

FROZEN SHOULDER



THYS DE BEER

HISTORY

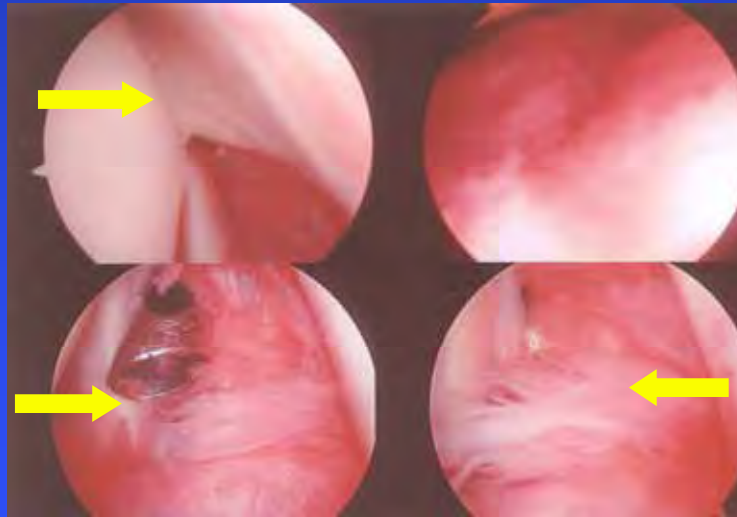
- 18th century Duplay
scapula-humeral peri-arthritis
- 1934 Codman
described stiff painful shoulder as
frozen shoulder



HISTORY

- 1945 Neviasser
coined term “adhesive capsulites”
inflammation, thickening + contracture

Norm. R.C.



Typical
Sinovitis

Typical
Sinovitis



DEFINITION

- Dauglas T Harryman

Idiopathic F.S. - global limitation of scapulo-humeral motion - contracture and loss of compliance of capsule.



Post traumatic stiff shoulder

- Limitation in scapulo-humeral motion after injury / repetitive trauma.
- Condition which results in contracture of peri-articular structures.



Diagnostic Criteria

- F.S. – G-H contracture
minimal or no trauma – fibrotic
process **intrinsic** to joint capsule
- Thus: History of pain
Global stiffness
Normal plain radiographs
(osteopenia)



Post Traumatic Stiffness

- **Extrinsic** process – traumatic / repetitive trauma precursor or other condition
- May originate - extra capsular process



Epidemiology

- Age : 40-60 Male-55 yrs
Female-52 yrs
- Under 40 yrs associated
insulin dependent diabetes



Epidemiology

- Minor injury - possible pain because stiffness already present
- Painful source-gout - immobilize-may become stiff



Gouty crystals

Diabetes Mellitus

- Incidence 10-20%
(non diabetics 2-5%)
- Insulin dependent for many years -
42%.
- Greater resistance to treatment
- Indicating earlier intervention



- Cervical disk disease - more frequently F.S.
- Hyper-and hypo thyroidism more bilat.
- Cardiac disease – CT patients
17/132 presented with shoulder pain
- Parkinson's disease – 8% F.S.
± 2 years before onset



Clinical Presentation

Three Phases



First Phase

- 2-9 months
- Pain aggravated by jerk
- Unrelated to activity
- Worse at rest
- Keep arm I.R. at side



Second Phase

- Progressive stiffness (3-12 months)
- Limited motion - all directions
- Clinically – First E.R. elbow at side
- A.D.L. restricted
- Night pain
- With time pain diminishes with use in permitted R.O.M.



Third Phase

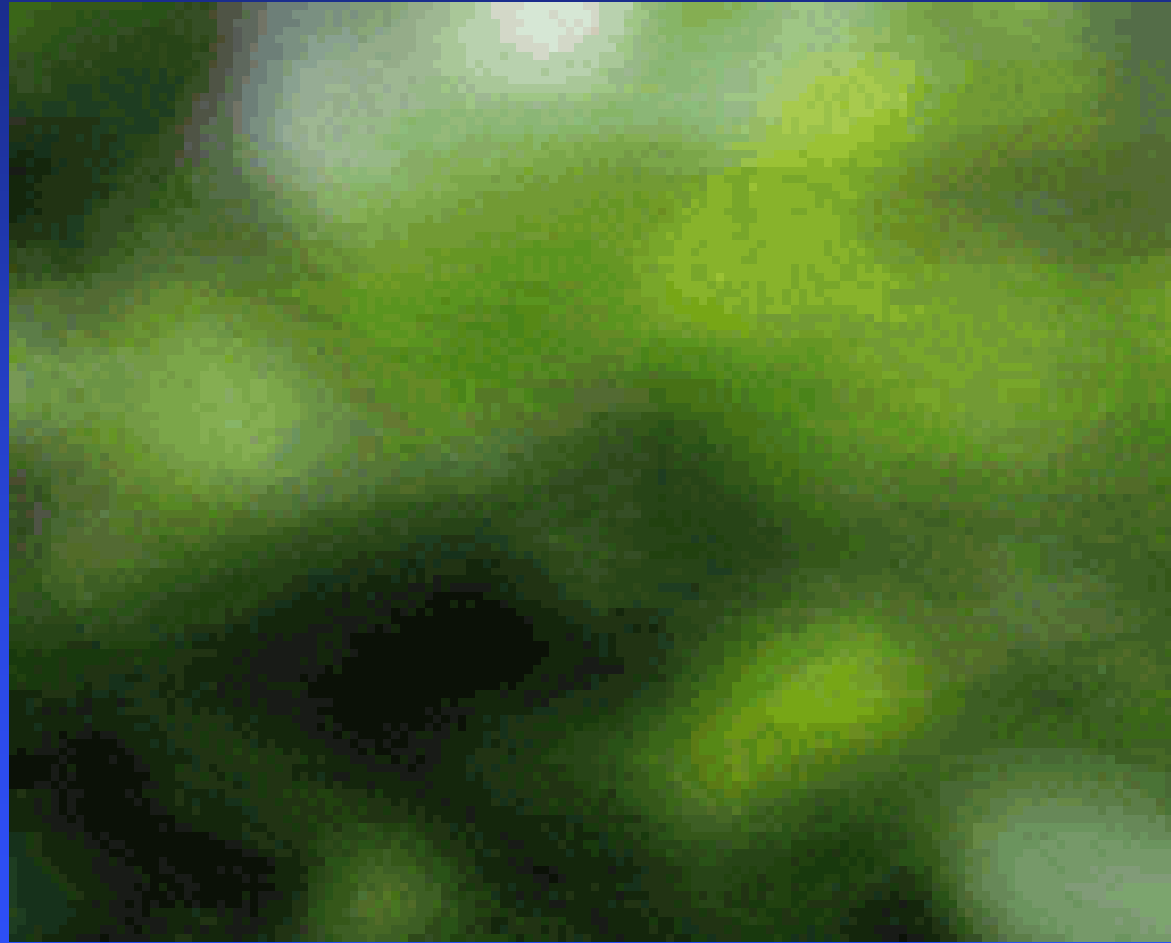
- Resolution “Thawing”
- Less pain
- Slow gain R.O.M - months to years
- no treatment seldom full R.O.M



Management

Full history and
clinical
examination
including neck

NB: R.O.M. on
every patient



Early diagnoses - easier treatment

Examination

- Pain: Visual analogue scale
A.D.L.

1. Please describe your OPERATIVE SHOULDER on the following scales by marking each line with a slash (/) in the place you feel is most appropriate

a) PAIN
None 0 _____ 10 Disabling

b) SHOULDER PAIN WITH ARM AT REST
No pain 0 _____ 10 Painful

c) SHOULDER PAIN AT SLEEP
No pain 0 _____ 10 Painful and wakes me up

d) OVERALL RATING OF SHOULDER FUNCTION
Comfortable / little or no pain 0 _____ 10 Painful, cannot use it

e) ABILITY TO USE YOUR ARM FULL TIME, AT WORK OR PLAY
Little or no problem 0 _____ 10 Cannot use it for work or play

f) YOUR OVERALL QUALITY OF LIFE
Little or no problem 0 _____ 10 Very bad



Examination

Note R.O.M.

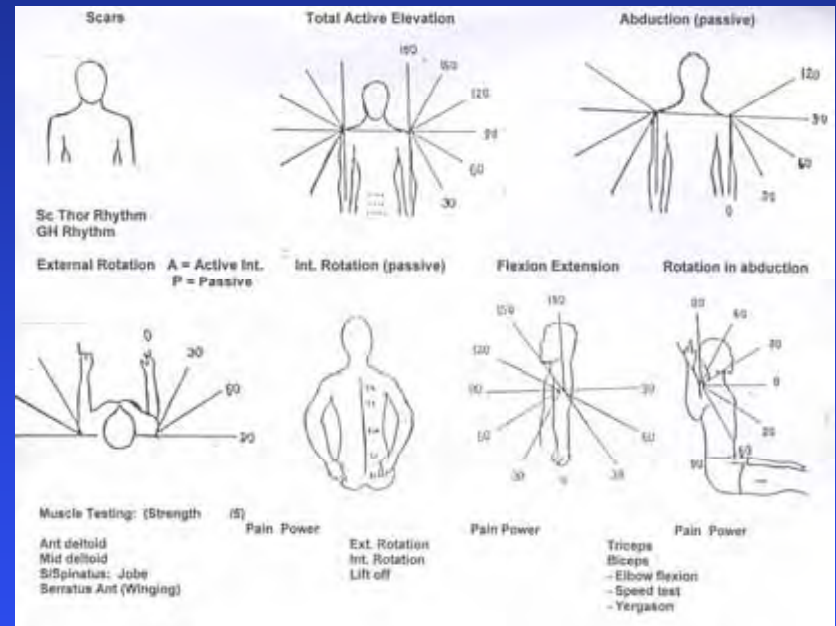
Elevation – scap. plane

E.R - arm at side

A.E.R and A.I.R

I.R

Abduction



Supplementary Assessment

- Routine radiographs
- Blood glucose – if indicated by history

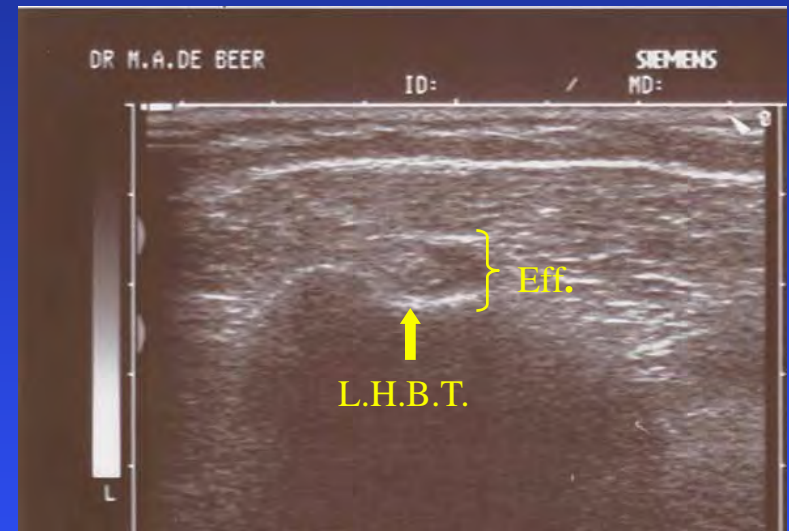


Supplementary Assessment

Ultrasound:

Effusion -Intra articular and/or around LHBT –

- 78% positive in stage I and II
- 0% - in stage III
- Effusion – easier to treat



Treatment

- Many treatment modalities have been tried, many with good results.



My Regime

- I have used this regime over 15 years with great success. Two modalities increased our success.
- In the conservative regime - the specific instruction to physiotherapists to only use heat and orthotherapy.
- “Operative” group the **scalene block** with indwelling catheter – titrate with infusion pump



Conservative Treatment

Our aim to have pain free shoulder with near full R.O.M. by 12 weeks

- Careful diagnostic work-up
- R.O.M. recorded



- NSAID + rest, then frequent stretching exercises
- Follow up every 10-14 days



- If not successful
- A maximum of 3 sub-acromial steroid injections
- 14 days apart – 24 hrs rest post. inject.
- Then orthotherapy



Surgical Treatment

- No improvement or deterioration after 4-6 weeks



Combination Treatment

- E.U.A.
 - **Short** arm-lever manipulation, scapula stabilized
- Abduction, elevation,
A.E.R., E.R.
I.R.



Abduction



Elevation



Abd. Ext. Rot.



Int. Rotation



Ext. Rotation

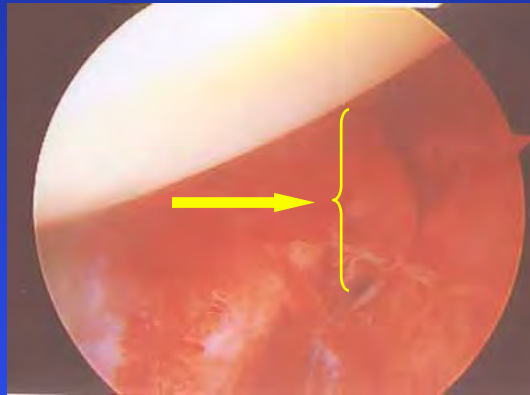


Arthroscopy

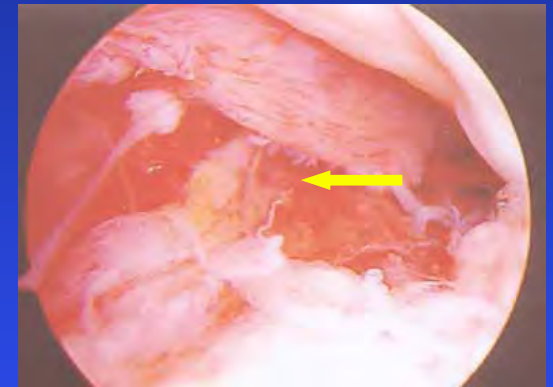
- Synovectomy + debridement of damaged structures



Sinovitis



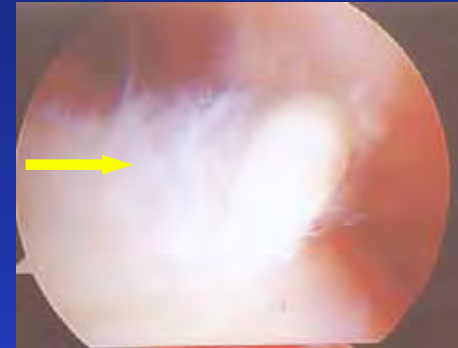
Ant. Caps.
tear



Post. Caps. tear

- Sub-acromial bursoscopy –
signs of impingement →
Arthroscopic decompression

R.C.



Ac.



- Inter – scalene block
- Immediate post. op. full passive R.O.M. physio. 24-48 hrs
- Home on intensive stretching program
- Loose \pm 20% R.O.M.



Material

- 95 patients (101 shoulders) treated over a 3 year period (1990-1993)
- Objective review by independent surgeon



- Average age 52,5 years
- M/F 3/7
- Left - 63 (62.6%)
Right - 38 (37.6%)
- Bilateral - 6



Results

1993

- Conservative Management Failed 36 (35,6%)
Treated operatively
- 3 patients needed capsular release

2001

- Conservative Management Failed 7/108 = 6.5% (excl. diabetics)
Treated operatively
- No capsular release



Follow Up Average
32.6 weeks

- Average time from combined treatment to end result – average 9 weeks

Follow Up Average
12 weeks

- Average time from treatment to end result – average 6 weeks



- Excellent results – 70 (70%)

- Good functional results – 27 (27%)

- Poor results - 3

- Excellent results – 80%

- Good functional results 18%

- Poor results – 2 diagnosed pre-diabetic



THANK YOU

