

stryker

Current Concepts in Hip Arthroscopy

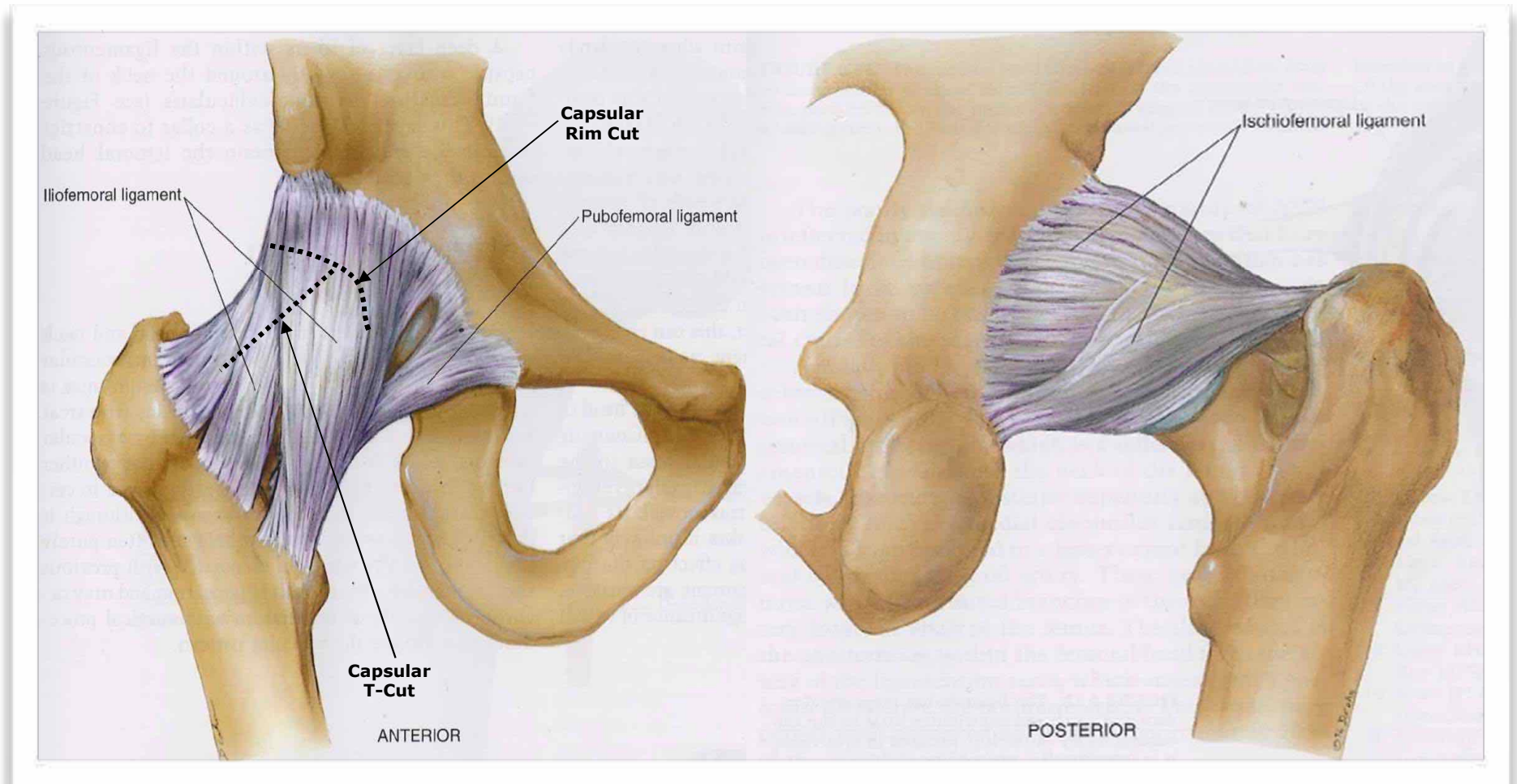
Amsterdam, June 10th, 2016

Evolution of Capsule Management

Raul Zini



HIP JOINT CAPSULE



COMPLEX ANATOMY STRUCTURE

- ILIOFEMORAL
- PUBOFEMORAL
- ISCHIOFEMORAL
- ZONA ORBICULARIS

THE CAPSULE IS FUNDAMENTAL FOR HIP JOINT STABILITY

LIGAMENTS WORKS IN CONCERT WITH:

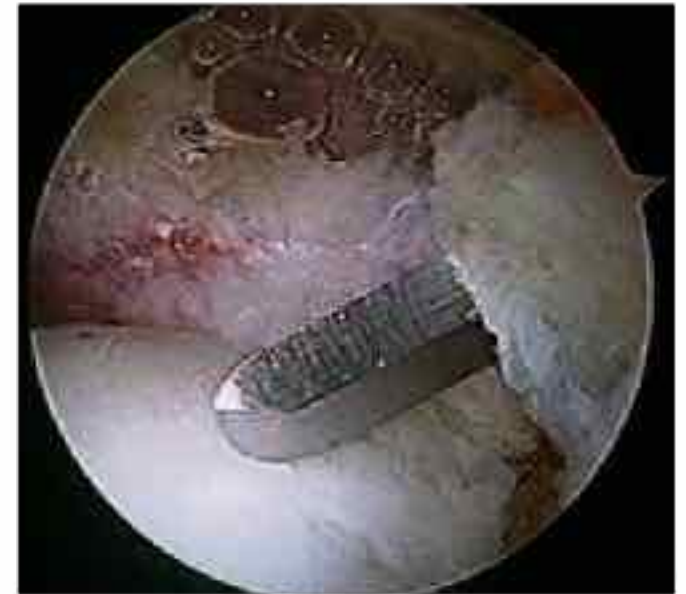
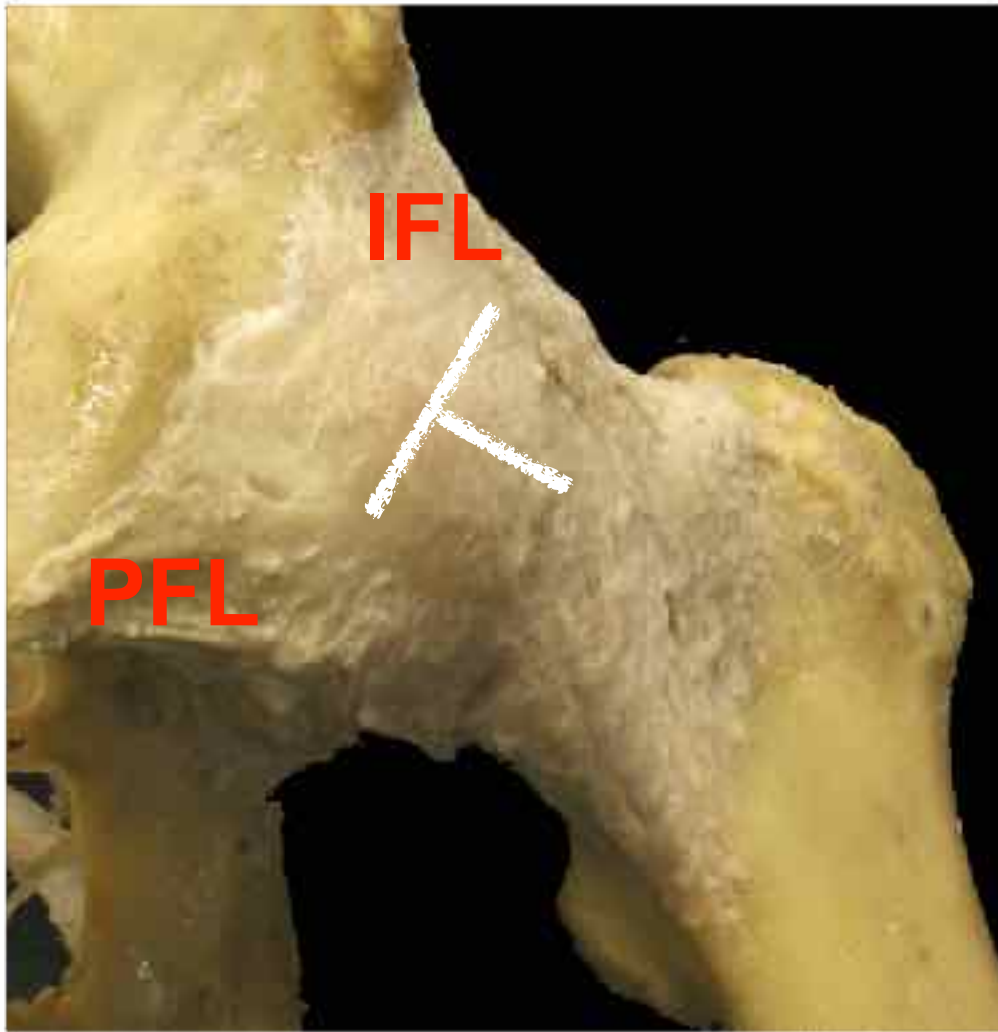
- Acetabular Labrum
- Transvers Acetabular Ligament
- Ligamentum Teres
- Iliocapsularis Muscle



ZONA ORBICULARIS

- SPIRAL CONFIGURATION
- "SCREW-HOME" MECHANISM
- FURTHER HIP STABILITY

CAPSULOTOMY



- ➔ INTERPORTAL
- ➔ "T" CAPSULOTOMY

INTERPORTAL CAPSULOTOMY

- ✓ Mobility of arthroscopic instruments
- ✓ Exposure of the extra-articular side of the labrum rim
- ✓ Better visualization in anchor placement and suture passage



"T" CAPSULOTOMY

- ✓ Improvement of visualization
- ✓ Exposure of the cam deformity without retraction of capsular tissue



CAPSULAR INTEGRITY IS FUNDAMENTAL FOR:

- CORRECT HIP BIOMECHANICS
- COMPLETE HIP STABILITY



Capsular deficiency can lead to hip joint instability

IATROGENIC INSTABILITY AFTER CAPSULOTOMY

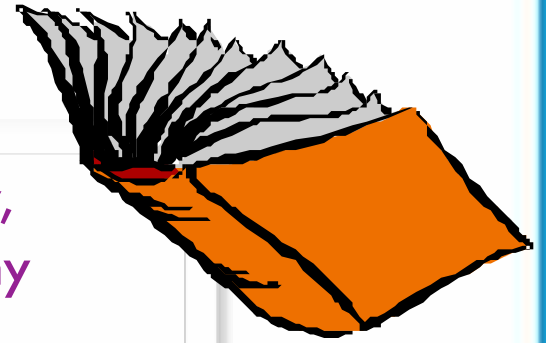
**POSSIBLE IN A HIGH NUMBER OF CASES
ESPECIALLY IN:**

- HIP DYSPLASIA
- EXCESSIVE ACETABULAR ANTEVERSION
- EXCESSIVE FEMORAL NECK ANTEVERSION
- LABRUM DEFICIENCY
- CAPSULAR HYPER-LAXITY



**CAPSULAR REPAIR AFTER CAPSULOTOMY? WHY
NOT?**

LITERATURE



Unfortunately, with the growing popularity of hip arthroscopy, iatrogenic instability from excessive capsulotomy/capsulectomy is becoming a growing concern.

Ranawat 2009 / Matsuda 2009 / Benali 2009

In cadaveric study a relative contribution of the acetabular labrum and ileofemoral ligament in hip stability is evident.

Myers 2011

In a series on revision hip arthroscopy, 35% of patients with refractory pain after prior arthroscopy had unaddressed instability

Philippon 2007

Repair of capsule resulted in no related complications and no limitation in range of motion.

Domb 2013

CAPSULAR CLOSURE IS BETTER

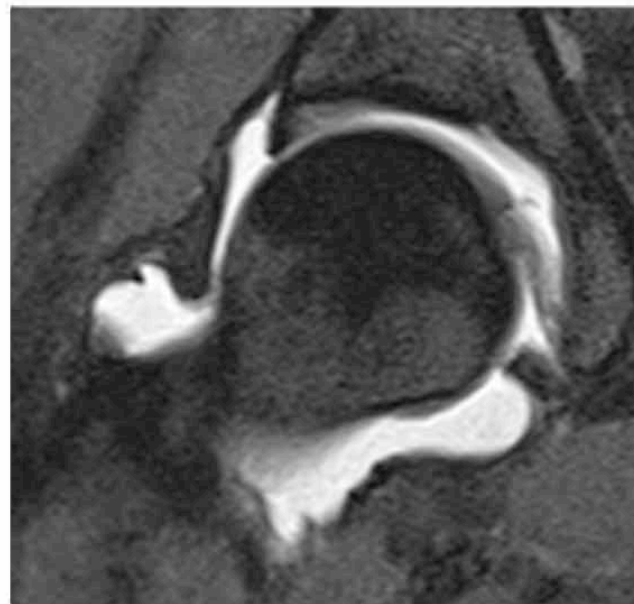
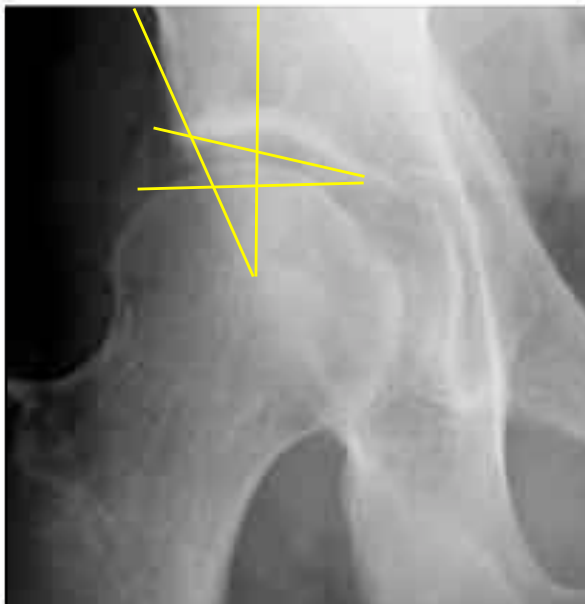
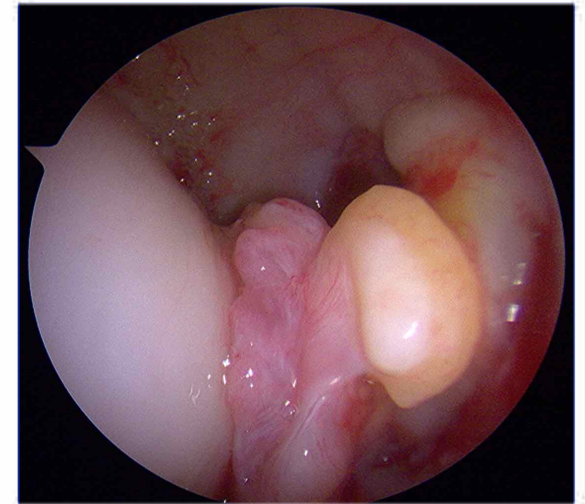
NO INDICATIONS IN:

- ✓ LIMITED CAPSULOTOMIES
- ✓ ARTHRITIC HIPS
- ✓ STIFF HIPS
- ✓ ADHESIVE CAPSULITIS



INDICATIONS TO CAPSULAR CLOSURE

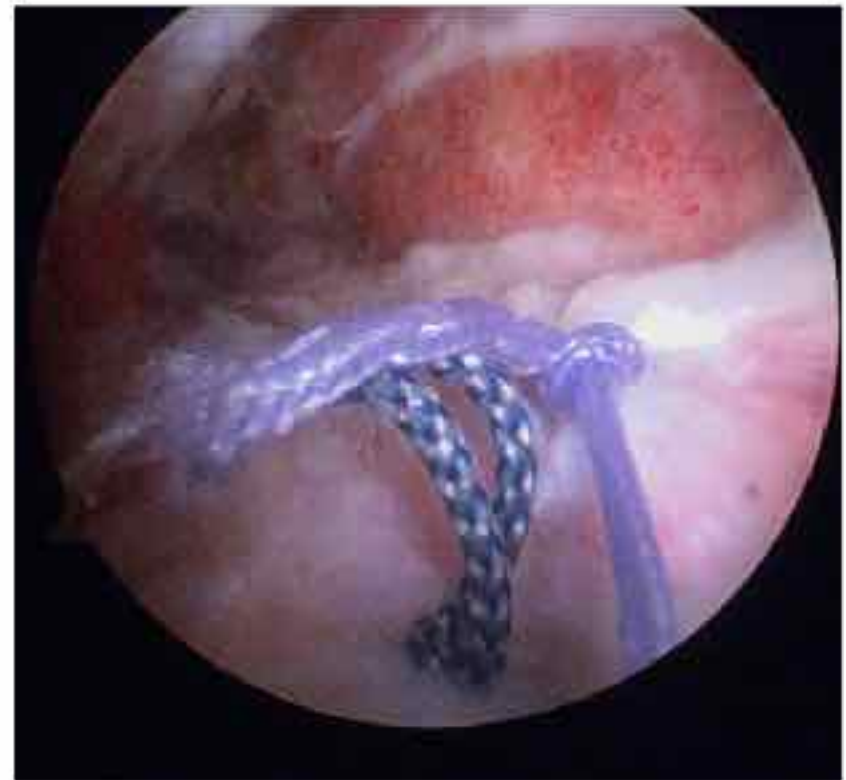
- ✓ YOUNG ATHLETIC PATIENTS
- ✓ FEMALE PATIENTS WITHOUT PREOPERATIVE STIFFNESS
- ✓ HIP DYSPLASIA (CEA 20° - 24°)
- ✓ CAPSULAR HYPER-LAXITY
- ✓ EASY DISTRACTION WITH MINIMAL FORCE
- ✓ ASSOCIATED LIGAMENTUM TERES TEARS
- ✓ NORMAL CAPSULAR COMPLIANCE
- ✓ SUFFICIENT CAPSULAR TISSUE TO PERMIT REPAIR WITHOUT OVER-TIGHTENING



WHY NOT...ALWAYS ?

BECAUSE CAPSULE CLOSURE IS NOT

- EASY TECHNIQUE
- TOO SHORT STEP



THE NEED FOR EASY DEDICATED DEVICES

SlingShot

Suture Manager



Injector II

Capsule Restoration System





Single-Step Capsular Closure

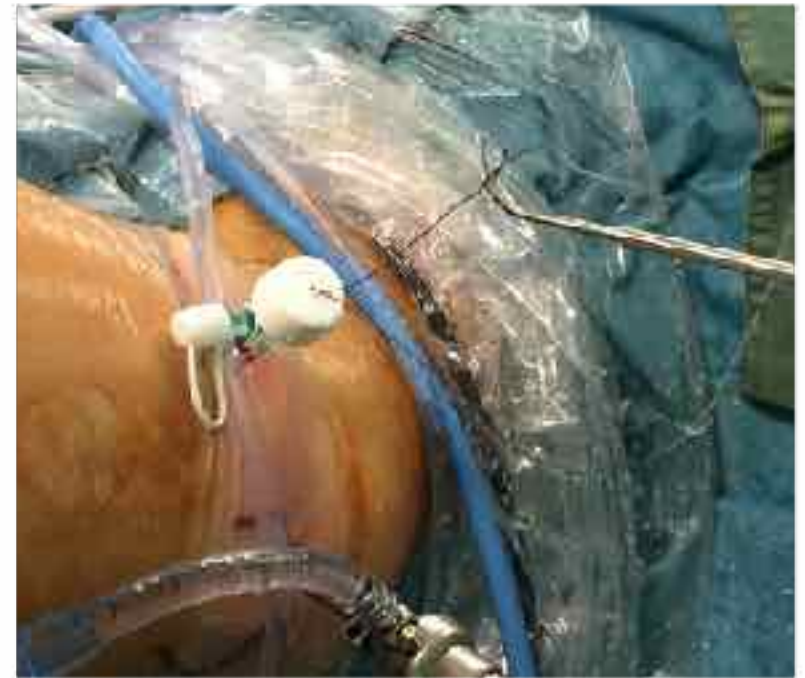
It allows to pass
and retrieve
sutures through a
single portal

- ➔ Easy
- ➔ Rapid
- ➔ Reproducible



SlingShot Technique

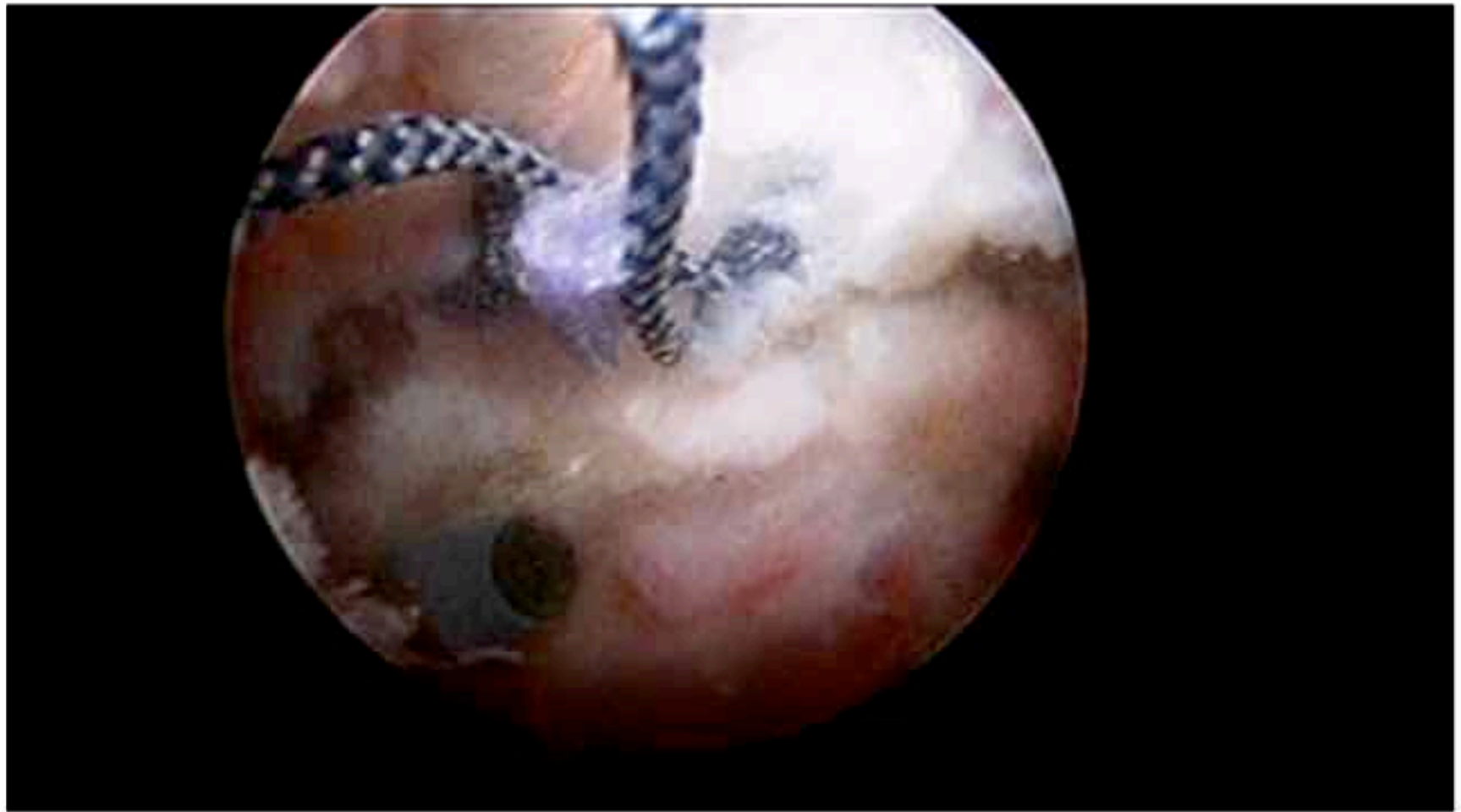
- Hip in 45° flexion
- Disposable cannula through MA
- Side-to-side stitches
- 2-3 stitches for T-capsulotomy
- 2-4 stitches for Interportal capsulotomy
- Evaluation of tightening in extension



T capsulotomy closure



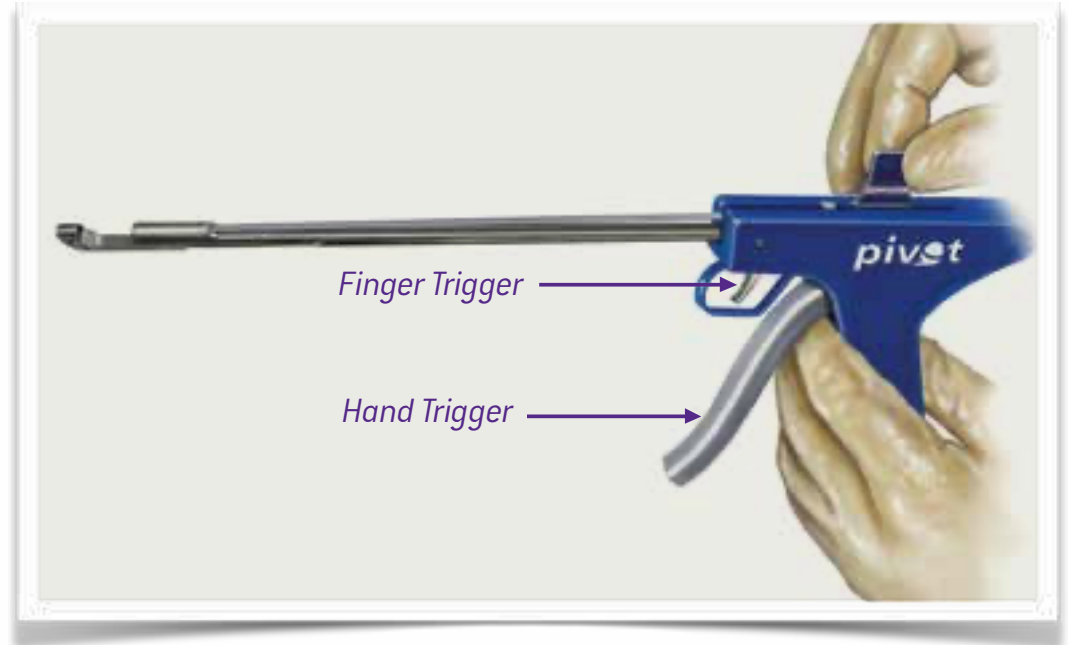
Interportal closure





Automated Suture-passing Device

- ✓ Designed to achieve normal capsule anatomy
- ✓ Tailhook suture system allows for highly reproducible stitching even in tough capsule

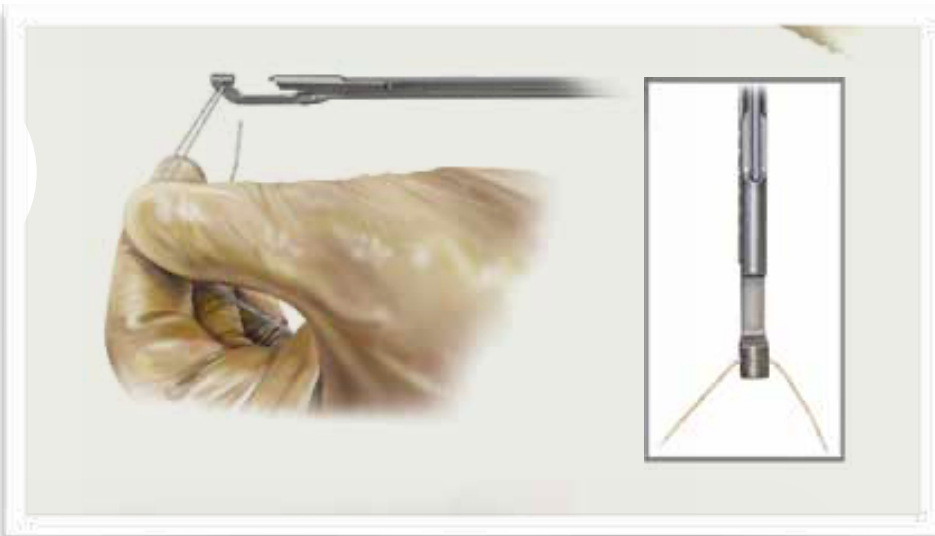


- ➔ Rapid
- ➔ Anatomic
- ➔ Reproducible

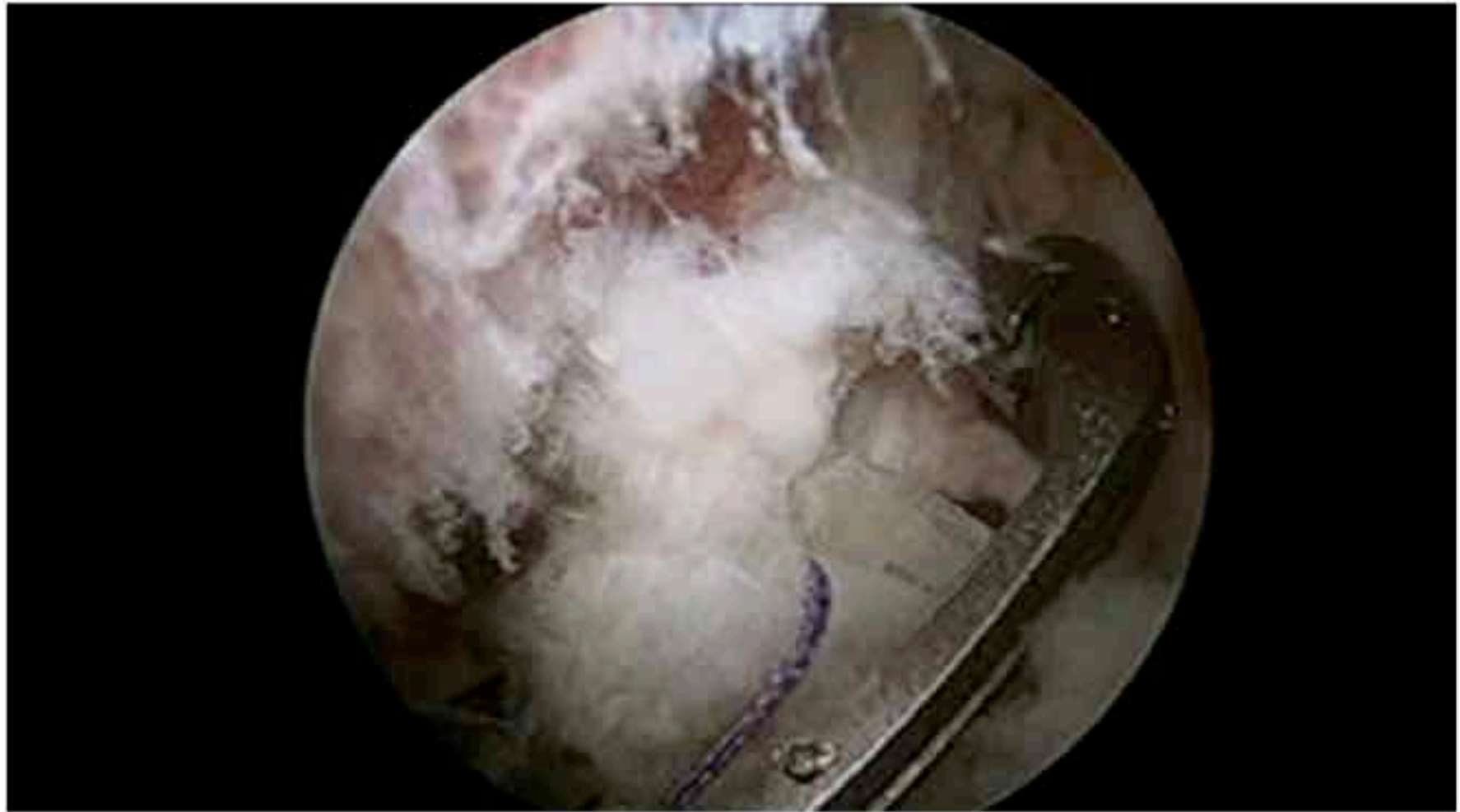
Injector II Technique

- Hip in 45° flexion
- Disposable cannula through MA
- Pivot ZipLine #2 suture
- 1-2 stitches for T-capsulotomy
- 2-3 stitches for Interportal

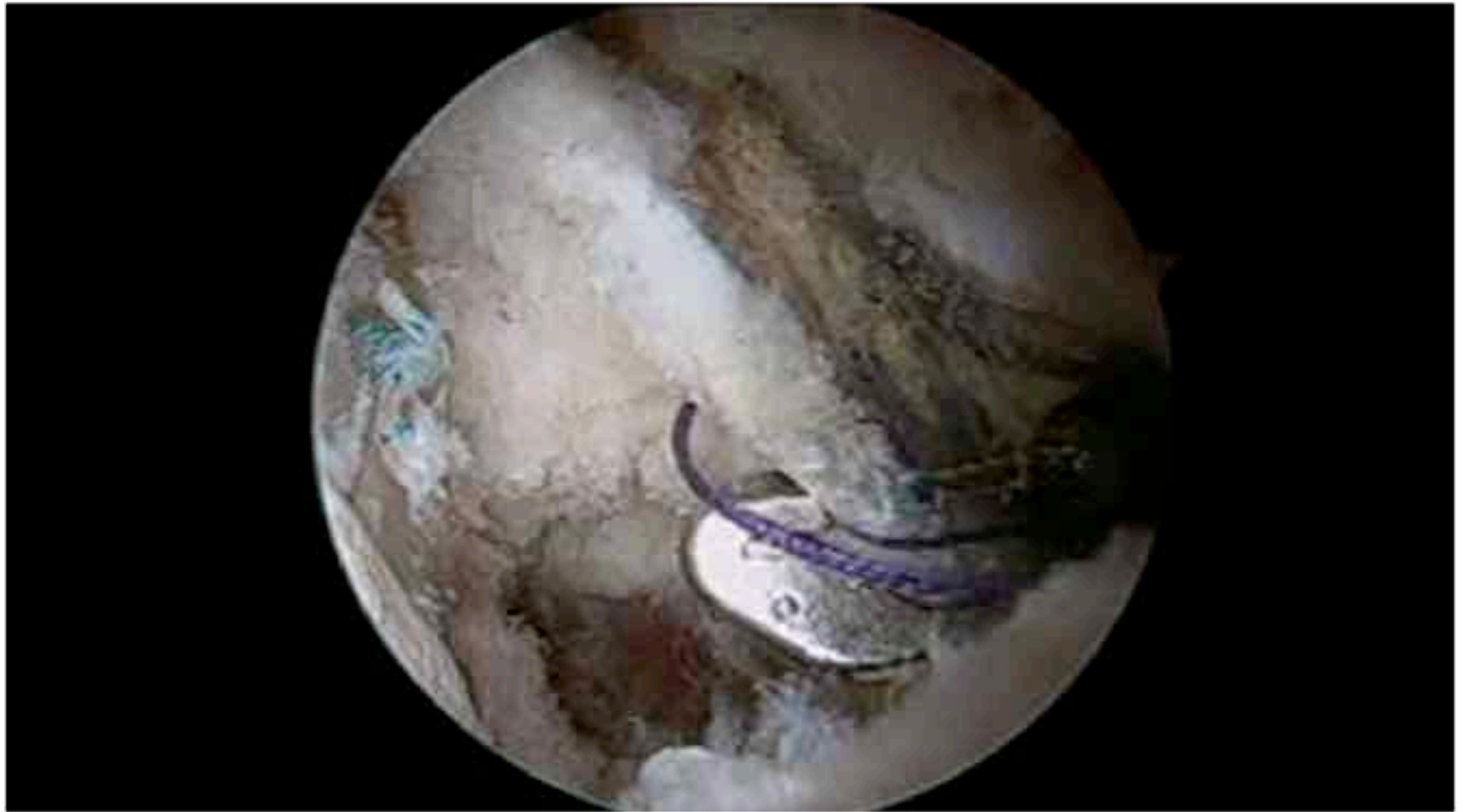




T capsulotomy closure



Interportal closure



CONCLUSIONS

CAPSULE REPAIR IS A SURGICAL STEP THAT MUST:

- BE CONSIDERED..... ALWAYS
- BE PERFORMED IN HIGH PERCENTAGE
- BE DONE.....EASILY AND RAPIDLY

EVEN MORE INDICATIONS

- LITERATURE AND OUTCOMES
- EASY AND REPRODUCIBLE TECHNIQUES



CONCLUSIONS

CAPSULAR REPAIR ALLOWS:

- MAXIMIZE EXPOSURE WITH CAPSULOTOMY
- IMPROVE THE SURGICAL PERFORMANCE
- MAINTAIN INTEGRITY AND FUNCTION OF THE CAPSULE

**BEST RESULTS
FOR OUR PATIENTS**



THANKS FOR YOUR ATTENTION



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