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ADHESIVE CAPSULITIS

(also commonly known as “Frozen Shoulder”)

WHAT IS ADHESIVE CAPSULITIS?

Adhesive Capsulitis is an inflammatory condition of the glenohumeral joint (GHJ) and its surrounding structures, specifically involving the joint capsule. This leads to thickening and contraction of the joint capsule, which resultantly causes pain and marked stiffness and restriction in the range of motion of the GHJ.

WHAT DOES ADHESIVE CAPSULITIS ENTAIL?

It is important to be able to distinguish between Primary Adhesive Capsulitis and Secondary Adhesive Capsulitis, as the progression of the condition and management will differ:

1. Primary Adhesive Capsulitis:

- Cause: Idiopathic
- No or hardly any trauma present and in certain patients overuse precedes the condition
 - Gradual onset
- Mostly middle-aged (40 – 60) women are affected and it can also be seen in older athletes
- Night pain is present as it is an inflammatory condition
- Severe pain and limitation in all ranges of motion (ROM) are present, but characteristically:
 - Restriction of movement is found to correlate with the capsular pattern of the GHJ, because the capsule is the most involved structure
 - Restriction of active movement in the GHJ = Lateral rotation > Abduction > Medial rotation
 - Restriction of passive accessory movement in the GHJ = Anterior glide > Inferior glide > Posterior glide
 - **The restriction in active movement and passive accessory movement MUST correlate.**
- The condition goes through 3 characteristic phases:
 - Stage1: Severe pain
 - Stage 2: Pain and stiffness, with pain > stiffness
 - Stage 3: Stiffness > pain
- This condition hardly ever recurs at the same site – it is as if the body acquires ‘immunity’ to the condition
- Aggravating factors:
 - “cocking phase” of GHJ movement
 - GHJ adduction (the patients usually do not want to touch their opposite shoulder)

2. Secondary Adhesive Capsulitis (Post Traumatic Stiff Shoulder):

- Trauma is usually involved or it occurs post-surgically – scarring of the capsule and/or muscles (specifically subscapularis) might be present

- Decreased active ROM and accessory glides is not restricted in the capsular pattern of the GHJ, but in a specific direction (this direction depends on the injury) – stiffness is greater than pain
- The condition does not follow the characteristic 3 phases of Primary Adhesive Capsulitis

DIFFERENTIATE BEFORE DIAGNOSING:

It is important to assess for the following possible differential diagnoses before making the diagnosis of Adhesive Capsulitis:

- Referral from viscera, cardio-vascular & pulmonary organs or cervical spine
- Fracture or Rotator Cuff Injury (severe trauma)
- Osteoarthritis or other inflammatory conditions of GHJ

WHAT IS THE MANAGEMENT PLAN?

1. Primary Adhesive Capsulitis

Stage 1: PAIN

There is not much evidence that physiotherapy will shorten the cycle of primary adhesive capsulitis ($\pm 4 - 18$ months according to some literature), but physiotherapy can help to decrease the pain

- Pain control: ice, low grade mobilization, electrotherapy modalities, dry needling therapy
- Stabilizer muscle function must be maintained: static rotator cuff control and scapular muscle control must be maintained

Stage 2: PAIN > STIFFNESS

- Treatment for pain continues – now also add mobilisation using accessory glides for increased range of motion, using higher grades of mobilization for the stiffness
- Stretching of the upper limb, cervical and thoracic muscles
- Specific soft tissue mobilisation of shoulder and surrounding musculature
- Active-assisted exercise, progressing to active exercise of shoulder muscles

Stage 3: STIFFNESS > PAIN

- Treatment for pain and stiffness as in previous stages
- Muscle control and muscle strengthening and endurance exercise of the rotator cuff muscles, scapular and shoulder muscle groups
- Posture and neural mobility must also be addressed

2. Secondary Adhesive Capsulitis

- Physiotherapy can shorten the cycle of the condition.

SOME INTERESTING POINTS FROM THE LITERATURE:

- Jewell et al (2009) conveyed the following in their study on interventions for Adhesive Capsulitis: therapists should consider increasing their use of techniques for improving joint mobility (eg., joint mobilisation such as Maitland's techniques) and the use of exercise therapy (strengthening and stretching exercises), as patients with Adhesive Capsulitis have shown improvement from receiving this treatment. Patients receiving ultrasound, massage, phonophoresis and iontophoresis have a reduced likelihood of improvement.
- Tripp (2008): in patients with shoulder dysfunction – proximal stability is the basis of function. Sensorimotor control should be an integral part of the rehabilitation.
- Rookmoneea et al (2010) conveys in their systematic review that we should not lose sight of the fact that the management of patients with adhesive capsulitis is one of multidisciplinary teamwork between general practitioners, physiotherapists and orthopaedic surgeons - interventions are not often used in isolation.



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