Open Stabilization in Anterior Shoulder Instability

경희대학교 정형외과
견관절클리닉 이용걸

Key lesion in unstable shoulder
- Perthes (1906)
- Bankart (1923)

Anteroinferior labrum and IGHL
- labral defect (3mm): loss of 20% stability ratio (Matsen, 1993)
- IGHL tensile strength; failure at glenoid 40%
  capsule 35%
  humerus 25% (Bigliani, 1992)
- simulated Bankart lesion
  only slight increase in anterior translation (3mm)
  further plastic deformation of ligament cutting necessary for dislocation (Speer, 1993)
- therefore, focused on
  anatomic restoration
  correction of plastic deformation

Questionnaire
- what about the conservative treatment?
- why should capsulorrhaphy be recommended?
- which is better, open or arthroscopic?

What about the conservative treatment
- muscle strengthening exercise
  satisfied 80% in atraumatic
  only 16% in traumatic subluxation
  (Burkhead & Rockwood, 1992)
- recurreencee rates(under 20years)
  95% in 181 McLaughlin (1967)
  83% in 107 Rowe (1956)
  80% in athletes, but only 30% in nonathletes Simonet & Cobield (1984)
- recurrencee rates in military

non-operative 12/15(80%)
operative 3/21(14%) (Arciero, 1994)

• postdislocation arthropathy(2208 shoulders)
11% mild arthropathy
9% moderate or severe (Hovelius, 1996)

Why should three capsulorrhaphy be recommended

• open stabilization: eliminate theee shoulder instability by cicatrix formaation using hot irons (Hippocrates, 4tth B.C.)
  · subscapularis advancement
  · bone block prrocedure
  · osteotomy
  · capsulorrhaphy
• open stabilizattion
  · non-physiologic
  · physiologic
• since Bankart(1939)
  · modification Rowe(1978)
  · capsular imbrication Rockwood(1984)
  · simplification Matsen(1989)
  · ACLR Jobe(1989)
• recurrence rates: 3.55% in Rowe(1978)
  1.6% in Matsen(1989)

Which is better, open or arthroscopic

• recurrence rates of the advocates with arthroscopic stsbilization
  Johnson (1982) 3%
  Caspari (1988) 8%
  Morgan (1989) 4%
  Wolf (1993) 5%
  Warreen (1993) 7%
• recurrence rates of some of non-advocate witth arthroscopic surgery
  Hawkins (1989) 8/50 16%
  Grana (1993) 12/27 44%
  Youssef (1995) 6/30 27%

Green (1995) 21/47 45%
Walch (1995) 29/59 49%
Mologne (1996) 17/41 41%

- arthroscopic stabilization
  still · unpredictable results
  · unacceptable recurrence rates
  · more complications

Open stabilization

- indications
  for patients: contact
  non-throwing
  associated laxity
  old ages
  for capsulolabral conditions: absence of Bankart
  large bony Bankart
  large Hill-Sachs
  significant glenoid rim wear
  too much retracted labrum
  poor IGHL
  for surgeons: more comfortable with open surgery technically
- surgical procedures
  expose clavipectoral fascia
  incise lateral to redline of conjoined tendon
  release the subscapularis and anterior capsule
  make a trough for bone to ligament healing
  make a hole at 3, 4, and 5 O'clock using Ethibond #2
  restore the glenoid dish and repair the ligament
  * not too loose: need check-rein
  not too tight: obligate translation
  * if no Bankart lesion: imbrication
  shifting
  * intraoperative: arm position-30 degrees abduction
  30 degrees external rotation
  after operation: no anterior drawer sign
  no sulcus sign
  ERs at least 40 degrees

• postoperative care: immediate passive ROM exercise
3 weeks - 90-0 exercise
6 weeks - 140-40 exercise
6-12 weeks - streengthening exercise
after 3 ms - swimming
6 ms - throwing

SUMMARY

• aims for open stabilization: anatomic restoration
optimal stabilization
• open stabilization: predictable results
acceptable recurrence rates
few complications
good range of motion
• wide eye for open, narrow eye for scopy