

Frozen Shoulder

'Natural History and Conservative Treatment'

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PHYSICAL THERAPY & SPORTS MEDICINE

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Sport & Exercise Medicine Physician

Frozen Shoulder

- Adhesive (Stuck)
- Capsulitis
- (inflammation of the capsule)
- “a condition of uncertain aetiology that is characterized by clinically significant restriction of active and passive shoulder motion that occurs in the absence of a known intrinsic shoulder disorder.”



Frozen Shoulder

- Affects 2-5% population (10-20% diabetics)
- Affects women > men
- 5th – 6th decades : “50’s shoulder”
- 10-20% bilateral



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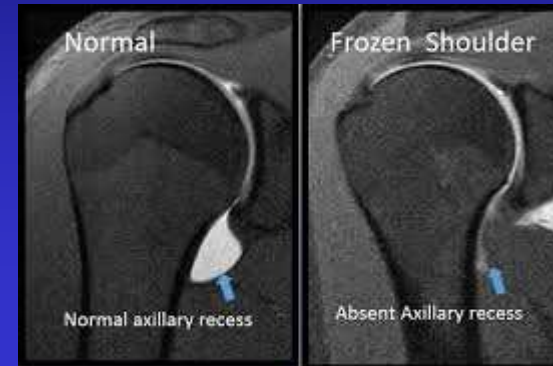
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Frozen Shoulder



- Causes – Idiopathic!
 - Hormonal. (Diabetes, thyroid, dyslipidaemia)
 - ?Autoimmune – Absent features/markers
 - Post-traumatic
 - Post-operative – shoulder immobilization
 - Neurological – Parkinson's disease



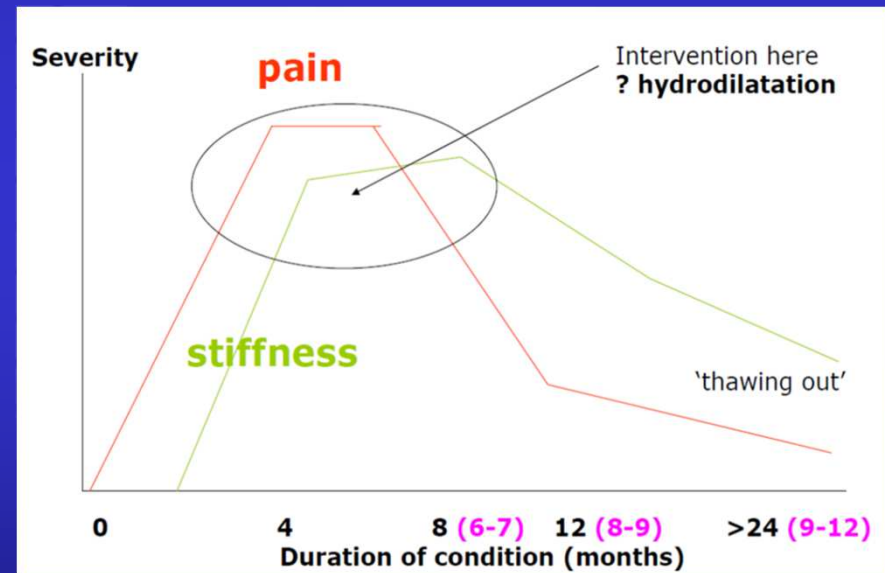
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Frozen Shoulder

- Natural history generally favourable
- 3 phases
 1. Freezing (2-9mo)
 2. Frozen (4-12mo)
 3. Thawing (5-24mo)



- May take 12-24 months for resolution

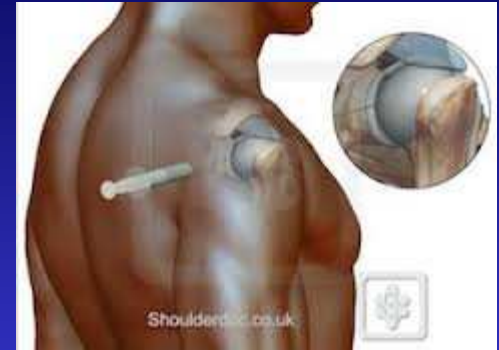


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Frozen Shoulder



- Improvement generally expected BUT
 - 40% have mild loss of motion
 - 10% clinically significant long term restrictions (Binder '84)
- 'Effective treatment shortens the duration of symptoms and disability'



Non-Operative Treatment

- Education – Information is therapeutic
- Re-assurance – ‘Doc, do I have cancer??’
- Empathy – Pain may be severe
 - Loss of sleep
 - Loss of function



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Non-Operative Treatment Medications

- Pain medication – Simple vs complex analgesics
- Anti-inflammatories
- ?Oral prednisone
 - Cochrane '06 'silver level' evidence for improved pain/ROM/function.
 - Side effects



Non-Operative Treatment Physiotherapy

- 2 X Cochrane reviews 2014.
- 1. Electrotherapy
- 2. Manual/Exercise therapy
 - No randomised trials vs placebo/no treatment
 - Not as effective as IA steroid
 - Carette '03. IA steroid + physio improved ROM over steroid + HEP
 - Work within patient's pain



Non-Operative Treatment Exercise

- Exercise

ROM – Active / passive

Strength – Scapula stabilizers/rotator cuff



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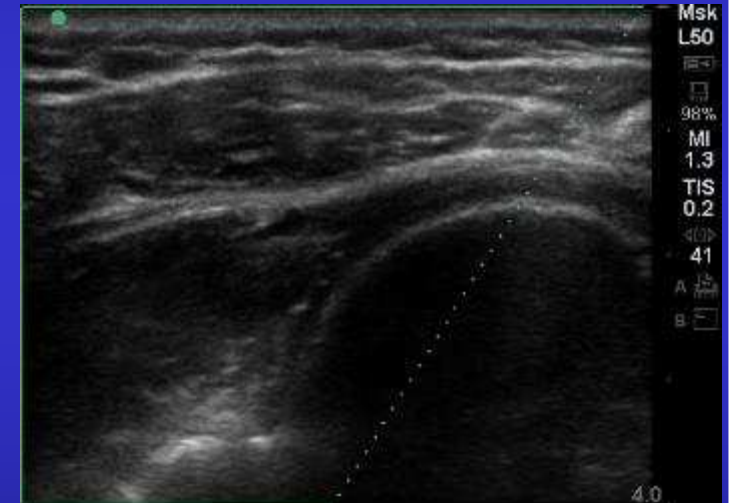
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Non-Operative Treatment

Steroid Injection +/- hydrodilataion

- Why Cortisone or hydrodilataion?
- IA steroid
 - Carrette '03
 - IA CSI + HEP better than placebo. Physio helps ROM
- IA steroid + HD
 - Buchbinder '04
 - Improved pain/ROM/function @ 3 & 6/52



Non-Operative Treatment

IA Steroid Vs Steroid + HD

- Cochrane – Buchbinder et al '08
- 'Silver' level evidence for IA steroid + HD
- Improves pain @ 3/52
- Improves disability @ 3, 6 & 12/52
- May not be better than steroid alone



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Non-Operative Treatment

Cortisone injection + saline hydrodilatation



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Cortisone HD – Side Effects

- Infection – 1:20,000 cases
- Post injection pain
- Steroid issues



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Post-injection treatment

- Initial ROM program
 - Flexion
 - Rotation
- Perform 2-3 X daily
- Physio at 1 week
- Review 4-6 weeks for re-injection
 - Up to a course of 3



Outcomes of Non-Operative Treatment

Hydrodilataion and stretching **ORTHOSPORTS**
Results – observational study 

- 305 patients over 5 years; follow-up 3-24 mths
- 216 female, 89 male
- Age 53 years (range 37-66 years)
- Pre procedure active and passive ROM, VAS pain scores, medication use
- Results:
 - 75% patients – good or excellent
 - 15% have the injection repeated.
 - 100% reduced medication use
 - This is reflected in improved pain scores (using a VAS) and ROM testing.



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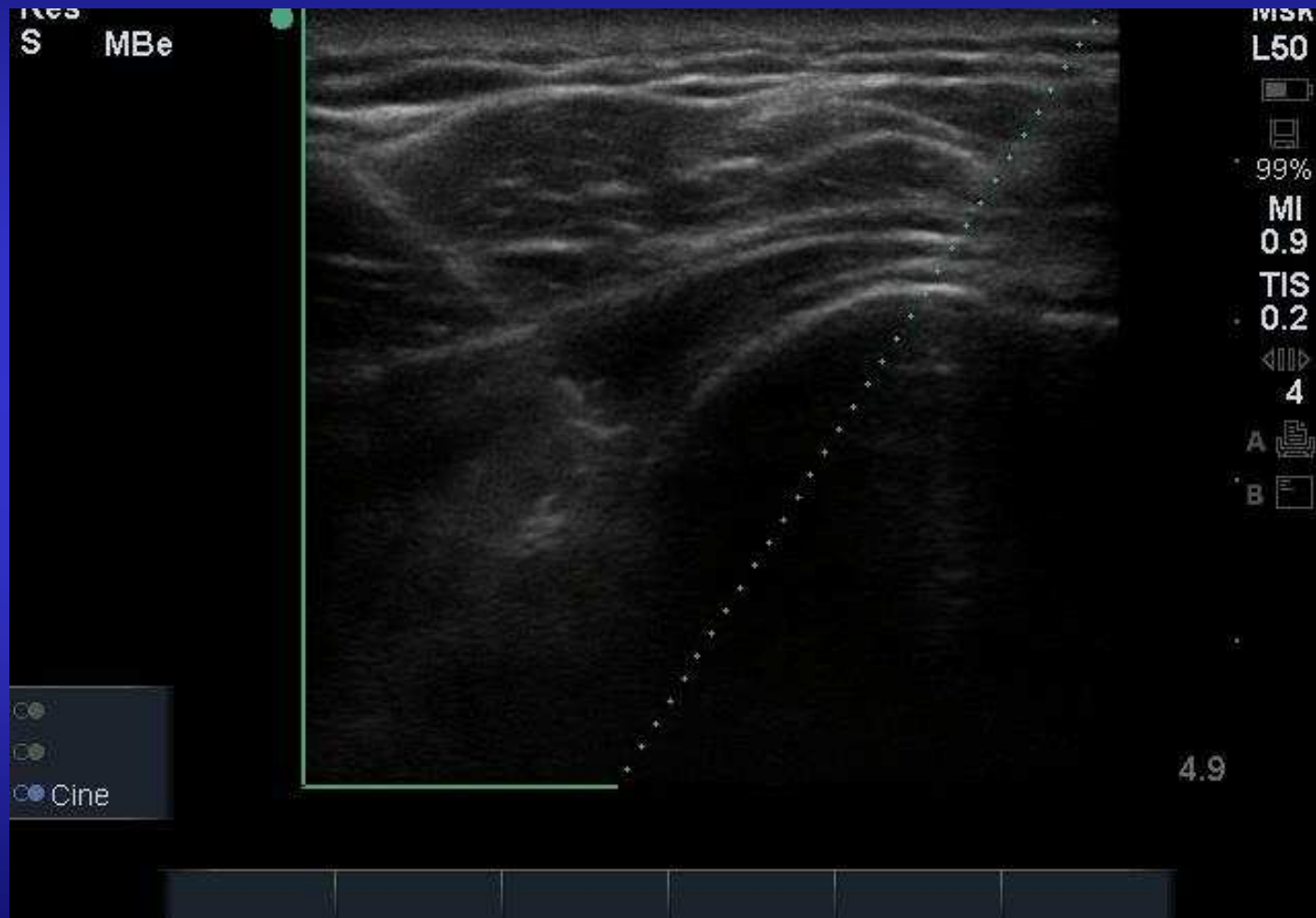
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Frozen Shoulder – Take Home Messages

- Make the diagnosis!
- Educate – Self-limiting condition
- Medicate & Physiotherapy
- Maintain function within pain limits
- Consider the early use of IA steroids +/- hydrodilatation



Thank You



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