

#JOURNALTUESDAY - by Abi Peck

Atrophy of the Quadriceps is Not Isolated to the Vastus Medialis Oblique in Individuals With Patellofemoral Pain, Giles et al; 2015, JOSPT - [Here](#)

1. What were the aims of this paper?
 - a. To investigate whether VMO weakness causes patellofemoral pain
2. What is VMO? What is the controversial belief about VMO that causes PFP?
 - a. Vastus medialis oblique is a branch of muscle that comes from vastus medialis at the front of the thigh and attaches onto the medial aspect of the patella
 - b. It was previously believed that weakness in VMO caused lateral tracking of the patella during activity, which resulted in PFP.
3. Does VMO contribute to patellofemoral pain according to this study?
 - a. Little evidence suggests that VMO alone contributes to patellofemoral pain; reduced muscle size in the quadriceps muscle as a whole appears to be the most significant findings for symptomatic PFP.
4. Based on this paper, how would you guide treatment for this subgroup of patients with patellofemoral pain?
 - a. Quadriceps strengthening programme
5. Discuss with colleagues what exercises you have found that are successful with patients with PFP?
 - a. Open question – feedback appreciated to Abigail.Peck@ahpsuffolk-cic.nhs.uk

#CLINICALSKILLSFRIDAY by Jess Miller- Wartenberg's Sign

Following on from last week, Wartenberg's sign is another way to identify possible ulnar neuropathy.

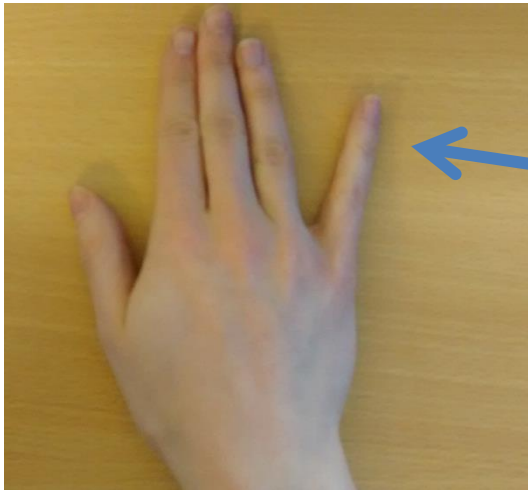


The patient's palm is placed face down onto a level surface and the fingers are either passively or actively abducted.

The patient is then asked to adduct their fingers.

If the test is negative: The patient will be able to fully adduct all of their fingers





If the test is positive: The patient will be unable to adduct their little finger.

This is due to the paralysis of the palmar interosseous muscle, which is an adductor supplied by the ulnar nerve, and the unopposed action of the extensor muscles which are innervated by the radial nerve.

This should not be confused with Wartenberg's Syndrome which affects the superficial branch radial

nerve and only has sensory signs.

A positive Wartenberg's sign should be considered significant alongside other subjective and objective signs of ulnar nerve neuropathy.

For the next **#CLINICALSKILLSFRIDAY- Schober's Test**

Any pictures, suggestions or comments to Jessica.z.miller@ahpsuffolk-cic.nhs.uk

#NEWSOFTHEWEEK by Liz Wright

1.How sleep patterns can contribute to back pain.

<http://www.independent.ie/life/health-wellbeing/health-features/how-your-sleep-patterns-could-be-contributing-to-your-back-pain-35409245.html>



For many people, taking steps to improve sleep could be important to help reduce pain.

While many realise that being in pain can cause poor sleep, studies now show that poor sleep among people without any pain also increases the risk of developing pain. Sleep is an essential function for survival.

Therefore, when your body is not getting enough quality sleep, your body can react (creating an inflammatory response which can make you feel sick, tired and irritable). Pain is also one of the body's responses to poor sleep.

Sleep and pain cannot be improved if you do not get to the bottom of why you are not sleeping well.

Determining the reasons for poor sleep should be the first step and this should guide the plan to help improve sleep, pain and overall health. The articles goes on to suggest some helpful tips in this field.

AHPS CLINICAL WEEKLY

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2. Be up to date – ACL.

Rehabilitation after ACL injury should include a prehabilitation phase and 3 criterion-based postoperative phases: (1) impairment-based, (2) sport-specific training and (3) return to play. A battery of strength and hop tests, quality of movement and psychological tests should be used to guide progression through the stages. To assess readiness to return to play and the risk for reinjury, a test battery, including strength tests, and measurement of movement quality, should be used.

<http://bjsmbeta.bmj.com/content/bjsports/50/24/1506.full.pdf>

3. Treatment of MDI of the shoulder – 'principles' for your clinical practice. Part 1 of 2.

MDI = Symptomatic subluxation/dislocation occurring in 2/3 directions. Primarily due to repetitive micro-trauma on a congenitally lax capsule. Patients can demonstrate reduced muscle strength, altered neuromuscular control, scapulae rested in downward rotation with deficient upward rotation through range. Recent systematic review showed evidence supporting exercise, but low quality + high bias. Only one other paper (Rockwood and Burkhead) provides sufficient detail for replication. This paper offers a clinical protocol (currently being tested via a RCT) based around retraining and maintaining good scapular and HH control (adequate detail for clinical practice).

It has been based on 25 years of clinical experience, reference to literature and consideration of biomechanical deficits. Recommended rehab programme duration is 3- 6 months. Divided in part 1 (explains stages 1& 3) and paper 2 (presents stages 3-6). Next week paper 2 shall be examined.

<http://journals.sagepub.com/doi/pdf/10.1177/1758573216652086>

Evidence-based clinical practice update: practice guidelines for anterior cruciate ligament rehabilitation based on a systematic review and multidisciplinary consensus

Nicky Van Melick et al
Br J Sports Med
2016;50:1506-1515

6 experts 10-37 years experience 90 papers

FACTORS

- prehab
- effectiveness of PT
- OKC vs CKC
- neuromusc training
- EMG
- cryotherapy
- functional performance

Strength

A preoperative deficit in quadriceps strength of ~20% has a significant negative consequence for the self-reported outcome 2 years after ACLR.

Eccentric quadriceps training can be safely incorporated 3 weeks after ACLR and may be the most effective way of restoring quadriceps strength.

To optimise outcome after rehabilitation, neuromuscular training should be added to strength training.

Reinjury

Risk of a contralateral ACL rupture (~10%) is higher than the risk of graft rerupture (about 5%) (up to 10 years after ACLR) or first-time ACL rupture.

RTP

Psychological factors as self efficacy, locus of control and fear of reinjury have influence on the rehabilitation process and return to play after ACLR.

To assess readiness to RTP strength tests, hop tests and measurement of movement quality should be used.

BJSM

#MEDOFTHEWEEK – by Alex Courtney-Hatcher

INSULIN

Plays a key role in the regulation of carbohydrate, fat, and protein metabolism

More than 20 different types, which vary by source: animal, human, genetically engineered

Insulin must be injected as it is inactivated by gastro-intestinal enzymes

- Usually injected into the upper arms, thighs, buttocks, or abdomen
- Absorption from a limb site may be increased if the limb is used in strenuous exercise after injection
- Lipodystrophy may occur but can be minimised by using different injection sites in rotation

Management of diabetes type 1 with insulin

The aim of treatment is to achieve the best possible control of blood-glucose concentration without making the patient obsessive and to avoid hypoglycaemia

Close co-operation is needed between the patient and the medical team

Insulin preparations can be divided into 3 types:

- Short duration, rapid onset of action
- intermediate action
- Slower in onset and last for long periods

The duration of action of a particular type of insulin varies considerably from one patient to another, and needs to be assessed individually

Treatment should be started with a short-acting insulin given before meals with intermediate-acting or long-acting insulin once or twice daily

Insulin requirements may be increased by infection, stress, accidental or surgical trauma, and during puberty. Requirements may be decreased in those with certain endocrine disorders (e.g. Addison's disease, hypopituitarism), or in coeliac disease

An increase in the frequency of hypoglycaemic episodes may reduce the warning symptoms experienced by the patient – loss of warning of hypoglycaemia can be a serious hazard, especially for drivers and those in dangerous occupations

<https://www.evidence.nhs.uk/formulary/bnf/current/6-endocrine-system/61-drugs-used-in-diabetes/611-insulins>

Disclaimer: This edit is for information/education use only and does not entitle people to advise patients on medication.