at treatment to determine whether technique is working.

#EXERCISEOFTHEWEEK – Suzanne Godfrey
Adductor strengthening
@JMoorephysio
Suitable for pre/post hip op, runners, gait problems, pelvic instability.
Picking up on the importance of adductor strengthening this week (as we found out in the Riverside staff circuits) not always the strongest area!

• When assessing the hip – important to assess adductor strength
• Adductors should equal abductor strength
• Only muscle active through whole gait cycle
• Often missed when assessing hip strength/gait retraining
• Research link for football player adductor rehab, 8 week rehab reps and sets specified. (Holmich et al, 2014)
• Research Link: [http://0-web.b.ebscohost.com.serlib0.essex.ac.uk/ehost/detail/detail?vid=3&sid=db80a08c-3ea1-49c7-ad68-79157f22f7b6%40sessionmgr103&hid=105&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=104011556&db=ccm](http://0-web.b.ebscohost.com.serlib0.essex.ac.uk/ehost/detail/detail?vid=3&sid=db80a08c-3ea1-49c7-ad68-79157f22f7b6%40sessionmgr103&hid=105&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=104011556&db=ccm)

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