



Clinical Weekly - 148th Edition

#JOURNALTUESDAY - by Abi Peck

Article: Femoral neck stress fracture: the importance of clinical suspicion and early review.

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1. What is a stress fracture?
2. What are the symptoms?
3. What are the risk factors?
4. Why should stress fractures be treated/ managed appropriately?
5. How should a stress fracture be managed?
6. What would be the imaging of choice?

#CLINICALSKILLSFRIDAY - by Josh Featherstone

Cranial nerve 11 – Accessory Nerve

General anatomy and function

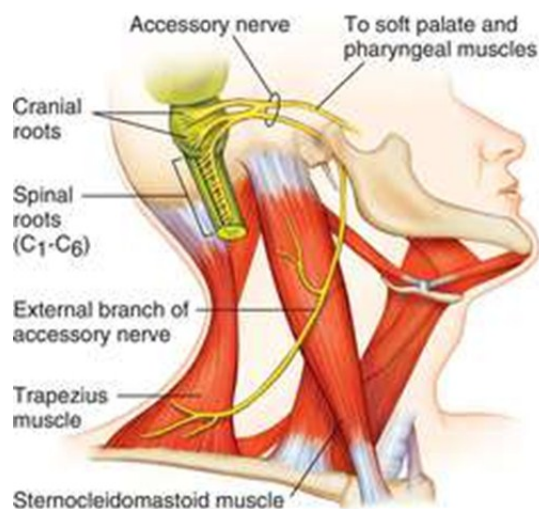
It provides motor function for the sternocleidomastoid (SCM) and trapezius muscles.

The spinal accessory nerve originates in the upper spinal cord to the level of about C6. The accessory nerve enters the skull through the foramen magnum and travels along the inner wall of the skull towards the jugular foramen.

Leaving the skull, the nerve travels through the jugular foramen with cranial nerves 9 and 10.

The spinal accessory nerve is the only cranial nerve to enter and exit the skull.

After leaving the skull, the cranial component detaches from the spinal component. The spinal accessory nerve continues alone and heads backwards and downwards. In the neck and innervates both the SCM and trapezius muscles.



Diseases of accessory nerve function:

- Trauma
- Injury can cause wasting of the shoulder muscles, winging of the scapula, and weakness of shoulder abduction and external rotation
- RTA

Testing of accessory nerve function for clinicians

- Strength testing of these muscles can be measured during a neurological examination to assess function of the spinal accessory nerve.
- Upper trapezius muscles can be tested by resisting shrugging
- SCM can be tested by asking the patient to rotate the neck and resist neck flexion. Observe symmetry and palpate muscle bulk

On next weeks #ClinicalSkillsFriday-we will be looking at Cranial Nerve 12

References:

Butler DS (2000) 'The sensitive nervous system' Australia: Noigroup publications
 Wikipedia (2017) Accessory nerve Online at: https://en.wikipedia.org/wiki/Accessory_nerve [Accessed on: 04 August 2017]





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#NEWSOFTHEWEEK - by Liz Wright

1. Lower limb tendinopathies- must knows.

Infographic to summarise key messages highlighted by Professor Jill Cook in her previous blog which all should be familiar with. See link below.

<http://bit.ly/2shvpkv>

<http://bit.ly/2shvpkv>

<http://bit.ly/1SPp1sn>

2. Ever at the ready for events that never happen.

A recent article published in the European Journal of Psychotraumatology, highlights 3 theoretical approaches in explaining the mechanisms underlying the influences of psychological stress on somatic health. The article states there should be less focus on stressors themselves and more emphasis on prolonged stress responses. The 3 mechanisms that cause the unhealthy prolonged stress response are discussed;

- 1. Perseverative cognition**- umbrella term for continually thinking about negative events (worry)

- 2. Unconscious stress** -prolonged stress responses are due to conscious and unconscious stress related cognition but that the latter is difficult to measure

- 3. Default stress response** -a stress response does not need a stressor at all, it is simply always 'on', and it stays on, as long as there is no obvious safety. It turns 'off' if the surroundings are perceived as safe and turns on again if this perceived safety disappears. See link for the full article: <http://bit.ly/2uQtPtz>

3. Central lumbar spinal stenosis: natural history of non-surgical patients.

The studies aim was to examine the natural history in patients with lumbar spinal stenosis. The incidence of surgery has increased considerably during the past decades in spite of a fairly favourable natural history in previous studies. The natural history of LSS with moderate symptom levels rarely shows symptom deterioration over a median of 3.3 years; moreover, a slight improvement of symptoms was seen. The treatment decision was revised for 7%, and for the rest an increase in pain was seen in only 10-13%. The results support reluctance towards surgery, if the symptom levels are tolerable for the patients.

<http://bit.ly/2wh9mw2>

10 THINGS NOT TO DO IF YOU HAVE LOWER LIMB TENDON PAIN

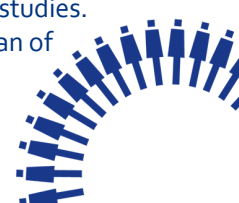
Reference: by Jill Cook, La Trobe University blog
Designed by @YLMSSportScience

- Rest completely**
The old adage of use it or lose it applies to tendons, resting just decreases the ability of the tendon to take load
- Have passive treatments**
Treatments that do not address the need to increase the ability of the tendon to take load are not usually helpful in the long term, although they might give short term pain relief
- Have injection therapies**
Injections of substances into a tendon have not been shown to be effective in good clinical trials. Do not have injection in a tendon unless the tendon has not responded to a good exercise based program
- Ignore your pain**
Manage the load on your tendon, pain is a way of telling you that the load is too much. Reduce the aspects of training that are overloading your tendon (see point 10)
- Stretch your tendon**
Aside from the load on your tendon when you play sport, there are compressive loads on your tendon when it is at its longest length, adding stretching to most tendons only serves to add compressive loads that we know are detrimental to the tendon
- Massage your tendon**
A tendon that is painful is one that is telling you that it is overloaded and irritated, therefore adding further insult by massaging it can actually increase your pain
- Be worried about the images of your tendon**
The pictures of your tendon with ultrasound and MRI can frighten you, and the words used by doctors such as degeneration and tears can make you wonder if your tendon should be loaded. There is good evidence that the pathological tendon can tolerate loads, especially when you gradually increase the loads on them
- Be worried about rupture**
Pain is protective of your tendon, it makes you unload it, in fact most people who rupture a tendon have never had pain before, despite the tendon having substantial pathology in it (see point 7)
- Take short cuts with rehabilitation**
Taking short cuts with rehabilitation do not work, you need to take the time that the tendon needs to build its strength and capacity. Although this can be a substantial period (up to 3 months or occasionally even more), the long term outcomes are good if you do the correct rehabilitation
- Not have an understanding of what loads are high for your tendon**
The highest load on your tendon is when you use it like a spring, such as jumping, changing direction and sprinting. Any loads that do not use these movements are low load for a tendon, so exercise using weights and exercise that is slow will not place a high load on the tendon, although they can certainly have a beneficial effect on the muscles

#STOP

VS

The take home message is that exercise-based rehabilitation is the best treatment for tendon pain. A progressive program that starts with a strength program and then progresses through to more spring like exercises and including endurance aspects will give the right loads on the tendon and the best long term results. Make sure you see a qualified health professional with expertise in this area to guide your rehabilitation



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#FRACTUREOFTHEWEEK BY SAM ACKERLEY

Radial Head and Neck Fractures -Part 2

Mechanism of injury

Usually the results of indirect trauma, with the majority caused by a fall on an abducted arm with the elbow in 0-80 degrees flexion. This results in valgus pronation stress with the radial head forcibly pushed against the capitulum of the humerus .

Usual accompanying injuries

- Fracture of the coronoid process of the ulna
- Medial collateral ligament tear
- Interosseous membrane injury

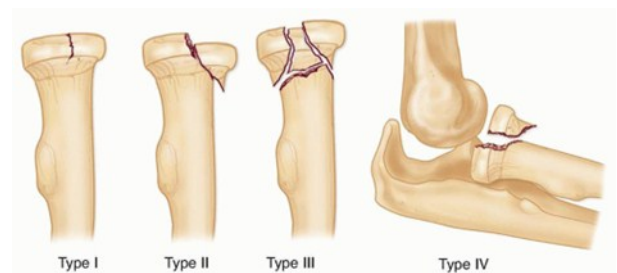
Mason classification of Radial Head fractures

Type I: non-displaced radial head fractures (or small marginal fractures), also known as a "chisel" fracture.
-Conservative management

Type II: partial articular fractures with displacement (>2mm)
- Require open reduction and internal fixation (ORIF)

Type III: comminuted fractures involving the entire radial head
- Often require early complete excision of the radial head.

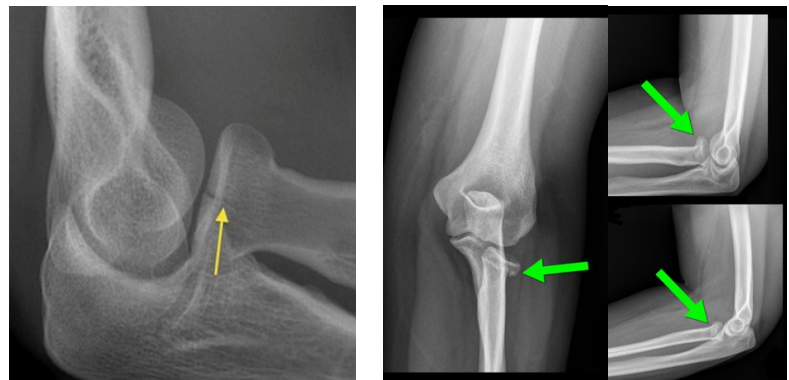
Type IV: fracture of the radial head with dislocation of the elbow joint



Rehab/Treatment

Treatment depends on the degree of displacement and involvement of the articular. In general type I injuries can be treated conservatively whereas type II injuries require open reduction and internal fixation (ORIF). Type III injuries often require early complete excision of the radial head. Radial head replacement is also an option, to help stabilise the elbow joint and prevent proximal migration of the radius. Generally, patients can expect a good outcome although secondary osteoarthritic change is certainly encountered in patients with intra-articular fractures.

Imaging



Resources

- <https://radiopaedia.org/articles/radial-head-fractures>
- <https://radiopaedia.org/articles/mason-classification-of-radial-head-fractures-1>
- <https://musculoskeletalkey.com/wp-content/uploads/2016/07/C18-FF6-5.gif>
- <http://handtherapy.com.au/wp-content/uploads/2017/03/ShoulderJoint.jpg>

