

Rowing Injuries

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Overview

- Nature of the sport
- Injuries:
 - Rib stress fractures
 - Forearm tenosynovitis/intersection syndrome
 - Low back pain
 - Infected callosities



Nature of sport

- Strenuous endurance sport
- Divisions
 - a) Sweep oar - one oar per athlete
 - Bow side - oar off to the left
 - Stroke side - oar off to the right
 - NB - The stroke is usually the most technically proficient athlete, and sets the rhythm for the rest of the crew
 - b) Sculling - two oars per athlete
 - Standard weight and lightweight categories

Types of training - on water

- Aerobic(U2) training
Steady state, up to 260km/week
- Anaerobic (interval) training
Speedwork - repetitions from 250 - 1000 metres
- Bungee (resistance) training
Trailing a bungee - creates drag
- Starts to optimise acceleration

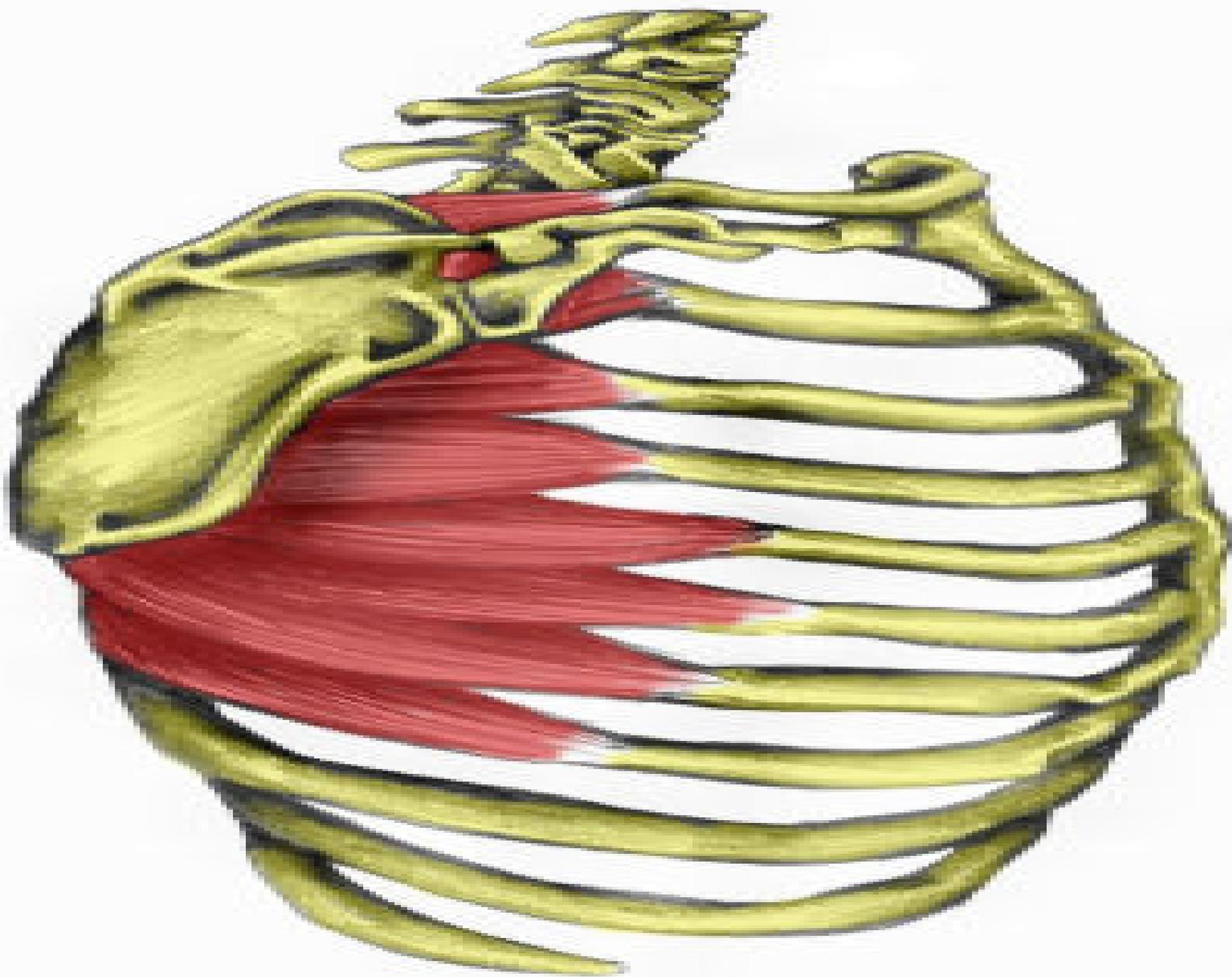


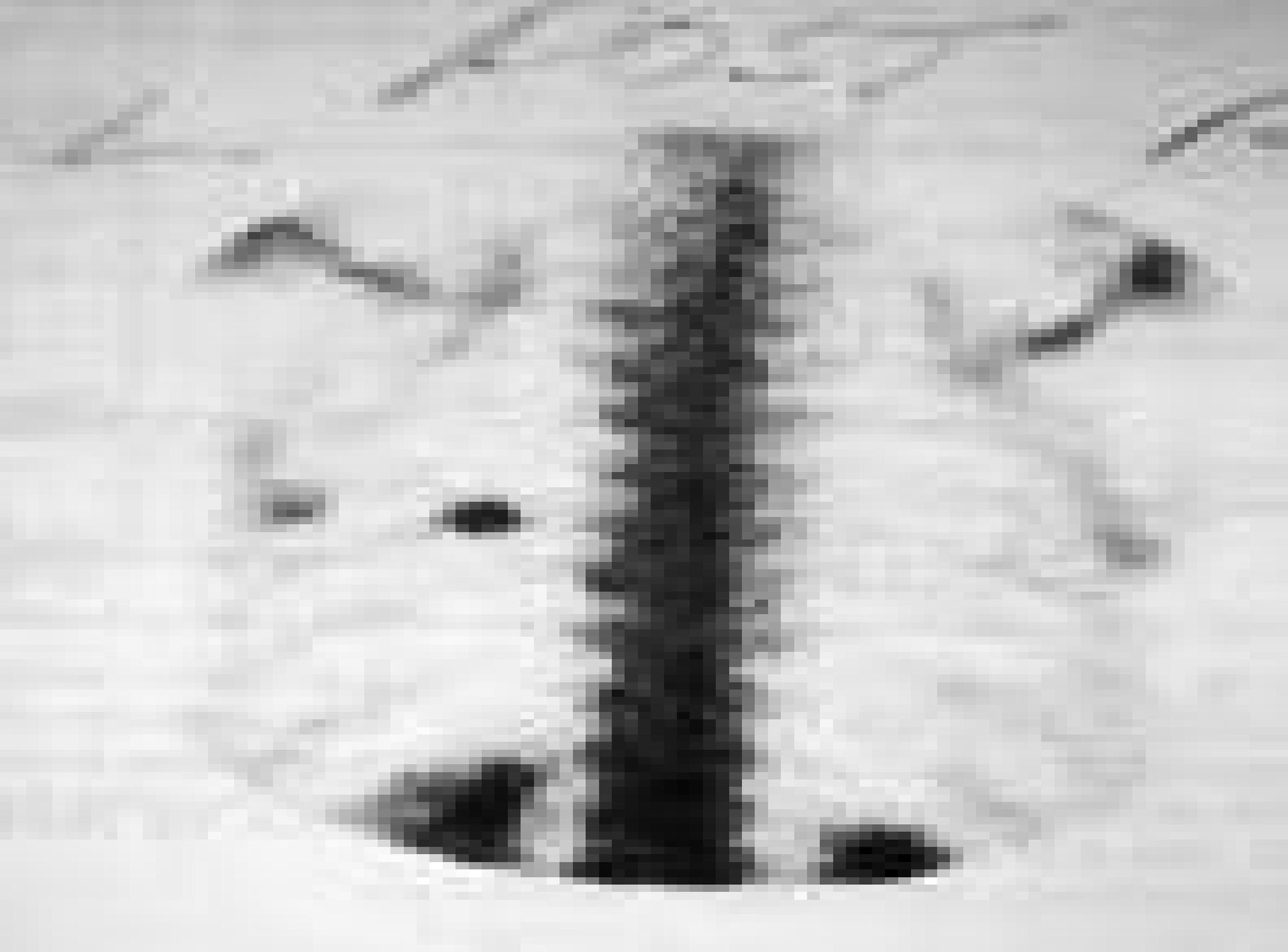
Types of training - off water

- Ergometer (rowing machine)
- Weight training
- Core stability training
- Cross training - cycling
- running

Rib Stress fractures

- Cause - Overload of rib, usually at insertion of serratus anterior in mid axillary line
- Symptoms - Focal rib pain
 - Present with training ,at catch phase
 - Also with ADL e.g lifting, carrying, rolling over in bed
- Signs - Focal rib tenderness
 - Pain with deep inspiration
 - Pain with resisted adduction, flexion, extension of the shoulder





Rib Stress fractures - continued

- Investigations - Bone scan positive within 48 hours
- Management - Time out of boat until pain free with ADL (usually 2-3 weeks)

Cross training - Leg weights

- Cycling , running

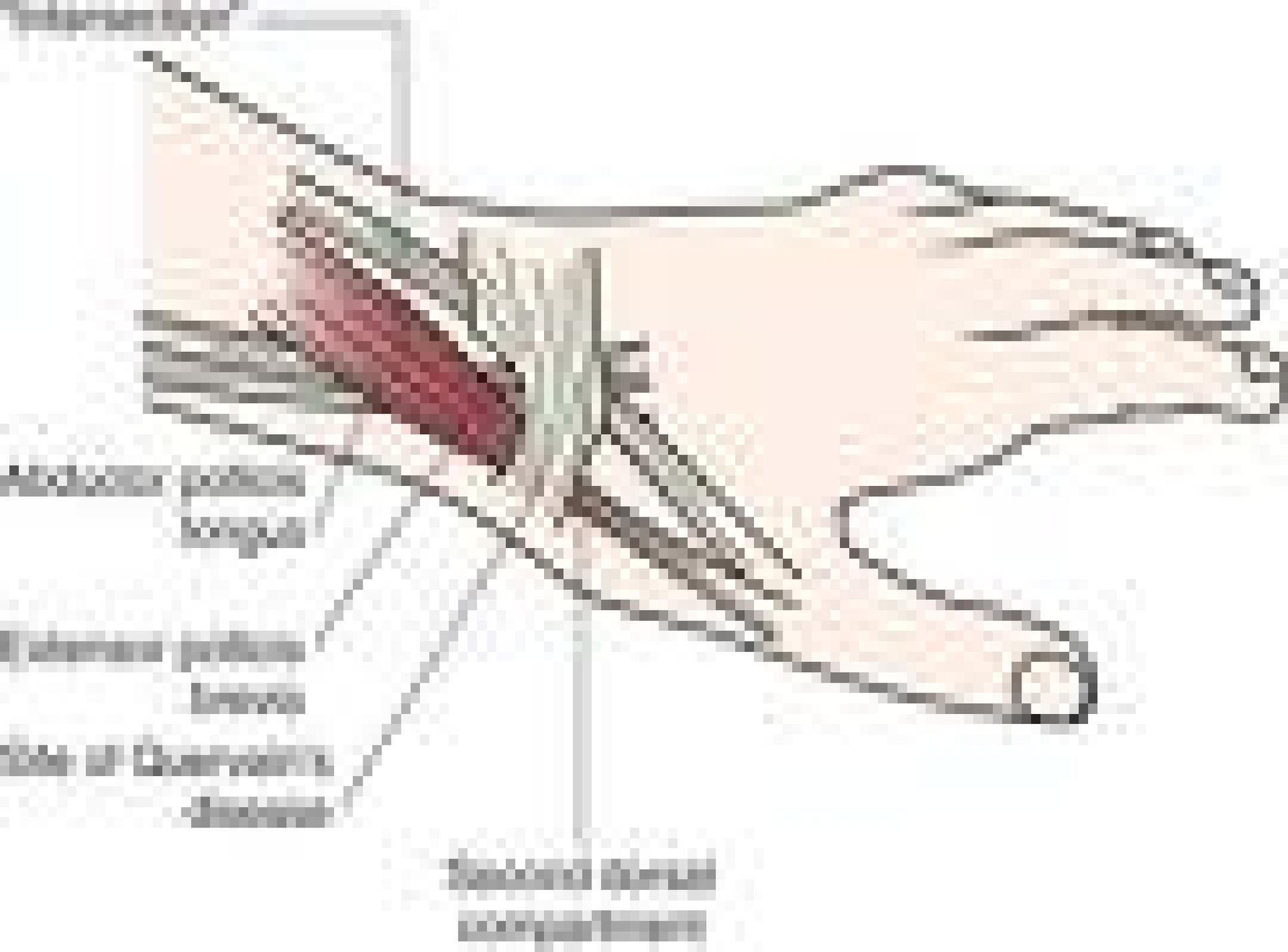
Assessment/modification of technique

Progressive resumption of training

Rarely, bisphosphonates

Forearm tenosynovitis/intersection syndrome

- Cause - Faulty feathering of the oar, with irritation where the APL/EPB tendons cross extensor tendons
- Symptoms - Pain, grating in crossover tendon region (5-8 cm proximal to wrist)
Associated swelling
- Signs - Tender swelling in crossover tendon region. Crepitus on wrist flexion/extension



Forearm tenosynovitis - continued

- Investigations - Ultrasound shows fluid in sheaths surrounding APL/EPB tendons
- Management - Ultrasound guided cortisone injection, if condition presents early [remember notification of use form to DFSNZ]

Time out of boat (1-2 weeks)

Cross training - Leg weights

- Cycling, running

Assessment/modification of technique

Rarely, surgical decompression (no recurrence after this)



Low back pain

- Cause
 - High axial loading
 - Premature disc desiccation and protrusion
 - In adolescents, occasional pars injury
- Symptoms
 - Pain, in back usually flexion related.
 - Occasionally, sciatica
- Signs
 - Loss of lumbar lordosis
 - Tender L4 to sacrum
 - Restricted straight leg raise
 - Pain at end range flexion
 - Occasionally, markers of radiculopathy



The black disc in this MRI indicates that the disc has a low water content. This is commonly seen in DDD patients.

Low back pain - Continued

- Investigations
 - XRays - AP, lateral
 - MRI scan in selected cases
 - Consider bone scan with SPECT in adolescent with extension related back pain
- Management
 - Reduce spinal loading - out of boat for 1-2 weeks
 - Analgesics/NSAID
 - Core stability exercises
 - Maintain lumbar lordosis in boat
 - If sciatica present, consider epidural steroid injection



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Callosities

- Cause
 - Repeated shear force across skin
 - Fissuring and secondary infection
- Symptoms
 - Pain, redness around blisters
 - May have purulent discharge
- Signs
 - Callosities, blisters with erythema
 - Occasionally, purulent discharge
 - Rarely, swollen lymph nodes

Callosities - continued

- Investigations
 - Usually none required
 - If infections frequent, check CBC, blood glucose, immunoglobulins
- Management
 - Antibiotics - Flucloxacillin (or erythromycin if allergic to penicillin)
 - Avoid probenecid
 - Trimming of callosities once infection cleared





Philosophy

- 1 - Minimise time out of the boat
- 2 - Provide appropriate cross training options
- 3 - Involve the injured rower in training drills they can safely perform