PRINCIPLES OF POST OPERATIVE MANAGEMENT FOLLOWING ROTATOR CUFF SURGERY

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WHAT WE KNOW

- R.C. tears are very common with advancing age
- Natural history is that symptomatic and asymptomatic tears increase in size in 40% of cases over several years
- Post operative healing occurs in about 60% of cases only!
WHAT WE KNOW

Factors affecting repairs
• Age of patient
• Size of tear
• Smoking
• Diabetes
• hypercholesterolaemia
• Cortisone injections
• patient compliance
• Poor rehabilitation & post op care
TENDON TO BONE HEALING

- Tendon
- Insertion site
- Bone
- Tendon proper
- Fibrocartilage
- Mineralized fibrocartilage
- Bone
Multiple Autologous Growth Factors™

- PDGF
- TGF-β

*mitogenesis*

- BMP and TGF-β stimulation

- IGF-1
- TGF-β

*differentiation*

- PDGF
- TGF-β

*mitogenesis*

- VEGF

*enhanced angiogenesis*

- stem cells
- osteoblasts
- mature bone

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REHABILITATION & POST OP CARE

- Surgeon
- Patient
- Employer
- physiotherapist
CORRECT TECHNIQUE

• Single row
• Double row
• Open repair
• Acromioplasty
• AC surgery
• Biceps
PATIENT EDUCATION

- Never a normal shoulder
- Healing is by scar tissue
- First 3 months is the danger period – repair is very fragile
- 6 month rehab minimum
- Results improve for up to 18 months
- Can never return to activities that load the shoulder including some work & sport
- The post op rehabilitation is more important than the surgery
- NEEDS 1 YEAR OF REGULAR FOLLOWUP
PATIENT

• Compliance/ compliance/ compliance
• Sling 6 weeks
• No lifting > 2kg for 6 months
• Self directed exercises 4 x per day
• Permanent restrictions
EMPLOYER

Sympathetic
1. Time off
2. Moderate pain for 3 months
3. Lifting restrictions
4. Time for exercises at work
PHYSIOTHERAPIST

- Understanding of tendon to bone healing
- Communication with surgeon as each repair is different
- Communication with patient
- Recognise problems

- Encourage home exercise program 4 times a day
INITIAL EXPECTATIONS

- First 6 weeks
  - Moderate to severe pain
  - Significant night pain
- 6 weeks to 12 weeks
  - Pain with movement and exercise
  - Mild night pain
- 12 weeks plus
  - Pain with exercise
- 25 weeks
  - Little pain

Note – this can vary with
- Type of repair
- Size of tear
- Biceps tenodesis
- Compensibility
- Personality factors

Dr Jerome Goldberg
Shoulder Surgery
IMMOBILISATION

- Immediate ROM
  - Better early ROM
  - Increased risk of retear or failure to heal
- 6 weeks immobilisation
  - Better chance of healing
  - High incidence of post op stiffness
  - Histologically better organised collagen
- Consider cryotherapy
RANGE OF MOTION FIRST

- GENTLE capsular stretches
- Never ABDUCTION
DELAYING STRENGTHENING

• Progressive increase SLOWLY
  – Yellow 6 weeks (if solid repair only)
  – Red 10 weeks
  – Green 18 weeks
  – Blue 25 weeks

• NEVER free weights
Postoperative Management for RC Repairs

Weeks

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Strength

Protection Restore Movement Early Strengthening Moderate Strengthening Further Strengthening
POST OP CAPSULITIS

• High risk groups
  – Peri/post menopausal woman
  – Endocrine disease
• NO NEED FOR CONCERN
• CAPSULITIS IS A FRIEND NOT A FOE!!!
  – Inflammatory cells are healing cells
  – Studies show patients with capsulitis get better long term results

• GENTLY push ROM
• Pain management
• ? NSAIDs
• Can delay ROM return for 12 to 18 months
DANGER SIGNS

FIRST 6 WEEKS
• Infection

THEREAFTER
• Sudden loss of function
• Increase in pain
• Fall
LONG TERM MANAGEMENT

- Never a normal shoulder
- It is an “at risk” shoulder
- Power will never be normal
- Avoid heavy and overhead lifting
- Occupational advice
- Avoid overhead/racket sports
- Freestyle swimming a risk
- Modify activities in Gym
SUMMARY

Postoperative Management for RC Repairs

- Protection
- Restore Movement
- Early Strengthening
- Moderate Strengthening

Further Strengthening

Weeks
THANK YOU

"Hold these, I have to go back for my Wife"