Shoulder Arthroscopy – New Frontier

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SHOULDER PROBLEMS & ARTHROSCOPIC MANAGEMENT

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Peculiarities of Shoulder

- Elegant piece of machinery
- It has the greatest range of motion
- Balance between mobility and stability
Shoulder girdle – bony anatomy

**Shoulder Complex: 4 joints**

- Sterno-clavicular joint
- Acromioclavicular joint
- Glenohumeral joint
- Scapulothoracic joint
Static Stabilisers

- Glenoid Labrum
- Glenohumeral lig.
  Three fibrous bands
  Sup., Middle, Inf.
  Reinforce the anterior part of the articular capsule
- CA lig.
Dynamic Stabilisers

- Scapulothoracic
- Scapulohumeral
- Thoracohumeral
Extrinsic - Suspend scapula from the trunk
Stabilize or move scapula

Dynamic stabilizer

Muscles
Muscles

Intrinsic muscles

Attach scapula to humerus

- Deltoid
- Teres Major
- Rotator Cuff
- Biceps

Attach trunk to humerus

- Latissimus dorsi
- Pectoralis Major
COMMON PROBLEMS

- Instability
- Impingement
- SLAP
- Rotator Cuff Tear
- A-C Joint Arthritis
- Gleno-Humeral Arthritis
- Others - Rheumatoid, Calcific Tendinitis, Infection, Nerve Compression Syndromes, Frozen Shoulder
HISTORY

- Age
- Occupation detail/ Sports/ Gym
- Onset- Acute/ Chronic/ Traumatic
- Pain- Duration/ Site
- Pain- Rest pain/ Night pain/ Morning Stiffness/ Pain on Activity
- Feeling of Instability
- Weakness
- Diabetes, Hemiplegia
Shoulder Arthroscopy

Arthroscopic treatment has evolved over the past few years in terms of:

- Better understanding of path anatomy
- Advances in technology
- Improved surgical technique
Management Goal

- Early Return to pain-free function
  - Maximize performance
  - Avoid future problems
Shoulder Instability

- Recurrent shoulder dislocation - common in young individual

- Instability spectrum - subtle instability to frank dislocation

- **Symptoms** - pain, weakness, dead arm syndrome, inability to perform overhead activities, lack of confidence
Patho-anatomy
Shoulder Instability
ARTHROSCOPIC BANKART REPAIR

GOALS

Restoration of Anatomy:
- Labral restoration
- Tensioning the capsule
- Restoration of resting length of glenohumeral ligament
Arthroscopic Bankart Repair

Step 1 - Diagnostic
Arthroscopic Bankart Repair

Step 2 - glenoid preparation
Arthroscopic Bankart Repair

- Step-3: Anchor insertion
Arthroscopic Bankart Repair

\( \textit{Step 4} \)
Arthroscopic Bankart Repair

Step-5: suture passage through labral tissue
Arthroscopic Bankart Repair

Step 6: Knot tying
Arthroscopic Bankart Repair

- **Success rate** - comparable to open technique
  - Less morbidity
  - No restriction of movements
  - Early return to function

- **Success depends on**
  - Proper patient selection
  - Surgical techniques & principles

- **Contraindications**
  - Significant bone loss
  - Gross capsular laxity
Impingement Syndrome

- Decrease in subacromial space due to
  - Ant. Acromial Spur
  - Shape of the Acromion
  - Slope of Acromion
  - A-C Joint arthrits

- Causes-
  - Subacromial bursitis
  - RC tendinitis
  - RC tear
Impingement Syndrome

Neer’s test

Hawkin’s test
Acromion Shape

Type 1

Type 2

Type 3
Subacromial Decompression
Rotator Cuff Pathology

- Rotator Cuff Tendinitis
- Rotator Cuff Tear
  - Partial tear
  - Complete Tear
- Cause of Tear
  - Traumatic – Young
  - Degenerative – Old
Rotator Cuff Strength

Supraspinatus

Subscapularis
ERLS
Infraspinatus/ Teres Minor
Rotator Cuff Tear

- Full Thickness Tear-
- Direct Signs-
  - Complete Tendon Defect
  - Increase Signal Intensity within Defect
- Indirect Signs-
  - Fluid in Sub-Bursal & Sub-Deltoid space
  - Muscle Atrophy
Rotator Cuff Pathology - Arthroscopic Management

- **Arthroscopic Rotator Cuff Repair**
  - Full Thickness Cuff tear

- **Cuff debridement & Subacromion Decompression**
  - Partial Thickness Cuff Tear
  - Unrepairable degenerative cuff tears
Misc. Shoulder problems

- **Adhesive Capsulitis (Frozen Shoulder)**
  
  Physiotherapy – Preferred
  
  Arthroscopic Capsular Release - Refractory

- **Calcific Tendinitis**
  
  Arthroscopic Debridement
  
  U/S Guided needling - Preferred
To Conclude

- Minimal Surgical trauma
- Better understanding of concomitant pathology.
- Lower morbidity.
- Less soft tissue dissection
- Maximal preservation of motion.
- Shorter surgical time.
- Improved cosmesis.