WELCOME TO THE BICEPS KILLERS CLUB

---

BICEPS TENDON PATHOLOGIES

---

ABNORMALITIES

---

ROLE OF THE LHB

- Controversies
- Head depressor
- Humeral head stabilization
- Pain

---

Phylogenesis

---

Lippmann likened the long head of the biceps to the appendix: “an unimportant vestigial structure unless something goes wrong with it.”

---

Role of the LHB

- LHB ↔ HUMERAL HEAD
- HUMERAL HEAD ↔ LHB

---
**Phylogenesis**

- Bipeds: modification of the relation between upper limb and thorax
  - Frontal thoracic enlargement
  - Forearm shortening
- Adaptation: medial migration of the bicipital groove
- Glenoid reorientation
- Humeral retrotorsion
- Increase medial dislocation forces

**Controversies role of the LHB**

- Head depressor ?:
  - Subacromial narrowing frequently associated to an intact or augmented LHB
  - No increase of subacromial narrowing after LHB tenotomy in massive cuff tears
- Stabilization?
  - Intact LHB in most of chronic glenohumeral instabilities
- Main action
  - Elbow active flexion and supination

**Biceps Tenotomy**

- Arthroscopic tenotomy of the LHB
- JSES 2005
- 307 cases
- Rotator cuff tears
- Clinical and radiographical evaluation
- 57 months follow-up
- Initial Acromio Humeral Height AHH 6.6 mm
- At follow-up AHH mean decrease 1.3 mm
- Comparable to natural history

**PROPRIOCEPTION**

- THROWING
- ABER
- ADIR
- Counterbalancing the IGHL

**G.Walch et al**

- Isolated Subscap tear
- Arthroscopy September 2006
- 11 shoulders mean age 64
- Irreparable tears 5 complete 6 partial
- 9 tenotomies 2 none (ruptured)
G. Walch et al

- Subscap tears
- All items Constant score
  - Pain 4.2 12 < .001
  - MOBILITY 31 39 < .001
  - ACTIVITY 7 18 < .001
  - STRENGTH 6 11 < .001
  - TOTAL 49 80 < .001

TENOTOMY/TENODESIS

- COSTS
  - IMPLANTS
  - SURGERY DURATION
- PAIN
  - POSTOP PAIN
  - LONG TERM PAIN
- COSMETIC
  - POPEYE SIGN

TENOTOMY / TENODESIS

- Gill et al. Only 1 patient out of 30 described having a cosmetic deformity that required a revision tenodesis.
- Osbahr et al. cosmetic appearance of the biceps muscle after arthroscopic intra-articular biceps tenotomy versus tenodesis.
  - cosmetic appearance, no statistically significant difference whose ages averaged 58 years and 54 years,
  - no differences between the two groups when anterior shoulder pain and postoperative muscle spasms were subjectively graded.

POPEYE SIGN

- Not systematic
- Rarely painful
- G. Walch
  - No reoperation
- literature suggests that a simple biceps tenotomy may be considered in individuals older than 50 years provided that they have been counselled regarding the risk of cosmetic deformity.

BICEPS TENOTOMY

- Full thickness cuff tear
  - Scope in the posterior portal
  - Through the Cuff tear
  - Anterolateral bursal approach
- Hour glass biceps
  - Tendon resection

BICEPS TENOTOMY

- Watertight Cuff
- Scope Posterior
- Anterior Approach
- Needle
  - Dupuytren disease
BICEPS TENODESIS

- Cuff Tear
- Double loop
- Viper Punch
- Anterolateral approach
- Fixation
  - Pushlock

Watertight cuff
- Anterior canula
- Temporary suture
- Tenotomy
- Subacromial space
- Tenodesis

Future studies

- Do we need an arthroscope?
- Ultrasound guided tenotomy
- Local anesthesia
- Cadaveric study
  - P. Gaudin M.D.
  - Ultrasound
  - Arthroscopic control

CONCLUSION I

- MAIN ROLE OF THE LHB IS PAIN
- TENOTOMY
  - DELOCATION
  - INSTABILITY
  - PARTIAL TEAR
  - TENDINITIS
  - SYNOVITIS
  - EXPOSED

Conclusion II

- WILL SURVIVE
  - WHITE
  - SMOOTH
  - STABLE
  - COVERED
- IF YOU HESITATE
  - KILL HIM
CONCLUSION III

- TENODESIS
  - OPTION
  - PATIENTS< 50
  - COST
  - LONGER SURGERY
  - PAIN
  - POSTOP IMMOBILIZATION
  - COSMETIC PURPOSE

THANK YOU