Complicanze: prevenzione e trattamento nella
nella chirurgia dell'anca dall'artroscopia alla protesi

Monza 23-24 Novembre 2017

Le complicanze dell'artroscopia dell'anca

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dell'artrosi deformante dell'anca
Direttore Dott. Giovanni Grano

Complicanze: incidenza

• **Glick**	(Current management of complication arthrosc surgery 1992)	15%
• **Funke – Munziger**	(Arthroscopy 1996)	15%
• **Byrd**	(Operative Hip Arthroscopy 1998)	1,5%
• **Griffin- Villar**	(J.B.J.S. Br 1999)	1,6%
• **Sampson**	(Clin. Sport Med. 2001)	6,4%
• **Clarke-Arora-Villar**	(Clin. Orthop. 2003)	1,4%
• **Sampson**	(Tecniques in Orthopedics 2005)	3,8%
• **Mc Carthy JC**	(Instr. Course Lect. 2006)	5%
• **M.Kowalczuk**	(Knee .Surg. Sport Traum. 2013)	4%
• **Gupta A**	(Arthroscopy 2014)	4.1%

Le complicanze cambiano con l'esperienza

Do Complications in Hip Arthroplasty Change With Experience?

Bruno Gonçalves Schoder e Souza M.D., Wiliam Soltau dani, M.D.
Arthroscopy vol.26 N°8, 2010

Complications in hip arthroscopy: necessity of supervision during the learning curve

Park MS, Yoon SJ, Kim YJ, Chung WC
Arthroscopy 2014 Aug:30(8):957-63

Journal of Hip Preservation Surgery Vol. 4, No. 3, pp. 214–223
doi: 10.1093/jhps/hnx018
Advance Access Publication 26 June 2017
Research article

Risk of failure of primary hip arthroscopy—a population-based study

Ryan M. Degen[1], Ting J. Pan[2], Brenda Chang[2], Nabil Mehta[2], Peter D. Chamberlin[2], Anil S. Ranawat[1], Danyal H. Nawabi[1], Bryan T. Kelly[1] and Stephen Lyman[2]*

Complicanze

Intraoperatorie

- Lesioni labbro acetabolare
- Lesioni cartilagine articolare *
- Rottura strumenti *
- Lesioni cutanee
- Sofferenze neurologiche *
- Lesioni vascolari
- Inadeguata rimozione ossea *
- Intra-Abdominal Fluid Extravation

Post-operatorie

- Instabilità
- TVP
- Infezione
- Necrosi testa del femore
- Fratture del collo del femore
- Ossificazioni *

Complicanze intra-operatorie

- **posizionamento del paziente**
- trazione
- realizzazione portali
- procedura artroscopica
- gestione dei fluidi

Complicanze: posizionamento paziente

Lesioni perineali da compressione:

- **lesioni scrotali e delle grandi labbra**
  (edema, ematoma, necrosi)
- **neuroprassia transitoria n.pudendo**
  3 casi in 150 artroscopie di anca (2%)
  (Pailhé R et al Orthop Traumatol Surg Res 2013 Nov;99(7):785-90)

Risoluzione spontanea

dopo 6-7 settimane

Complicanze: posizionamento paziente

Lesioni da compressione al piede ed alla caviglia:

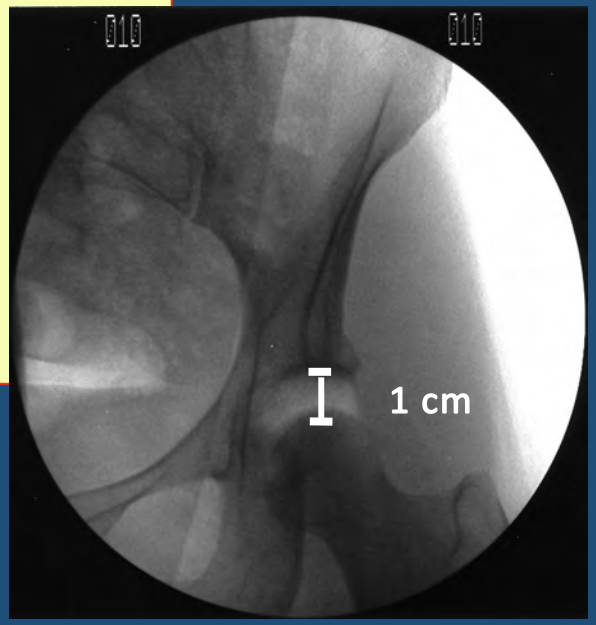
-algie transitorie

-trombosi arteriosa al livello della caviglia
(Hatem G. Said et al. Arthroscopy 2011;27:1594-1596)

-neuroprassie safeno (Sampson TG, Clin Sorts Med 2001)

Complicanze intra-operatorie

- posizionamento del paziente
- **trazione**
- realizzazione portali
- procedura artroscopica
- gestione dei fluidi



Complicanze: trazione

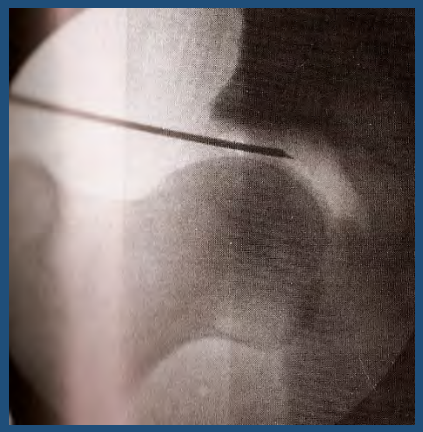
Lesioni articolari da inadeguata trazione:
- lesione labrum
- lesioni testa femorale (scuff-lesion)

-50 casi di lesioni labbrali iatrogene in 250 artroscopia (20%), senza esiti clinici a 2 anni dall'intervento.
-(Badylak, J, Keene J. Arthroscopy, Vol.27,N° 6, 2011)

Complicanze: trazione

Lesioni articolari da inadeguata trazione:

- lesione labrum
- lesioni testa femorale (scuff-lesion)



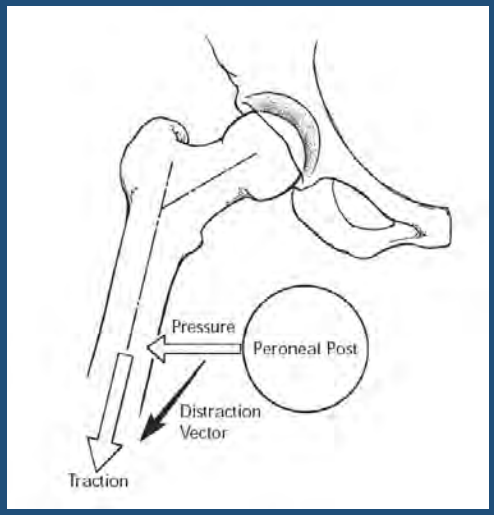
68 casi di piccole lesioni iatrogene della cartilagine in 100 artroscopie di anca.
Scarso impatto sui risultati clinici a breve termine.
(Ilizaliturri VM. Procs International Society for hip Arthroplasty Annual Scientific Meeting.Paris 2011)

Complicanze:entità della trazione

neuroprassia n.sciatico,n.femorale,n.peroneale

- oltre 50 libbre (23 kg) diminuzione trasmissione nervosa con potenziali evocati.
- durante monitoraggio intraoperatorio 35 pazienti

  (58%) con disfunzione del n. sciatico in 60 artroscopie di anca.



L'entità della trazione e non la durata è il maggior fattore di rischio per la disfunzione del n. sciatico durante l'artroscopia.

(Telleria JJ et al J Bone Joint Surg Am 2012;94:2025-2032)

Complicanze: tempo di trazione

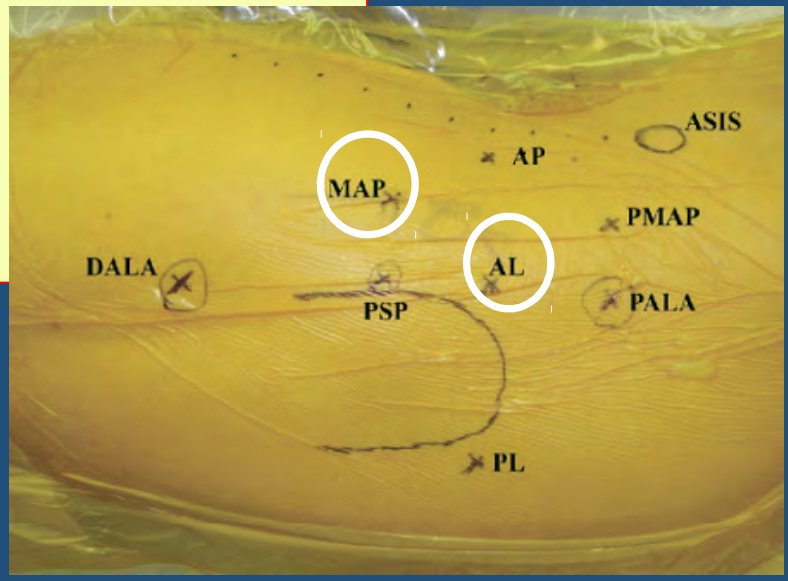
neuroprassia n. sciatico, n. femorale, n.peroneale

non superiore a 2 ore

Hip arthroscopy technique and complications.
Simpson J, Sadri H, Villar R. Orthop Traumatol Surg Res. 2010

Complicanze intra-operatorie

- posizionamento del paziente
- trazione
- **realizzazione portali**
- procedura artroscopica
- gestione dei fluidi

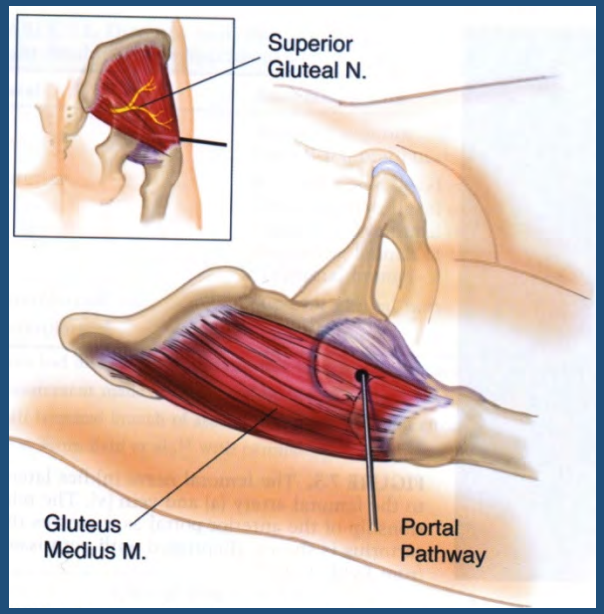


Complicanze: portali

Anterolaterale

N. gluteo superiore: 4.4 cm (3.2-5.5)
(Byrd JW, Operative hip arthroscopy Ed thieme 2004)

N. femoro-cutaneo laterale: 5,6 cm (4,6-7,8)
(Elsaidi GA, JBJB Br 2004)

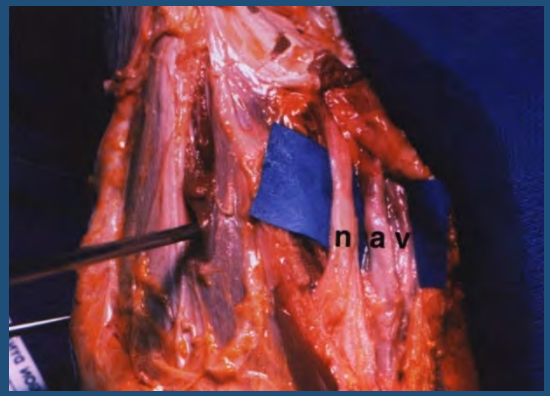


Complicanze: portali

Anteriore

N. femorocutaneo laterale:

- 0,3 cm (0,2-1) (Byrd JW 2004)
- 0,5 cm (0-2,8 cm) (Elsaidi GA, JBJB Br 2004)

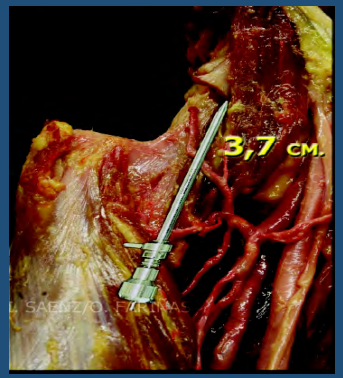


N. femorale:

- 3,2 cm (Byrd JW 2004)
- 2,4 cm (0,5-4,8) (Elsaidi GA, JBJB Br 2004)

A. circonflessa laterale:

- 3,7 cm (1-6) (Byrd JW 2004)



Complicanze: portali

Posterolaterale

N. sciatico:

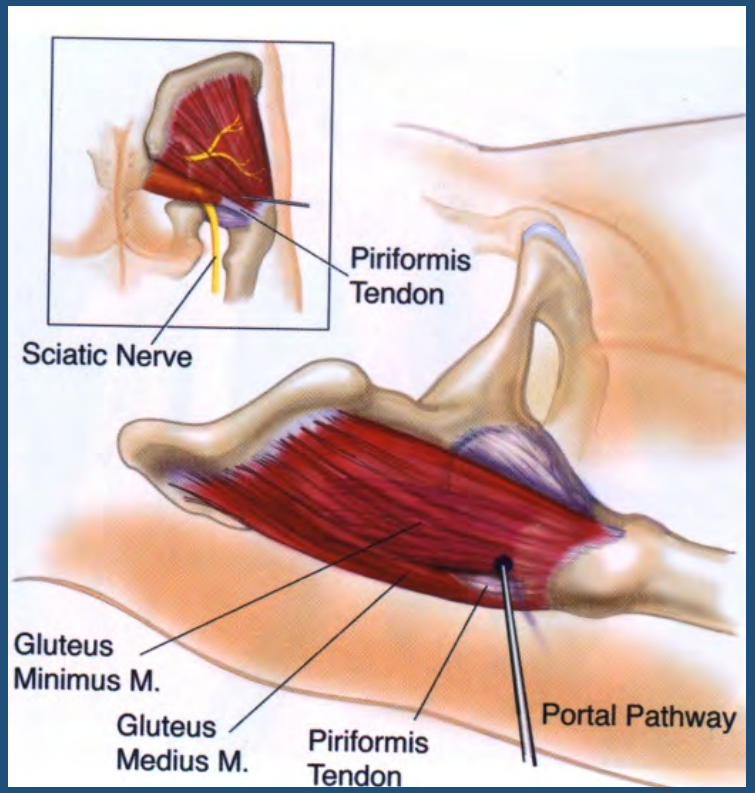
- 2,9 cm (2.0-4.3) (Byrd JW 2004)
- 4 cm (1,6-7,0) (Elsaidi GA, JBJB Br 2004)

A. circonflessa mediale:

- 1,9 cm (1,6-1,2) (Elsaidi GA, JBJB Br 2004)
- 1 cm(0,5-1,5)(Sussmann PS, Arthroscopy 2007)

A.glutea superiore:

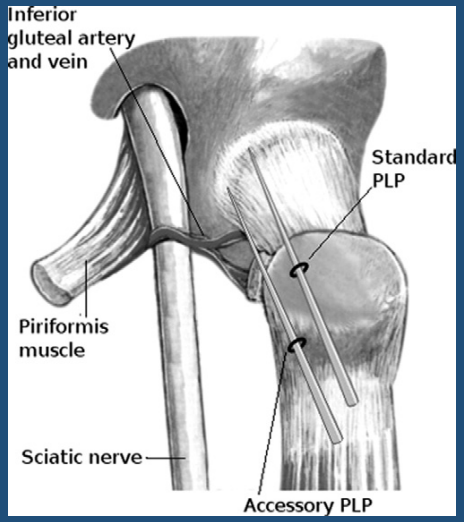
- 3,6 cm (0,6-8,5) (Elsaidi GA, JBJB Br 2004)

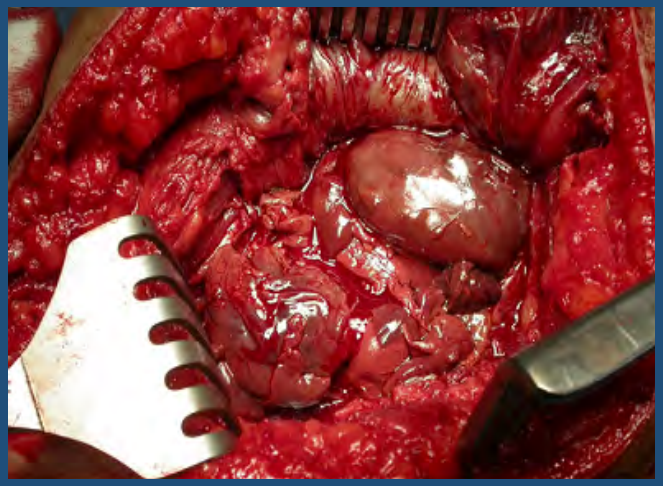


Complicanze: portali

A catastrophic complication of hip arthroscopy

(Bruno M, Longhino V, Sansone V. Arthroscopy 2011;27:1150-1152)

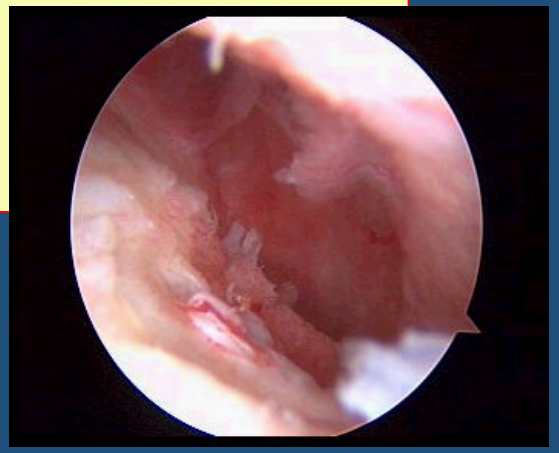




Pseudoaneurisma da rottura arteria glutea inferiore e compressione del n. sciatico

Complicanze intra-operatorie

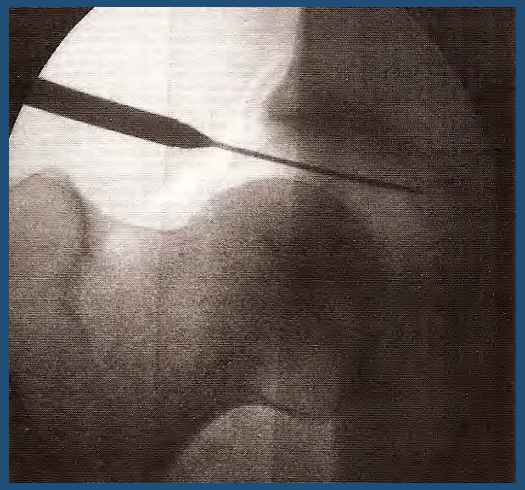
- posizionamento del paziente
- trazione
- realizzazione portali
- **procedura artroscopica**
- gestione dei fluidi



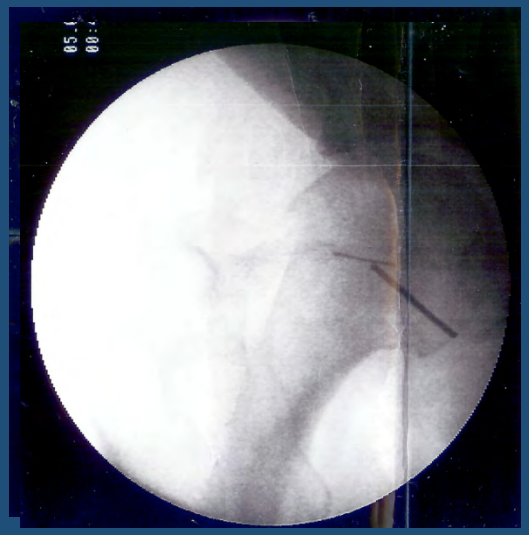
Complicanze: procedura artroscopica

rottura di filo guida in Nitinol

piccole disattenzioni.....



grosse complicazioni

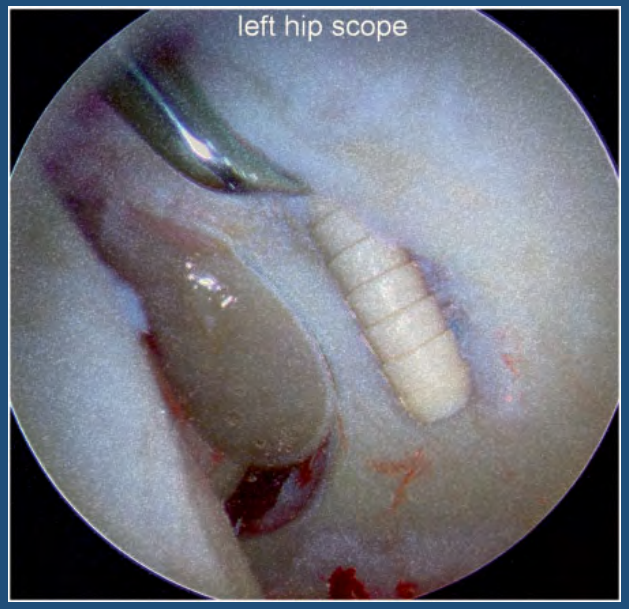


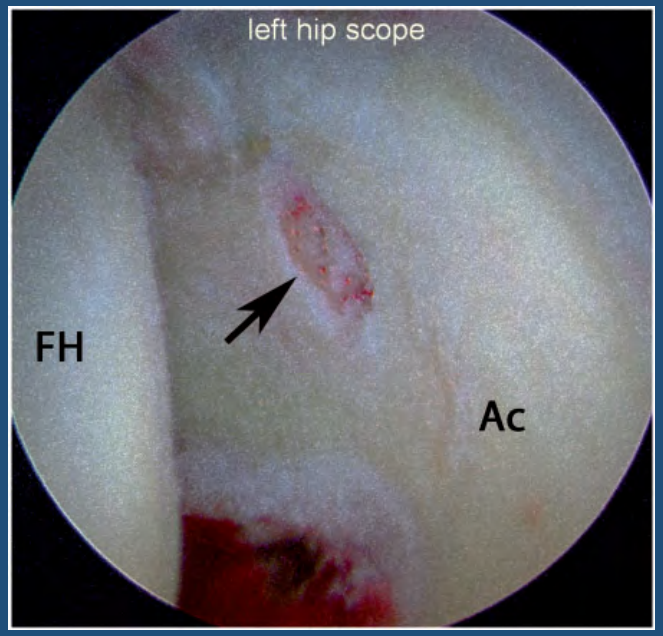
2 casi di rottura di strumenti in 1054 artroscopie
(Clarke MT et al. Hip Arthroscopy.Complications in 1054 cases.Clin. Orthop. Relat Res 2003;406:84-8)

3 casi di rottura di strumenti in 1000 artroscopie
(Sampson TG, Complications of hip arthroplasty.Tech Orthop 2005;20:63-6)

Complicanze: procedura artroscopica

malposizionamento ancora





Anchor-induced chondral damage in the hip

D. K. Matsuda, S.Bharam, B.J. White, N. A. Matsuda and M. Safran

Journal of Hip Preservation Surgery Vol. 2, No. 1, pp. 56–64

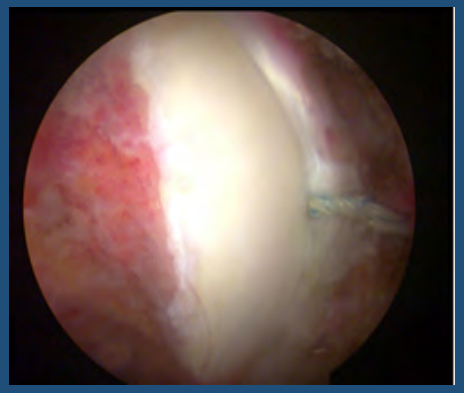
Complicanze: procedura artroscopica

Incomplete osseous reshaping

Heyworth BE et Al: Radiologic and intraoperative findings in revision hip arthroscopy. Arthroscopy 2007
79%

Philippon MJ et Al: Arthroscopic management of femoroacetabular impingement: osteoplasty tecnique and literature review . Am.J.Sport Med. 2007
92%

Harris DJ et Al: Complication and reoperation during and after hip arthroscopy: a systematic review of 92 studies and more than 6000 patient Arthroscopy 2013
18%



Complicanze

- posizionamento del paziente
- trazione
- realizzazione portali
- procedura artroscopica
- **gestione dei fluidi**

Intra-Abdominal Fluid Extravasation

Tech Orthop 2005;20:63-6

Complications of hip arthroscopy.

Sampson TG.

- incidenza IAFE: 1%

Arthroscopy.2012 Nov;28(11):1654-1660

Intra-adbominal fluid extravasation during hip arthroplasty:a survey of the MAHORN group.

Kocher MS[1], Frank JS, Nasreddine AY, Safran MR, Philippon MJ

- 40 casi di IAFE /25.650 artroscopie
- incidenza IAFE: 0,16%
- fattori di rischio: • elevata pressione intrarticolare
  • concomitante tenotomia del ileopsoas

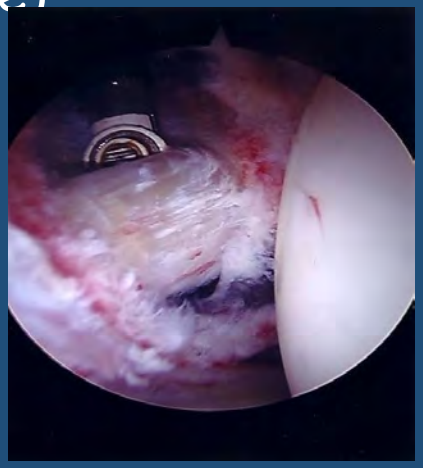
IAFE: Fattori di rischio

- Elevata pressione della pompa
- Intervento di lunga durata (> 2 ore)
- Ampia capsulotomia
- Precoce tenotomia ileopsoas:

  IAFE nel **44% dei casi** se all'inizio

  vs **4% dei casi** se a metà procedura

  (Kocher et al Arthroscopy 2012;28:1654-1660)

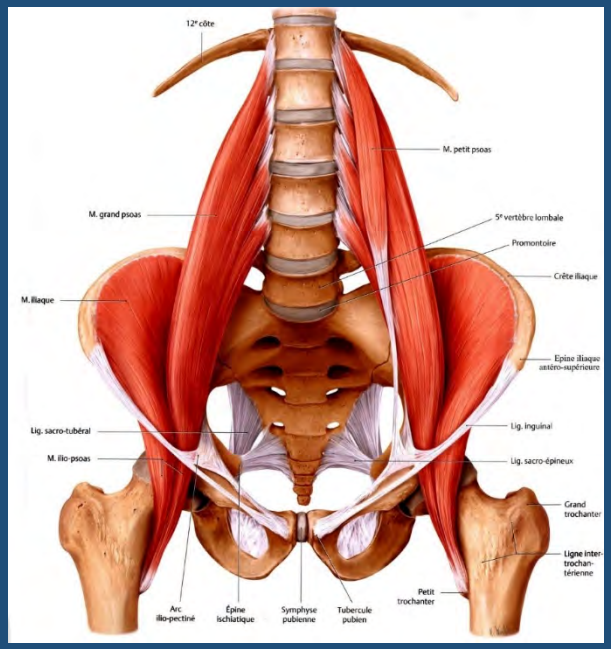


- Artroscopia in acuto dopo frattura dell'acetabolo

Arthroscopy.2008 Aug;24(8):966-8

Intra- and retroperitoneal irrigation liquid after arthroscopy of the hip joint

Kocher MS[1], Frank JS, Nasreddine AY, Safran MR, Philippon MJ



Il liquido di irrigazione fluisce seguendo un percorso retroperitoneale attraverso il muscolo ileopsoas ed i vasi iliaci

Da sospettare uno stravaso di liquido quando c'è un'improvviso abbassamento della temperatura corporea.

Intra-Abdominal Fluid Extravasation

5 segni di sospetto

- Incapacità nel distendere l'articolazione
- Aumento della quantità di liquido richiesta per mantenere distratta l'articolazione
- Frequente interruzione della pompa
- Distensione dell'addome e della coscia
- Ipotermia acuta

Arthroscopy.2010 Sep;26(9 Suppl):S90-4

Intrathoracic fluid extravasation after hip arhtroscopy

Verma M[1], Sekiya JK.

Stravaso di liquido in sede:
- intra e retroperitoneale ed
- **intratoracica.**

Riduzione del volume polmonare
con difficoltà respiratoria
nel 1° giorno post-op

Accumulo intratoracico risolto
spontaneamente e senza conseguenze

Quindi la difficoltà respiratoria nel post-operatorio può non essere dovuta solo all'embolia polmonare…

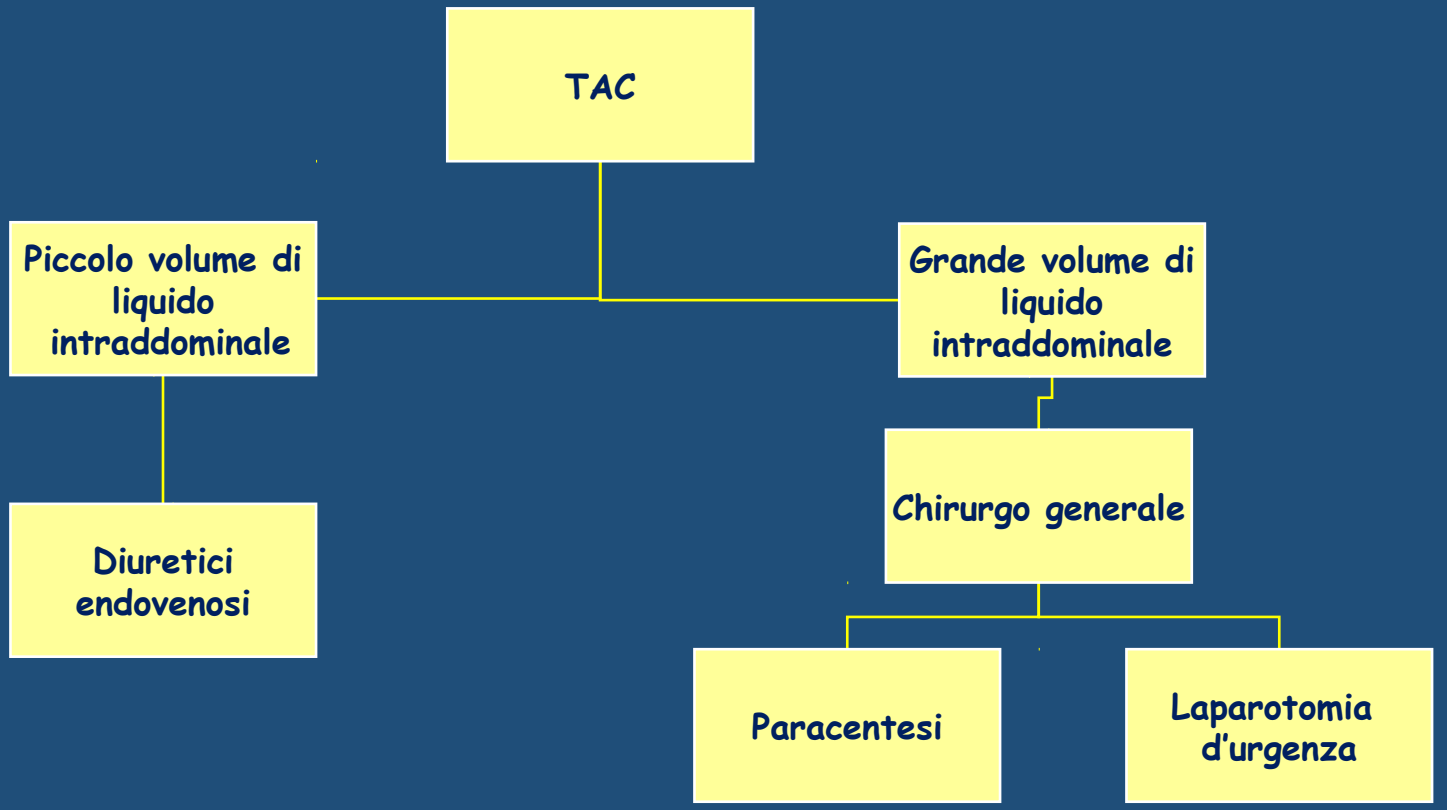
J Orthop Trauma 1998;12:294-299

Cardiac arrest as a result of intra-abdominal extravasation of fluid during arthroscopic removal of a loose body from the hip joint of a patient with an acetabular fracture

Bartlett CS, DiFelice GS, Buly RL

1 caso di arresto cardiaco in seguito a stravaso di liquido durante artroscopia per rimuovere corpi mobili in seguito a frattura recente acetabolo

Algoritmo di trattamento IAFE



Complicanze

- posizionamento del paziente
- trazione
- realizzazione portali
- procedura artroscopica
- gestione dei fluidi
- **postoperatorio**

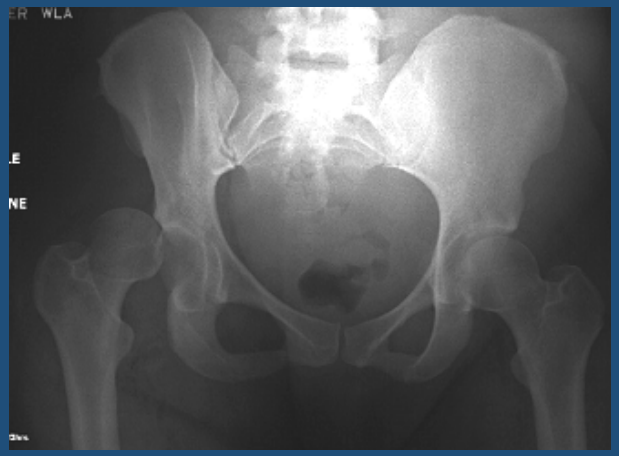
Complicanze: post-operatoria
Instabilità iatrogena

Case Report

Acute Iatrogenic Dislocation Following Hip Impingement Arthroscopic Surgery

Dean K. Matsuda, M.D.

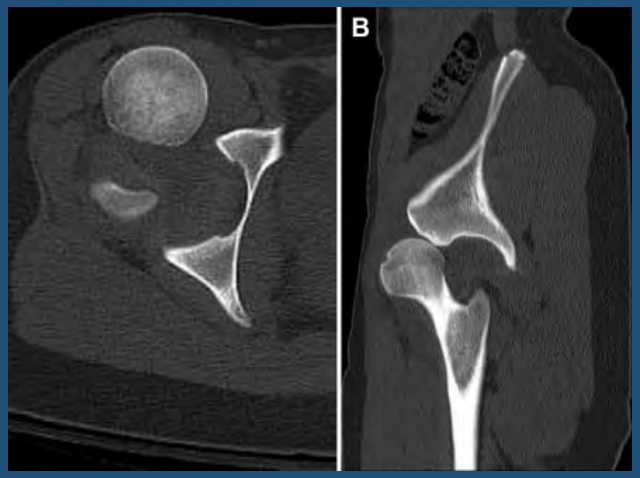
Arthroscopy 2009;25:400-404



Instabilità iatrogena

Cause

- eccessivo rim trimming
- ampia capsulotomia
- aggressiva resezione labbrale



Evitare rim trimming se l'angolo di Wiberg < 20°
(Philippon MJ, Oper Tech Orthop 2005)

Limitare la capsulotomia e preservare il legamento rotondo nell'anca con lieve displasia
(Mei-Dan O[1], Mc Conkey MO, Brick M Arthroscopy 2012 Mar;28(3)440-5)

Complicanza post-operatoria:
Frattura del collo del femore

43 casi su 31392 pazienti (0,1%) dopo artroplastica del CAM in artroscopia

Femoral neck fractures as a complication of hip arthroscopy: a systematic review
Journal of Hip preservation Surgery Vol 4 N 1, 9-17 2017

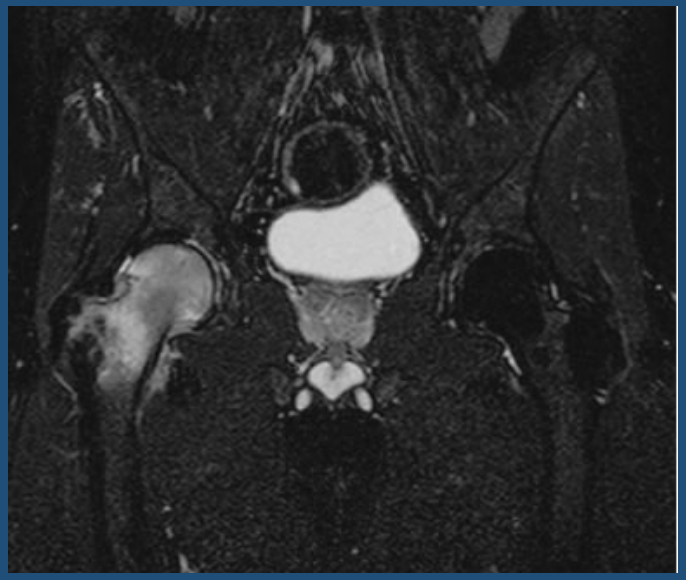
Frattura del collo del femore

- Aumento del rischio se resezione >30% head-neck junction
  (Mardones RM, JBJS Am 2005)

- Solitamente rimozione intorno al 15 %
  (Beck M, Clin Orthop Relat Res 2004,
  Ilizaliturri VM jr, J Arthroplasty 2008)

- Consigliato carico parziale (50% del peso corporeo) fino a 6 settimane soprattutto quando in età > 40 aa od in scarsa qualità ossea.
  (Ilizaliturri VM jr, J Arthroplasty 2008;
  Guanche Ca, Arthroscopy 2006;
  Sampson TG, Techniques in Orthopedics 2005;
  Philippon MJ, Oper Tech Orthop 2005)

Algodistrofia epifisi prossimale del femore



Risoluzione dopo 32 sedute di OTI

Necrosi asettica della testa femorale

- Nessun caso di AVN in > 1500 casi
  (McCarthy, Instr Course Lect 2006)

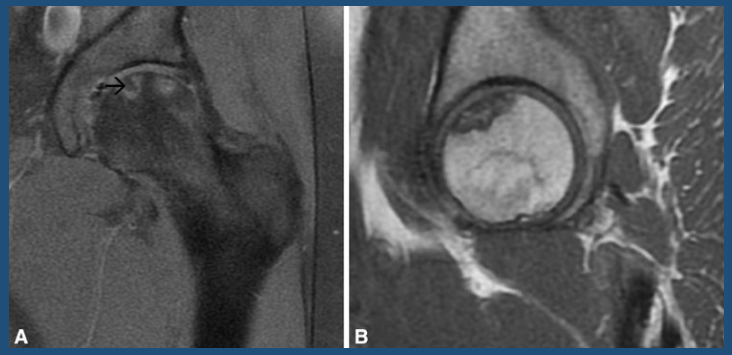
- 1 caso su 1000 artroscopie
  AVN attribuita alla distrazione e la capsulotomia in anca già compromessa per trauma.
  (Sampson TG et al, Tech Orthop 2005;20:63-66)

- 2 case reports (senza fattori di rischio per AVN)
  AVN attribuita alla compromissione vascolare da trazione
  (Scher DL et al, Clin Orthop Relat Res 2010;25:400-404)
  (Sener N et al, Hip Int. 2011;21:623-626)

Necrosi asettica della testa femorale

- 1 case report

(senza fattori di rischio per AVN)
AVN attribuita alla compromissione vascolare da danno dell'arteria circonflessa laterale e da trazione
(Danielle L et al. Clin Orthop Relat Res 2010;468:3121-3125)



Importante identificare il " lateral synovial fold". Mai eseguire capsulotomia e osteoplastica del cam posteriormente al lateral synovial fold. (Sussmann et al. Arthroscopy Vol. 23, 2007)
(Kalhor et al. J Bone Joint Surg Am 2009;91-A:409-418)

Ossificazioni eterotopiche

Incidenza OH: 6% (studio di 100 casi trattati per FAI)
Larson CM, Giveans MR Arthrocopy 2008;24:540-546

Incidenza OH: 1,6% (studio di 300 casi trattati per FAI)
Heterotopic ossification after arthroscopic management of FAI: the role of NSAID prophylaxis.
Randelli F. et Al. J.Orthop Traumatol. 2010, December, 11; 245-50

Am J Sports Med 2012;40:854-863

The incidence of heterotopic ossification after hip arthroscopy.

Bedi A, Zbeda RM,ed al.

- Studio di 616 casi trattati per FAI
- Incidenza di OH a 13,2 mesi: 4,7%

CONFRONTO

Protocollo A:

- Naprossene 500 mg x 2 per 30 gg

incidenza: 8.3%

Protocollo B:

- Indometacina 75 mg/die per 4 gg
- Naprossene 500 mg x 2 per 30 gg

incidenza: 1.8%

I pazienti trattati solo con naprossene presentavano 4.36 volte maggiore probabilità di sviluppare OH

TVP/EPA

- 1 caso in paziente trombofilico a un mese
(McCarthy JC, Instr Course Lect 2006)

- 0 casi su 5500 pazienti
(Bushnell BD, Orthopedics 2008)

- 1 caso di trombosi delle vene femorale superficiale comune e delle vene poplitee dell'arto controlaterale a 13 gg dall'intervento (uso contraccettivi orali)
(Alaia MJ et al Orthopedics 2011;34:674-677)

Infezione

- 1 caso di artrite settica dopo 26 settimane su 1054 artroscopie
(Clarke MT, Clin Orthop Relat Res 2003)

- 1 caso di ascesso della sutura del portale anteriore su 218 artroscopie dell'anca in bambini ed addolescenti
(Nwachukwu BU, McFeely ED, J Pediatr Orthop 2011;31:227-231)

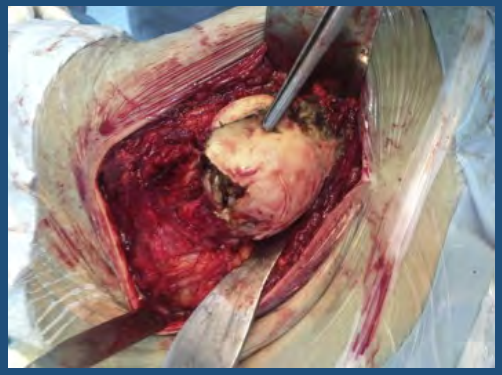
Condrolisi

- 1 case report di condrolisi dovuto all'utilizzo dell'ablatore

(Martinez-IM et al Arthroscopy 2015;31:167-172)

Paziente di 58 anni sottoposta ad artroscopia dell'anca sinistra per FAI

Condrolisi



Distacco della cartilagine dall'osso subcondrale a 4 mesi dall'artroscopia

Impianto di artroprotesi di rivestimento. FU: 2 anni HHS:96

Si consiglia:
-uso intermittente dell'ablatore
-buon flusso in entrata ed uscita
-frequenti lavaggi in modo da mantenere la temperatura intrarticolare sotto i 50°C. (McCormick et al.Arthroscopy 2013;29:336-342)

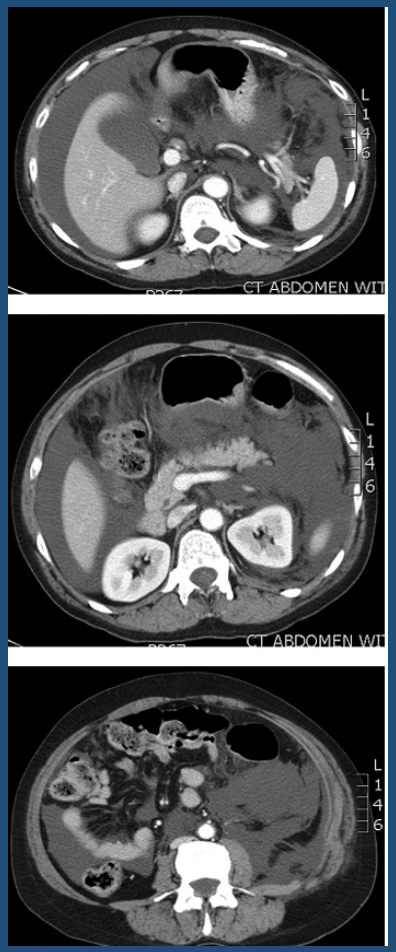
Conclusioni

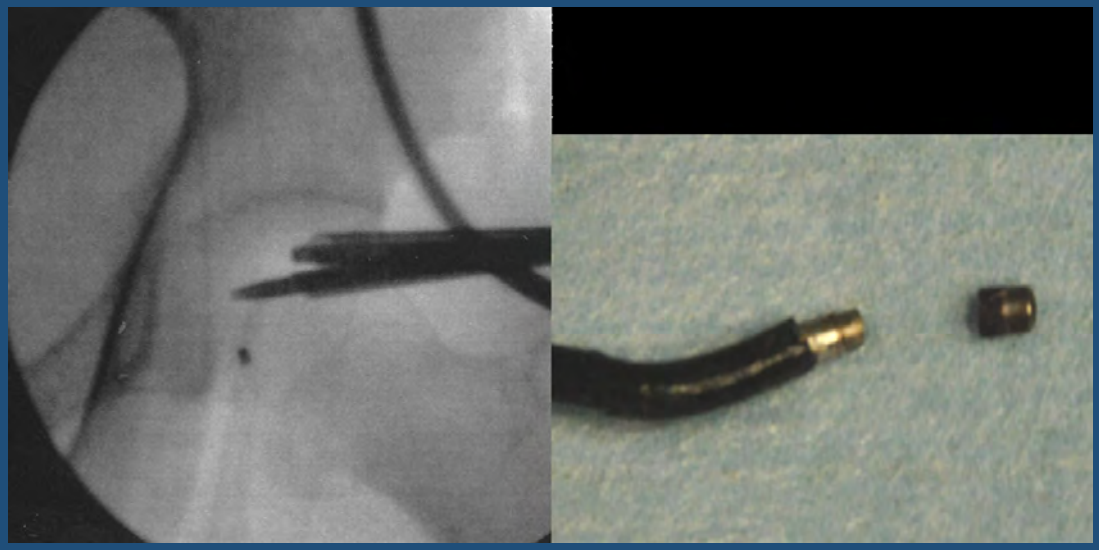
- L'artroscopia d'anca è stata la procedura che ha avuto il maggior incremento negli ultimi anni
- Procedura relativamente sicura (complicanze 1-8%)
- Bassissima percentuale di complicanze maggiori
- Complicanze cambiano con esperienza
- Come evitare le complicanze ?


GRAZIE

Stravaso di liquidi intraddominale

- 3 casi con necessità di paracentesi
  (Byrd J, in Byrd J (ed): Operative Hip Arthroscopy 1998)
- 1 caso risoltosi con riassorbimento spontaneo del liquido entro 16 ore
  (Haupt U. Arthroscopy Vol. 24;2008)
- 1 caso risolto con somministrazione di furesemide 20 mg x 2
  (Ladner et al.Arthroscopy Vol 26; 2010)
- 2 casi di sindrome compartimentale addominale trattata con laparotomia
  (Sharma et al. Anaesthesia, 2009;64)
  (Fowler J,Arthroscopy Vol 26;2010)





Prevenzione delle complicanze

Daniele Munegato

Clinica Ortopedica-Università degli Studi Milano-Bicocca
ASST Monza - Ospedale San Gerardo
Direttore : Prof. Giovanni Zatti

Planning preop

Profilassi preop

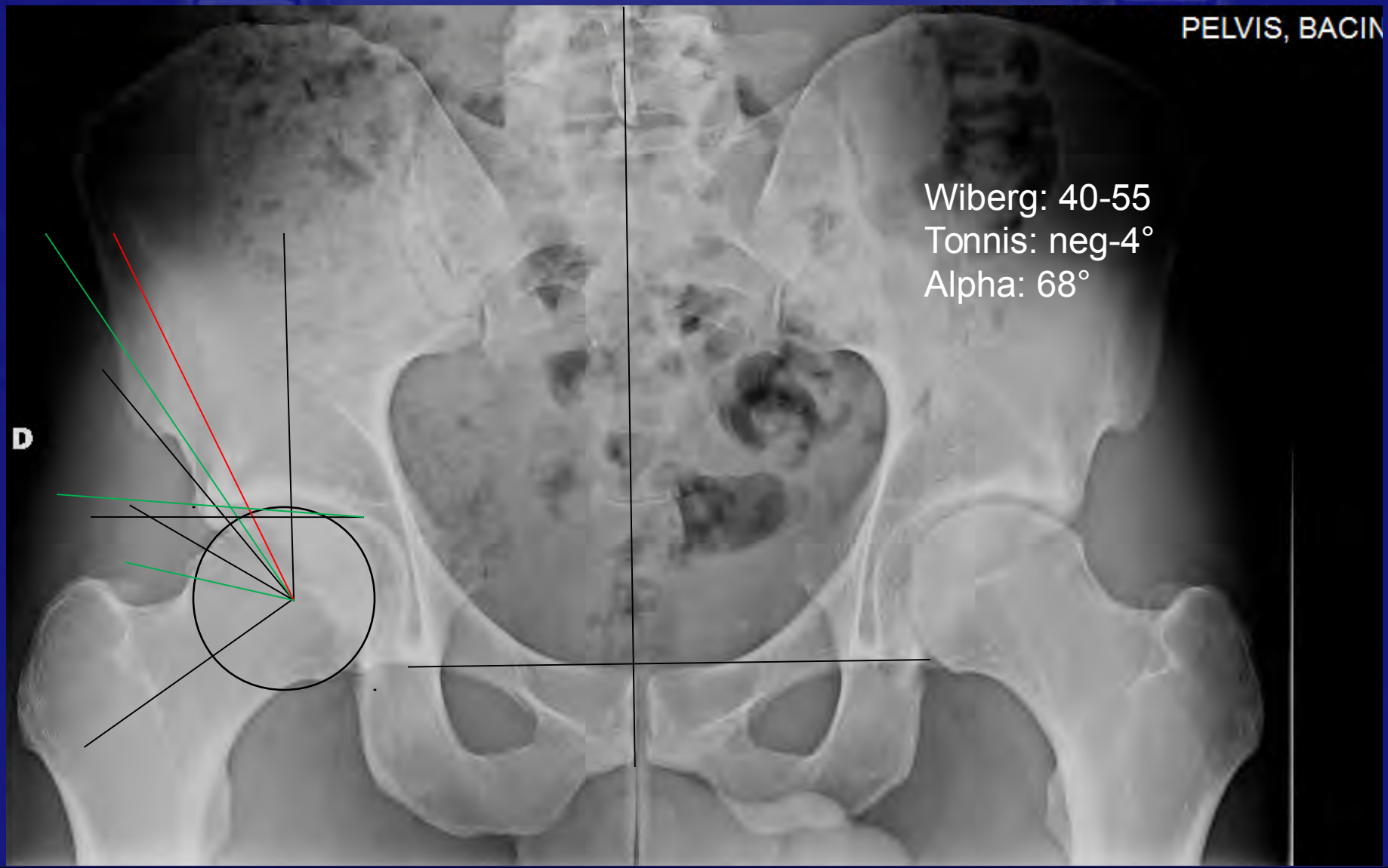
Posizionamento del paziente

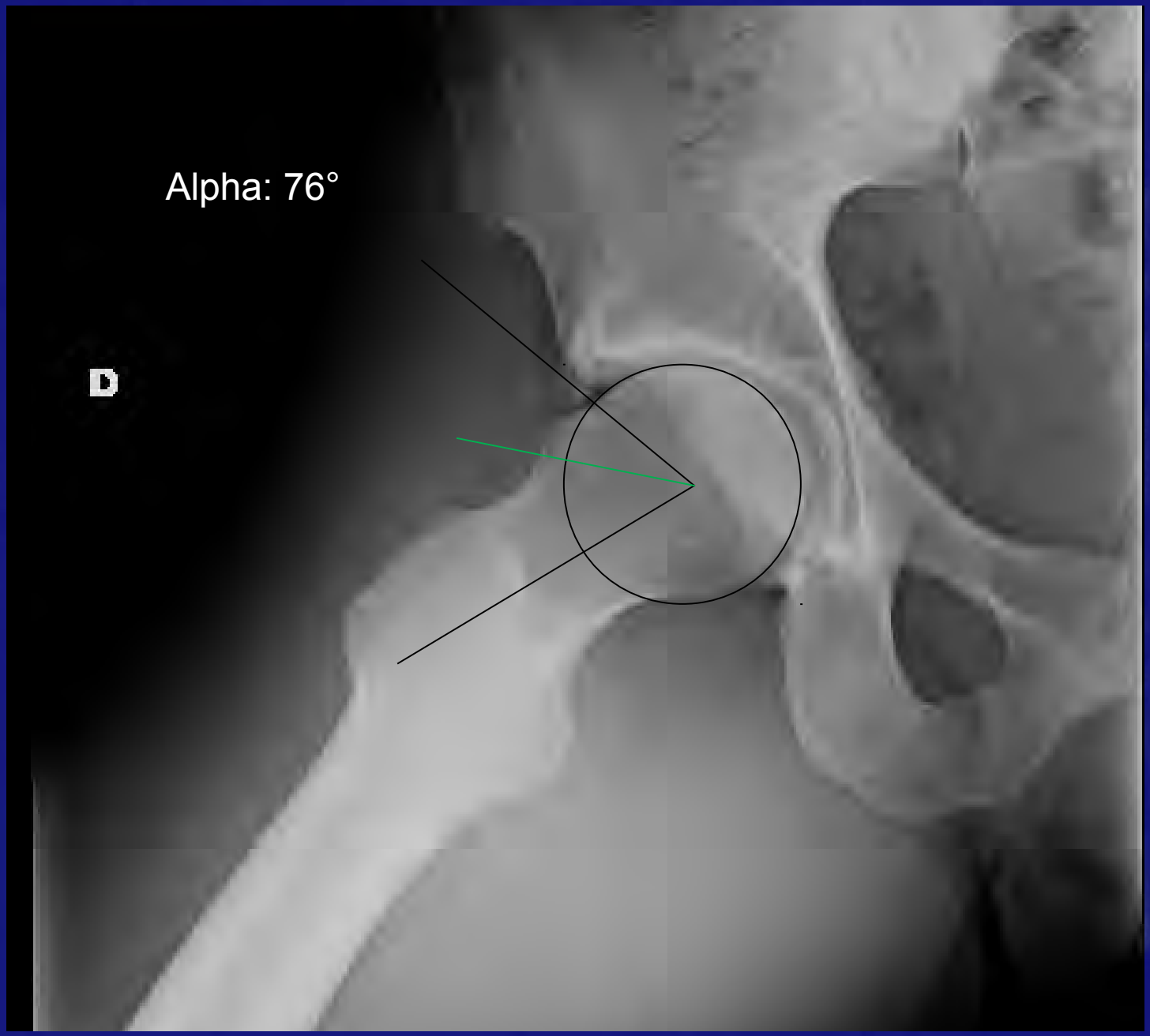
Trazione

Intraoperatorio

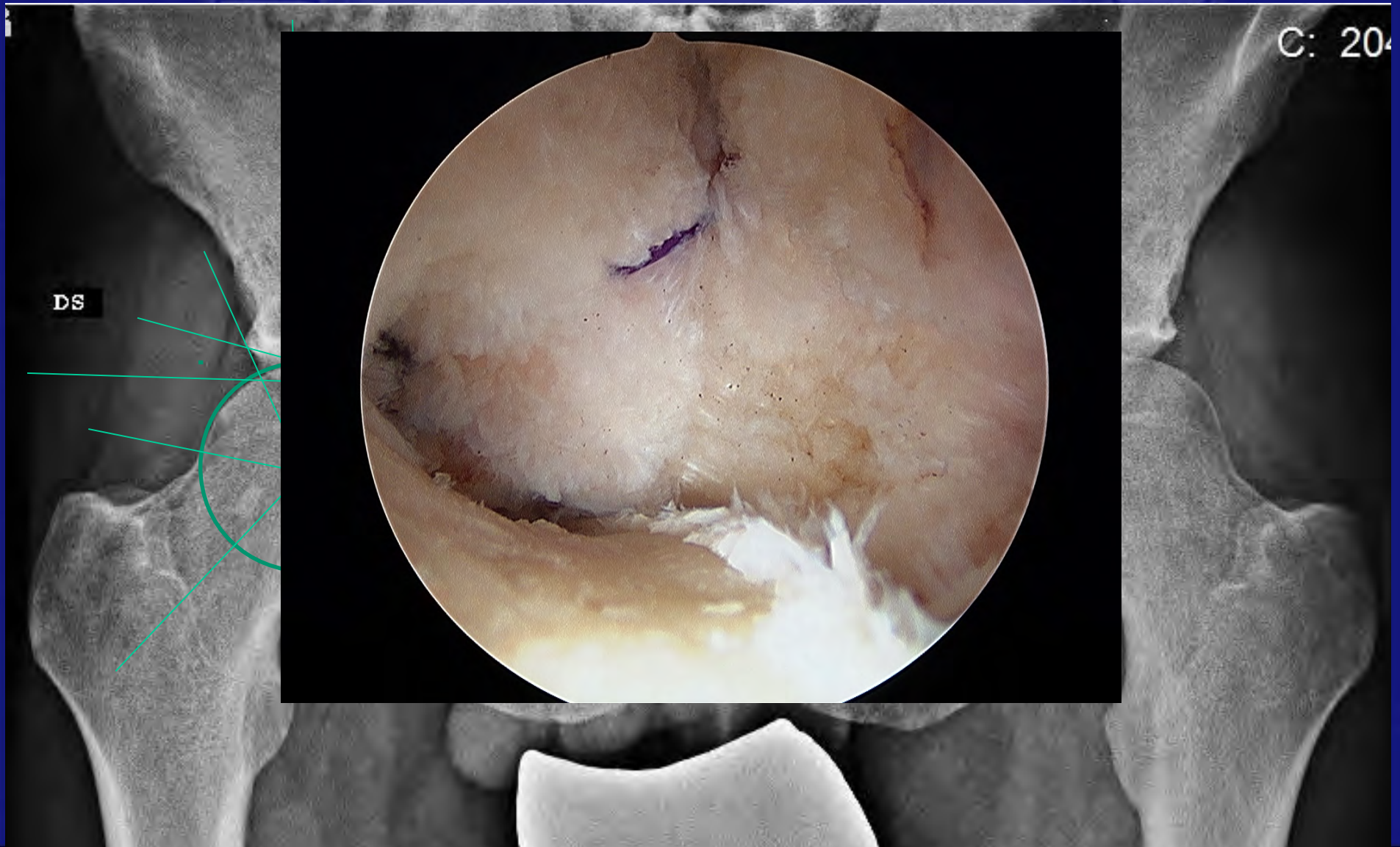
Postoperatorio: Profilassi ed FKT

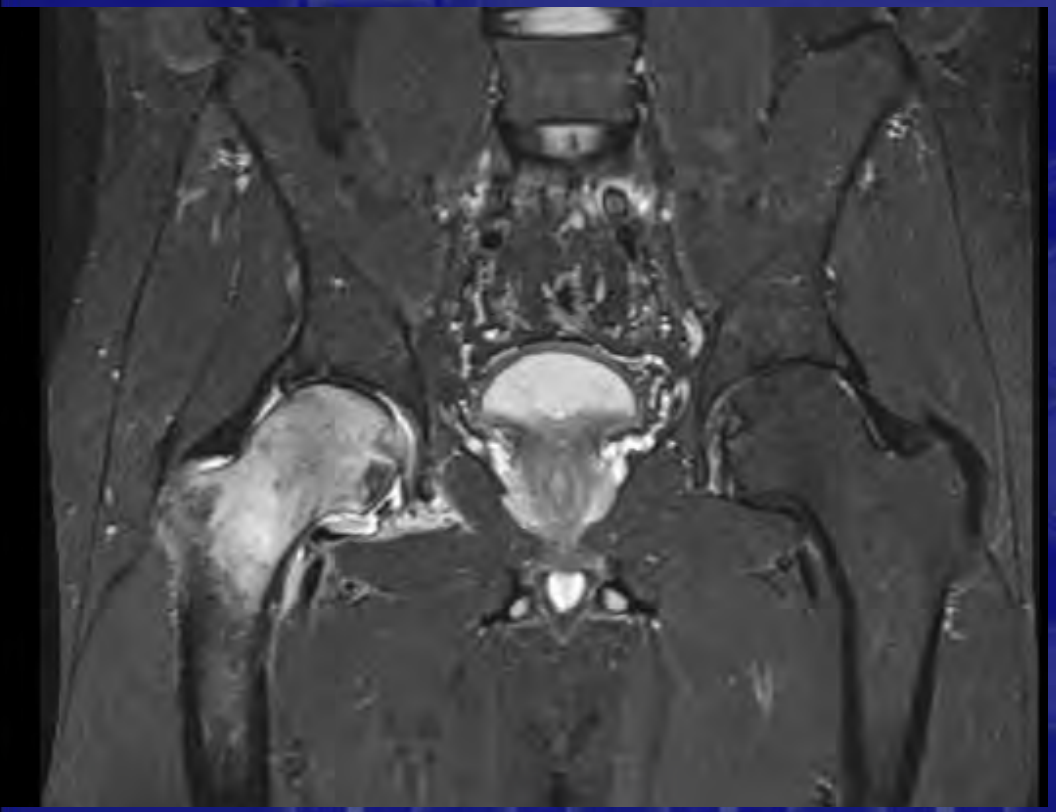
Planning preoperatorio

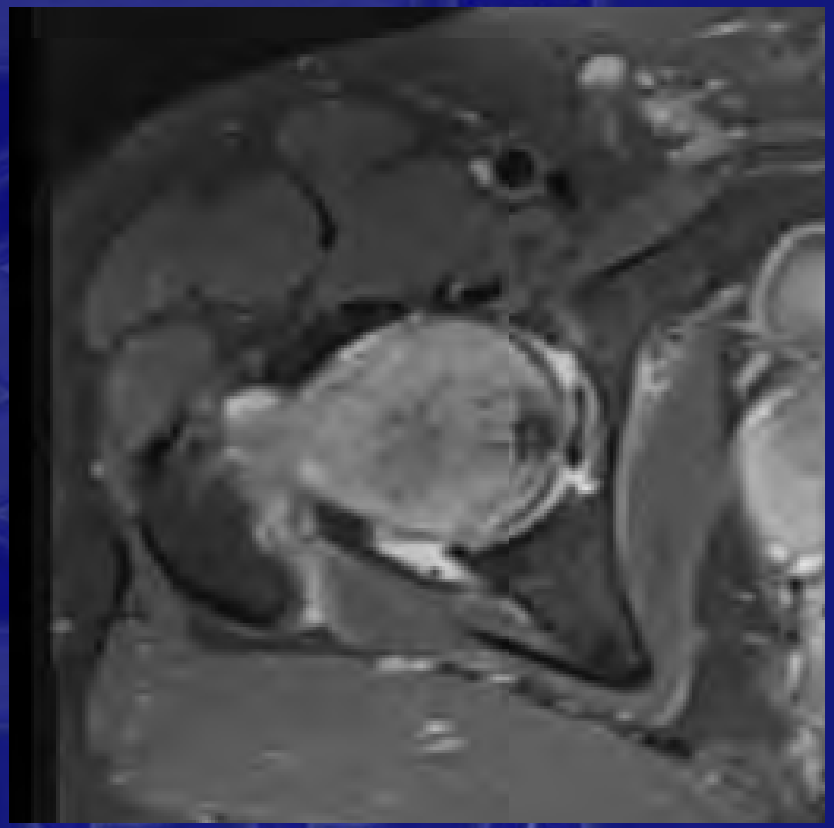



Alpha: 76°
D

Valutare displasia e instabilità dell'anca





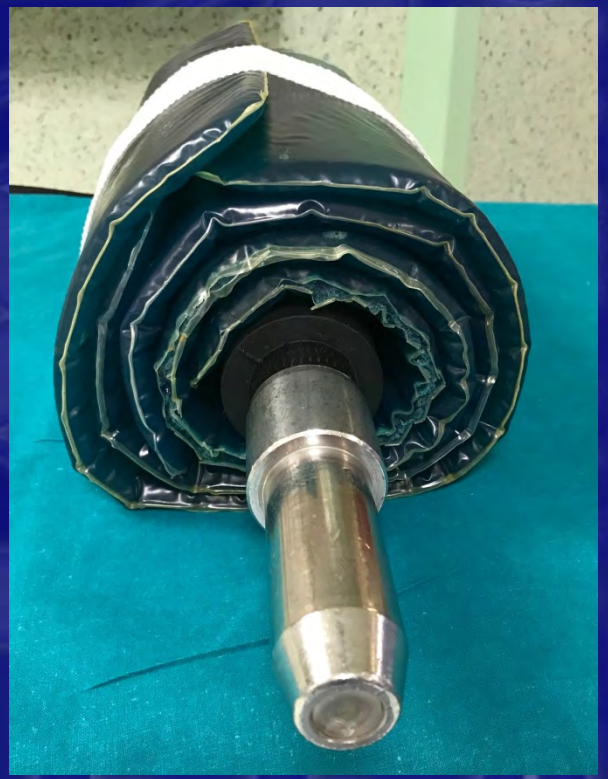


Profilassi antibiotica preoperatoria

Cefazolina

Clindamicina
(se allergia penicilline)

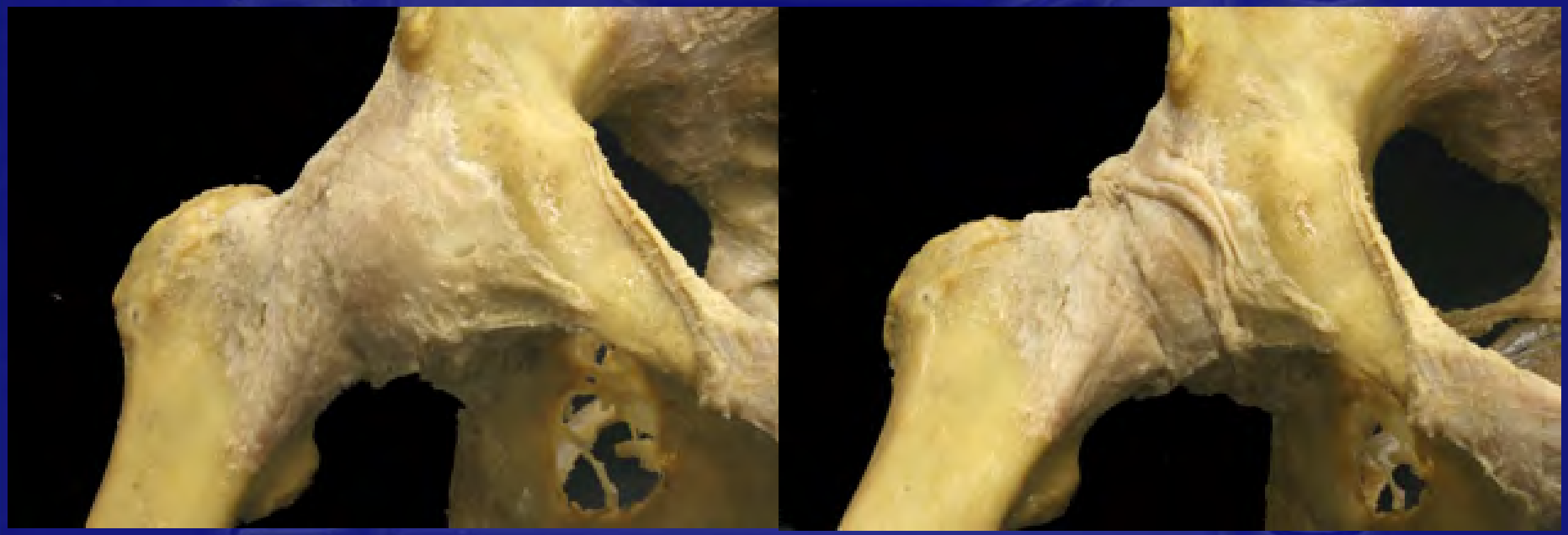
Posizionamento: Perineal post



Posizionamento

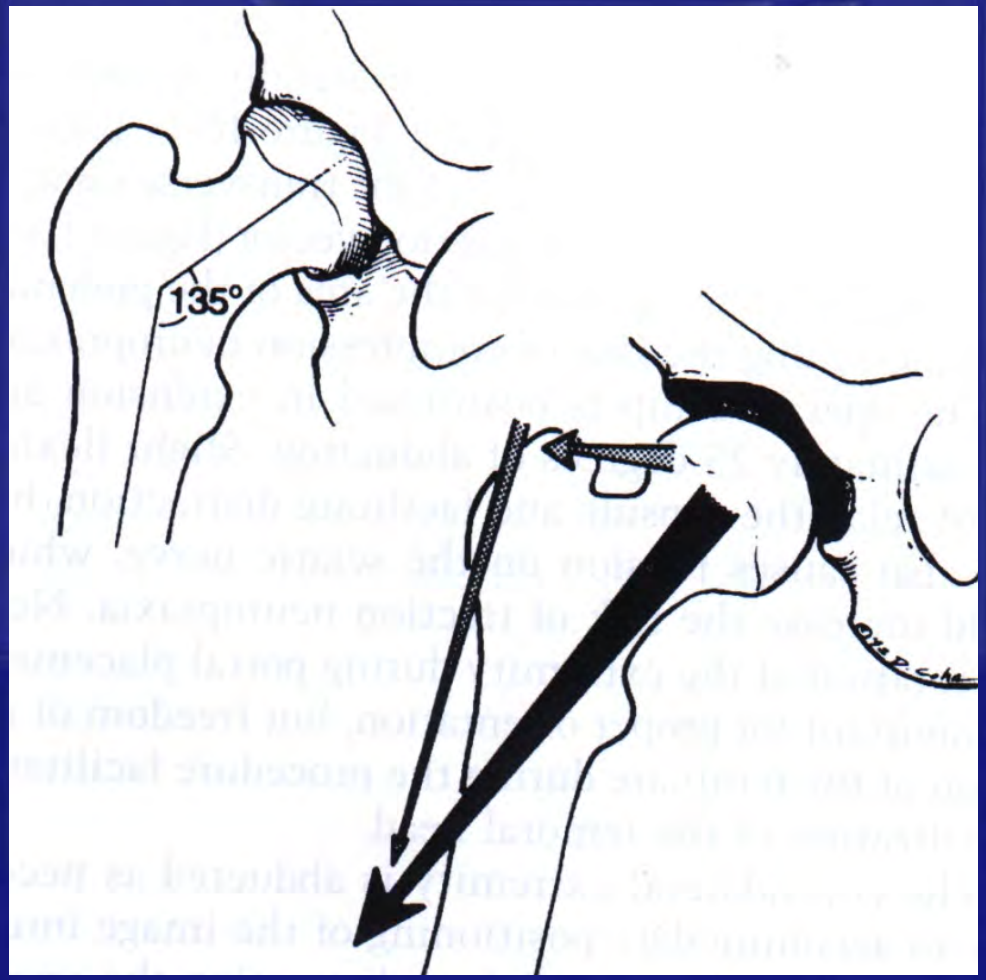

MAQUET

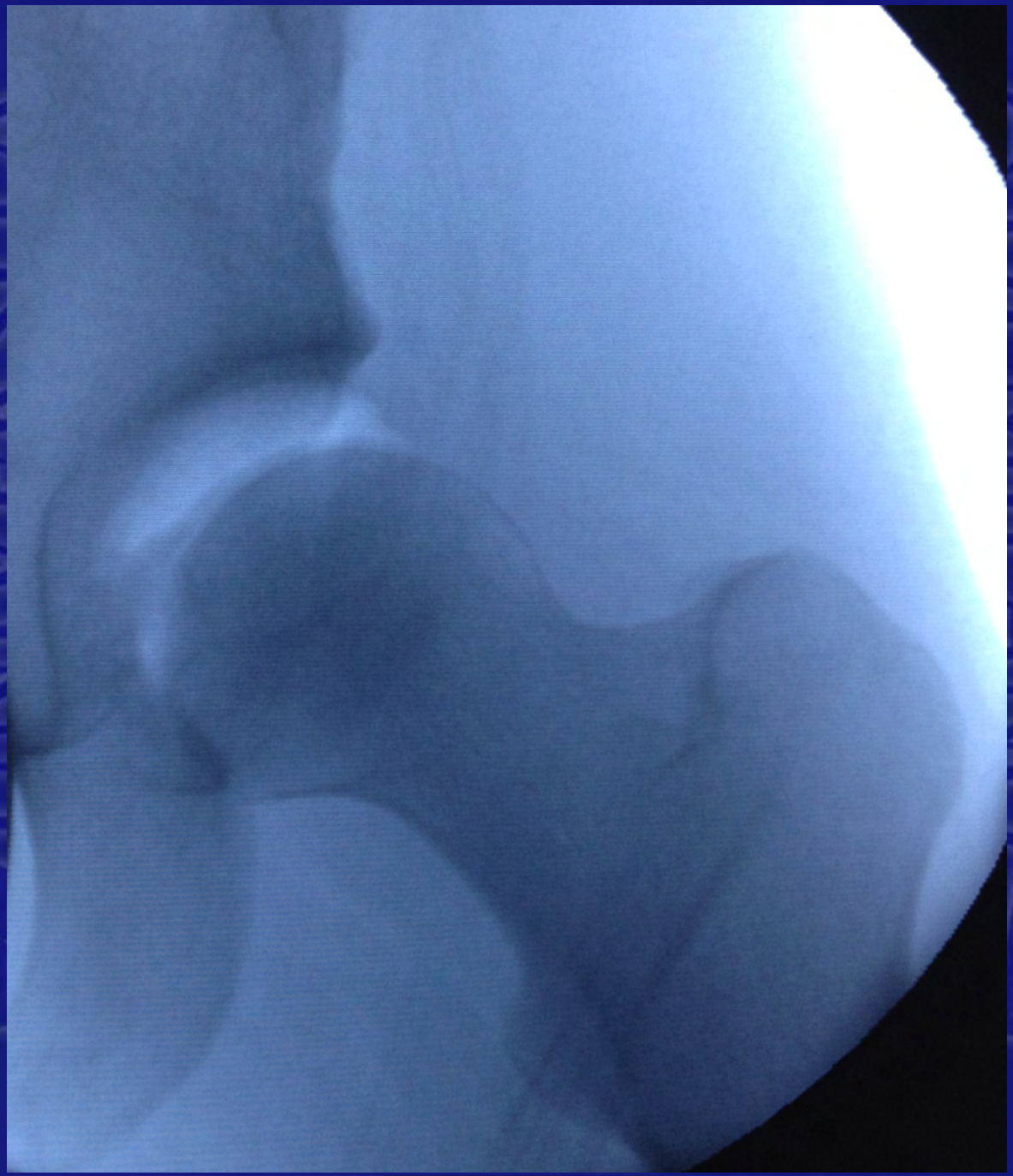

stryker
MAQUET



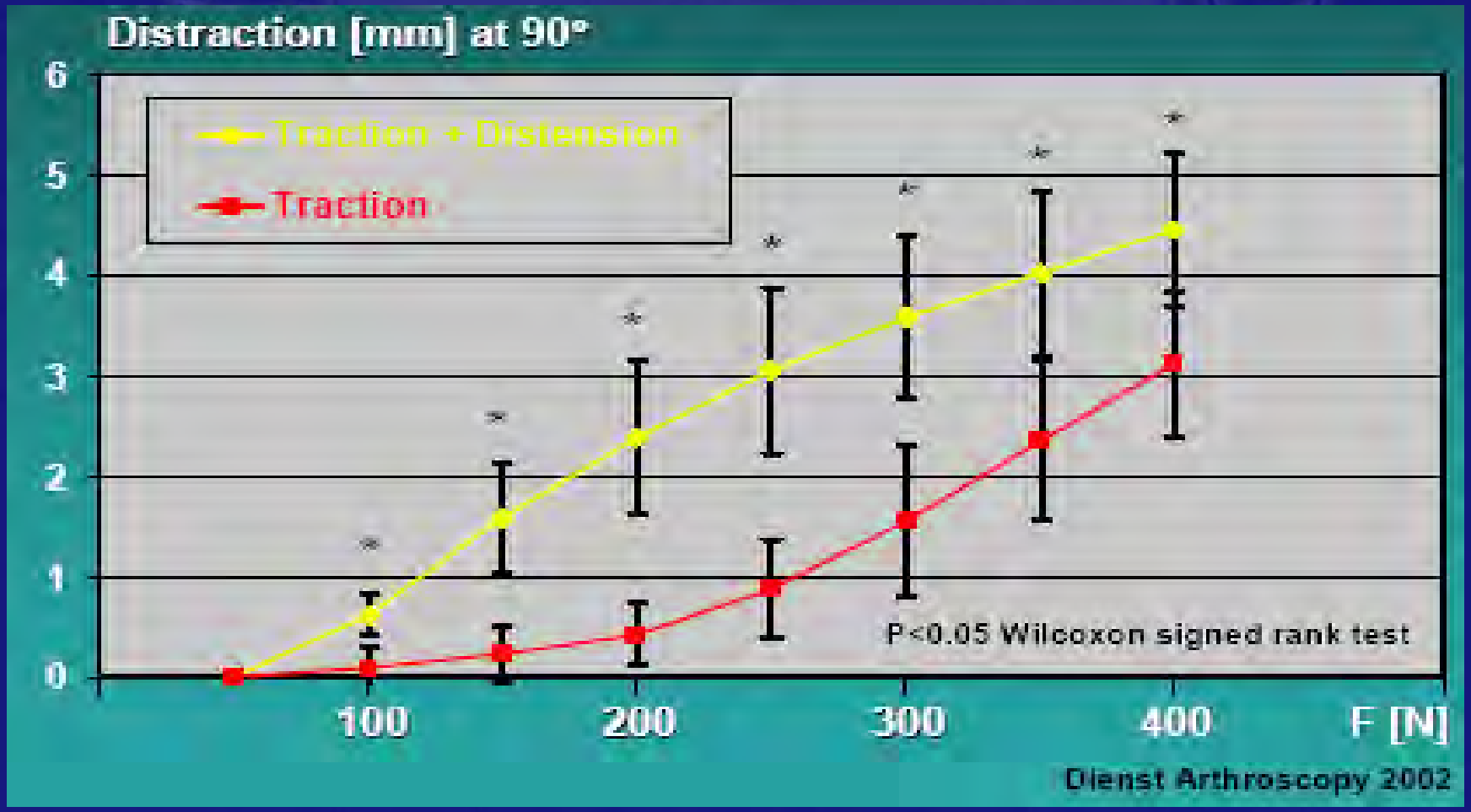
Courtesy of Stefano Guerrasio

Trazione

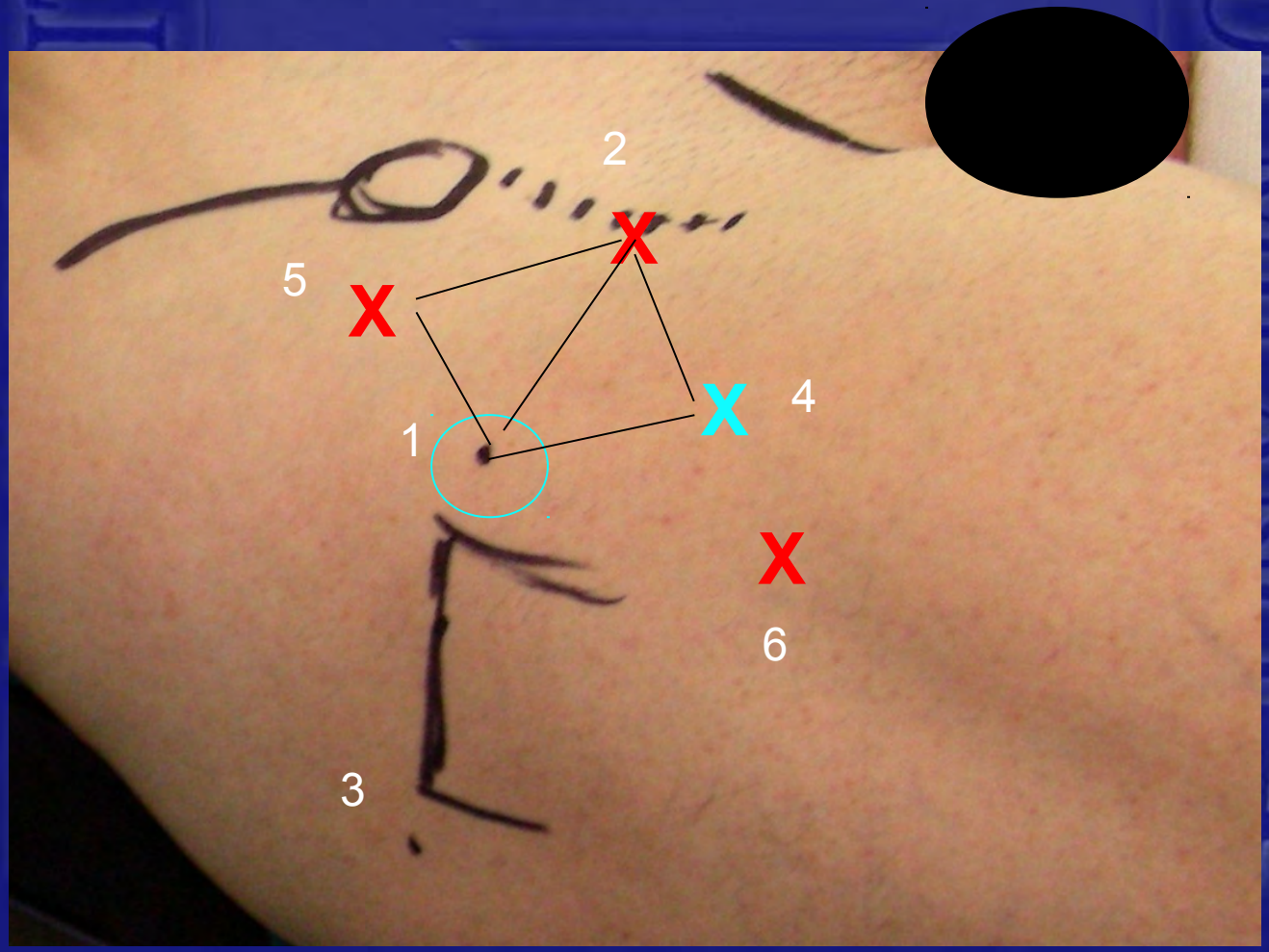


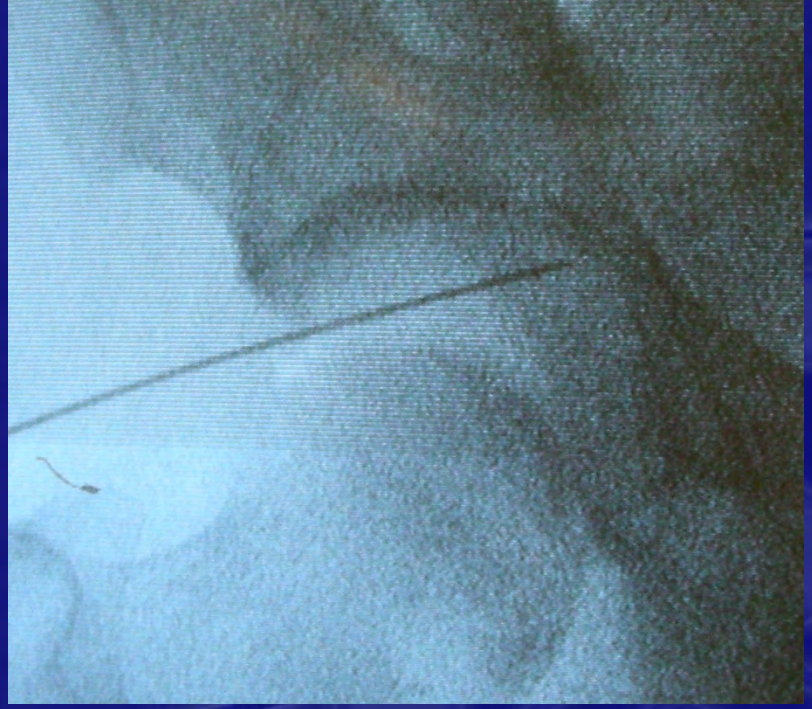


Distrazione ed effetto vacuum

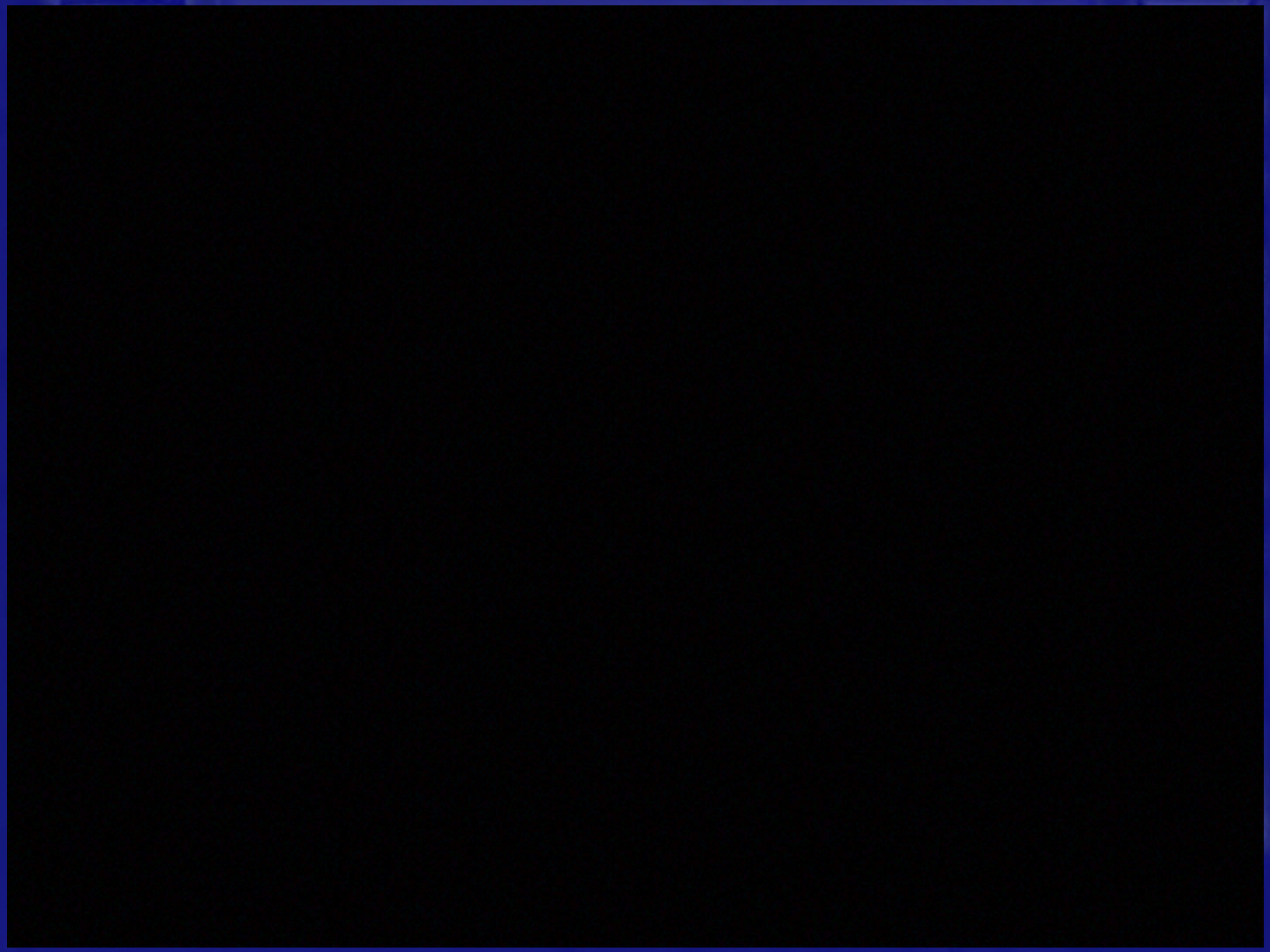


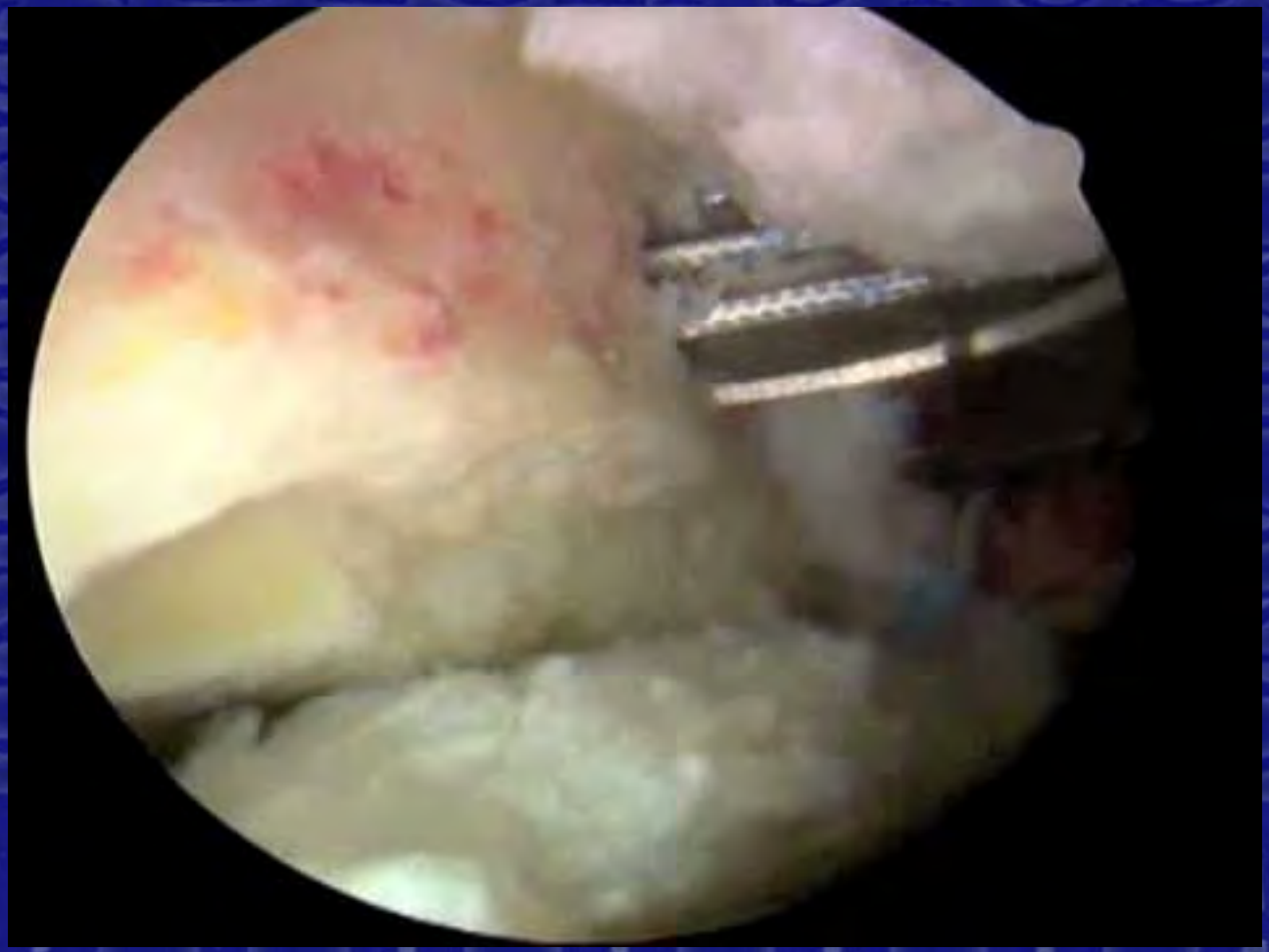
Portale AL



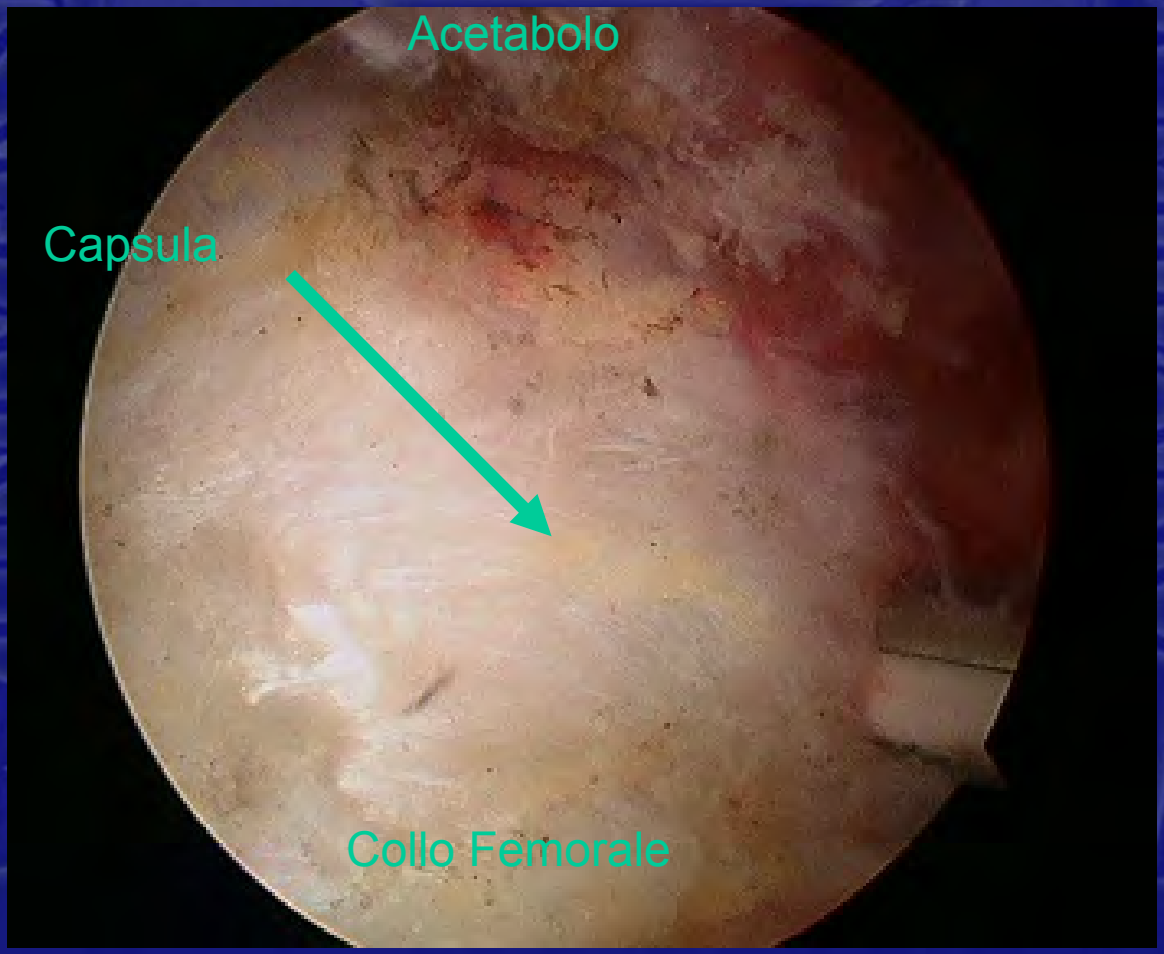


"Danza della trazione"

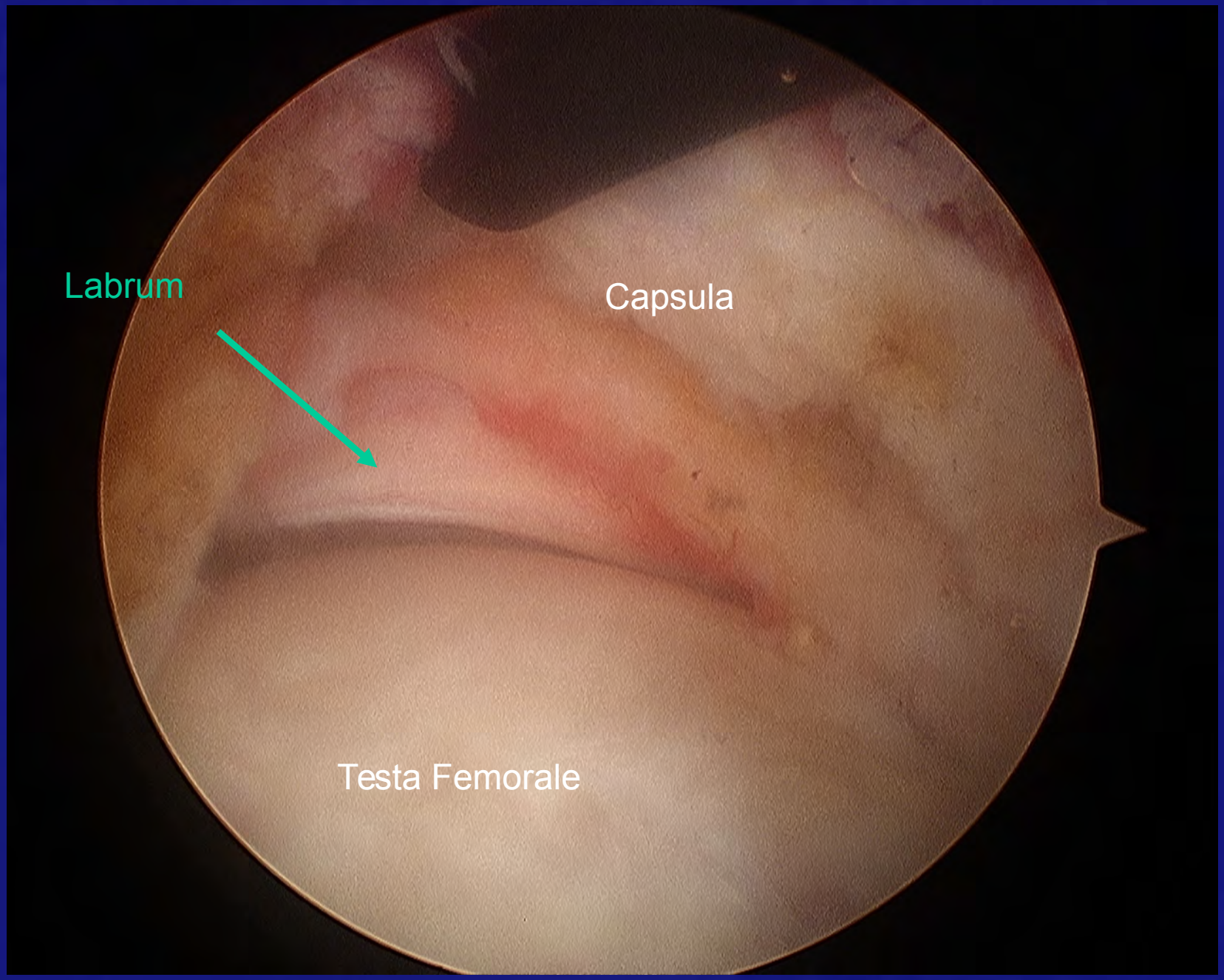




Capsulotomia Out-in



Capsulotomia Out-in


Labrum
Capsula
Testa Femorale

Technical Note

Intraoperative Fluoroscopy for Evaluation of Bony Resection During Arthroscopic Management of Femoroacetabular Impingement in the Supine Position

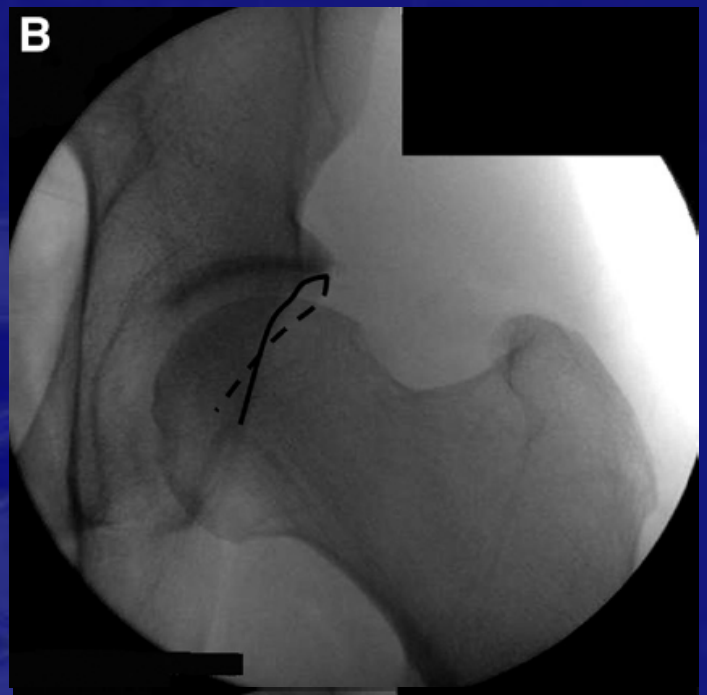
Christopher M. Larson, M.D., and Corey A. Wulf, M.D.

Arthroscopy: The Journal of Arthroscopic and Related Surgery, Vol 25, No 10 (October), 2009: pp 1183-1192

"Around the world"

1. In estensione
2. A 40° di flessione
3. Cross-table


A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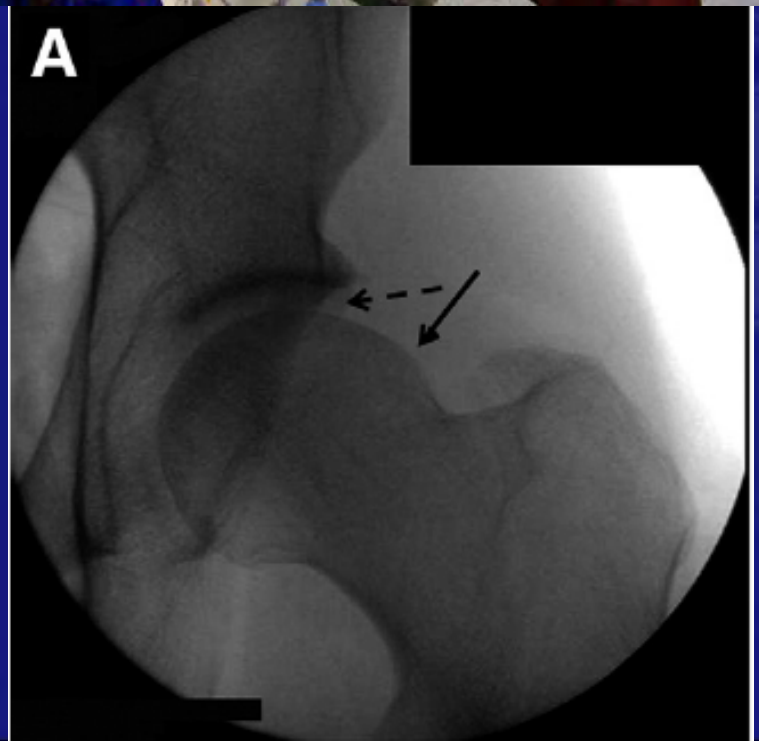
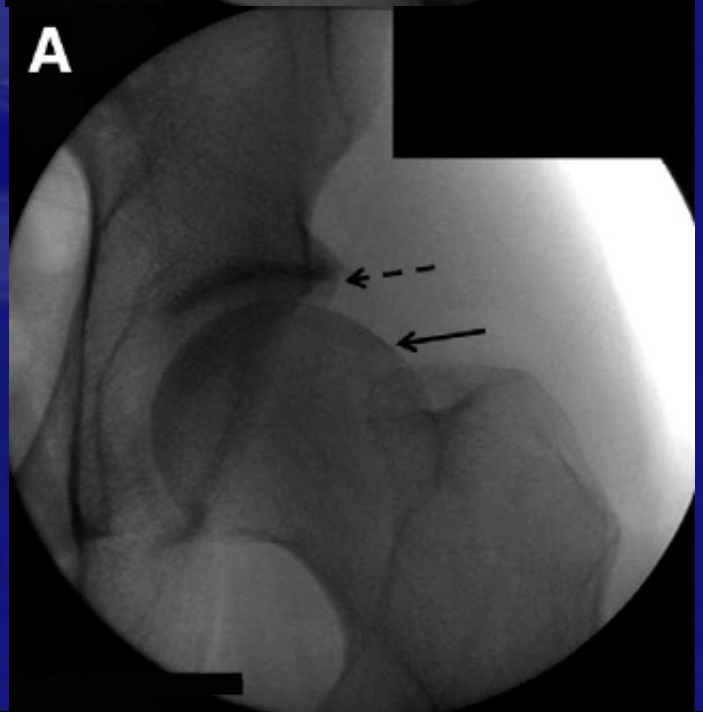
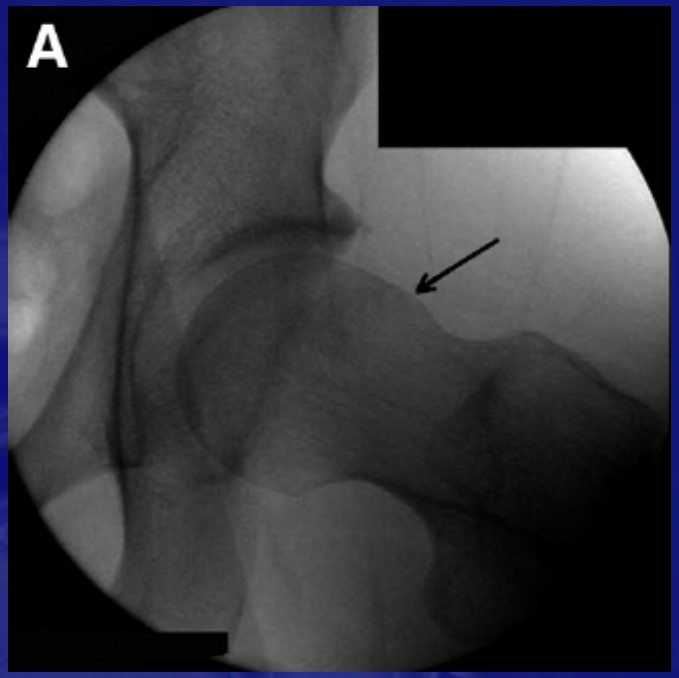

A


A


A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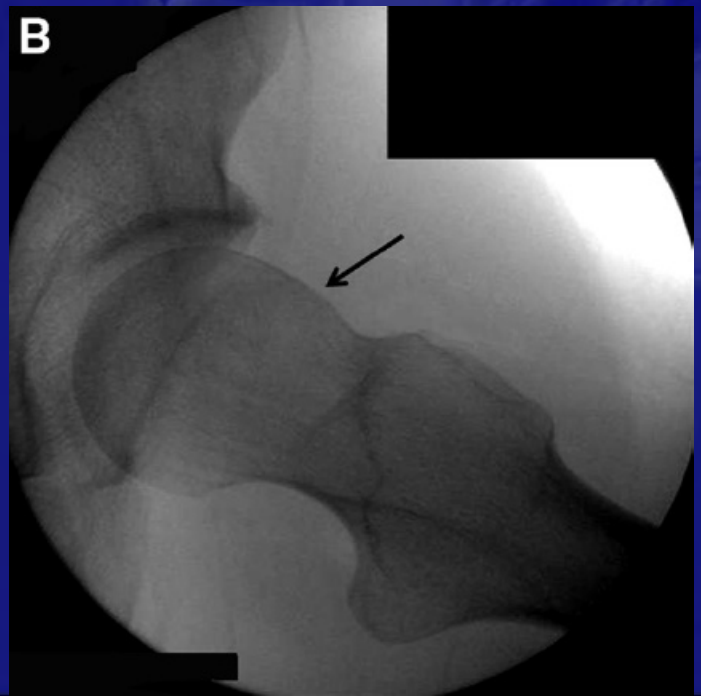
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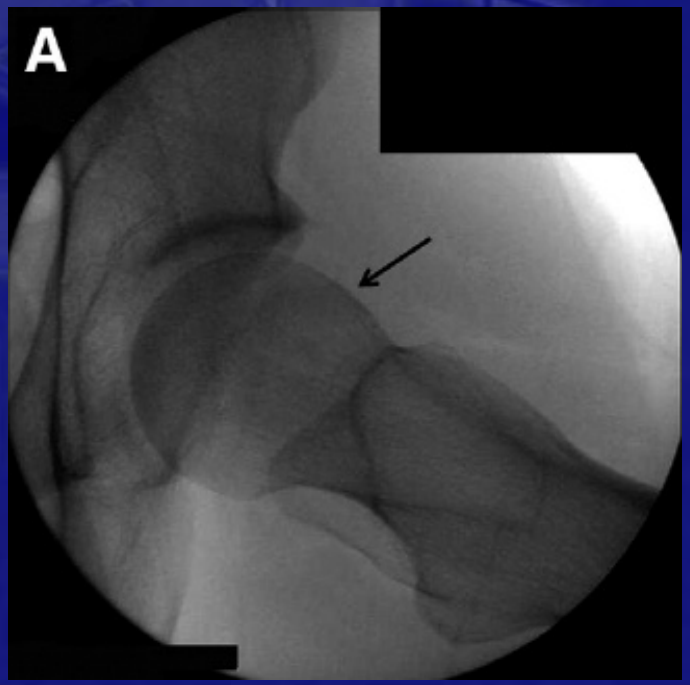
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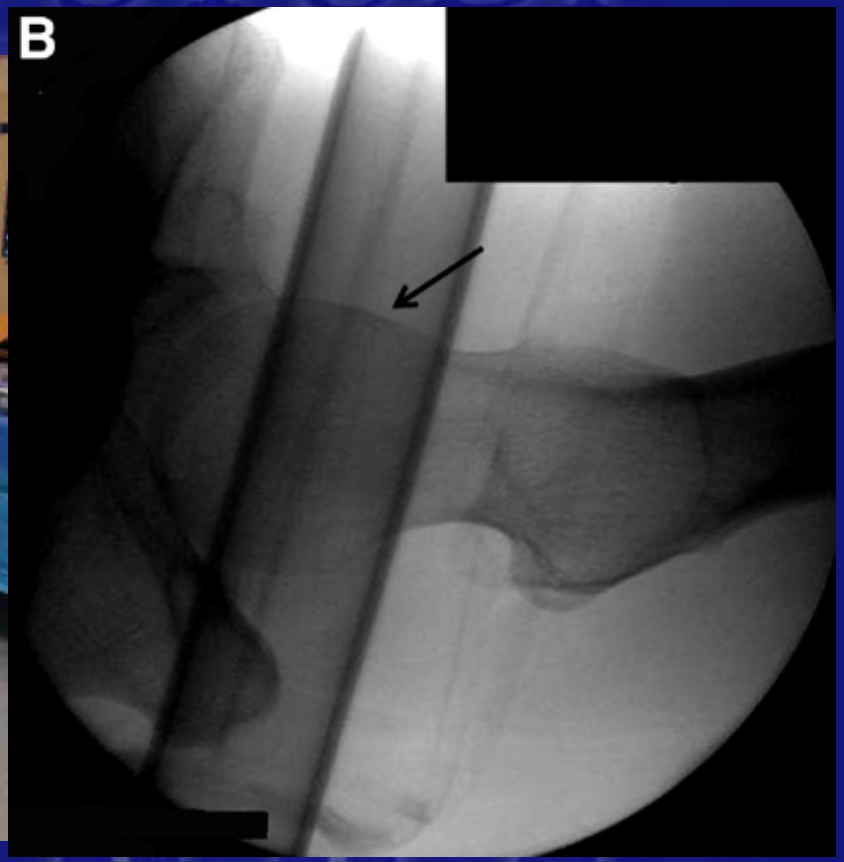
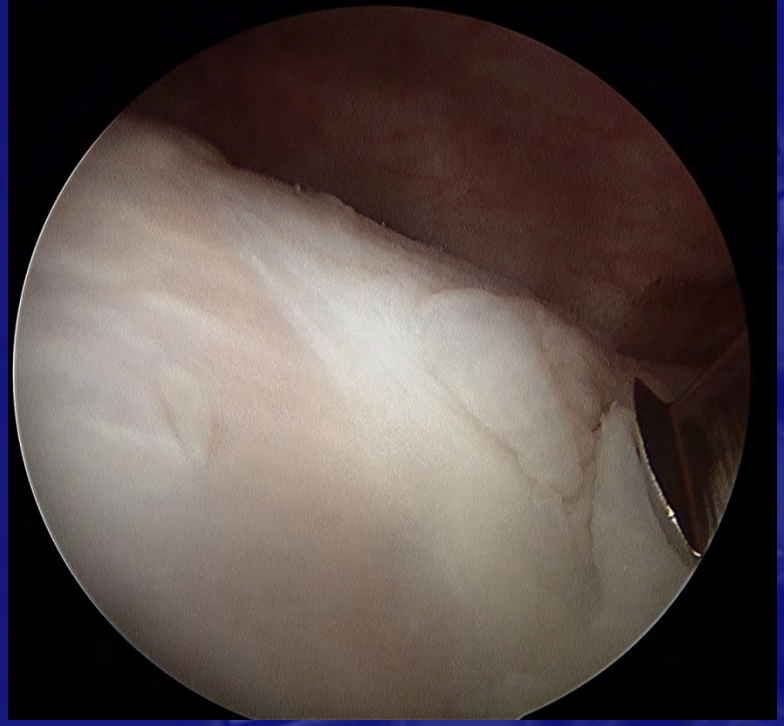
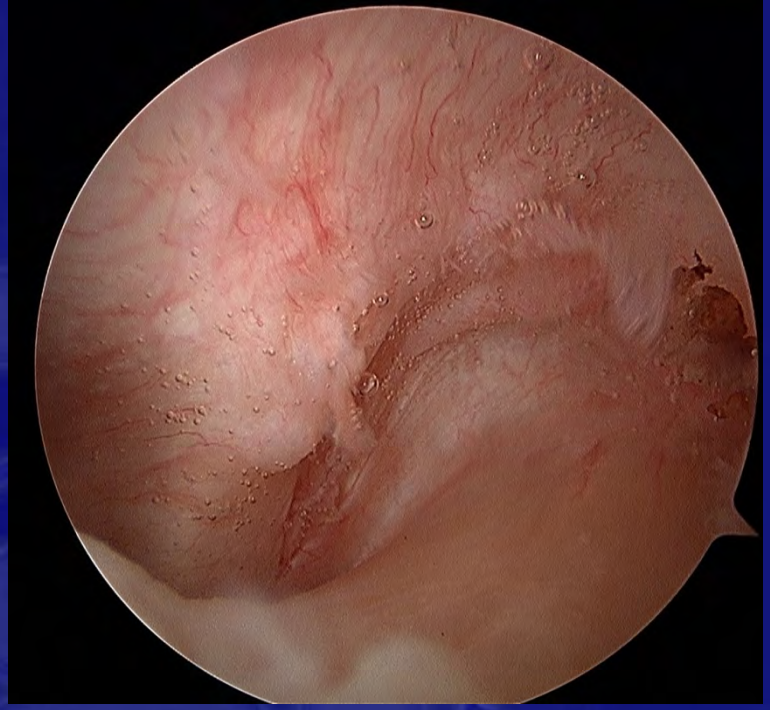
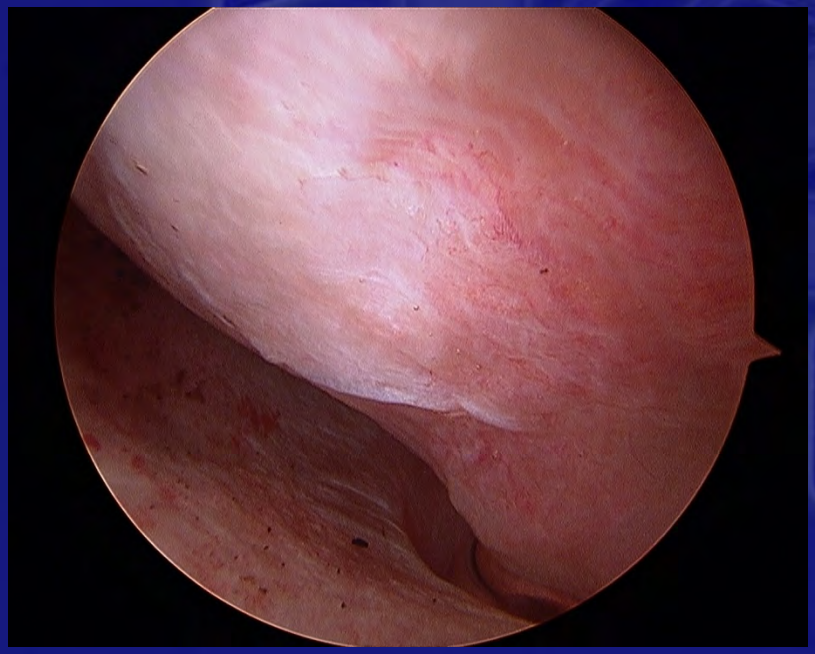
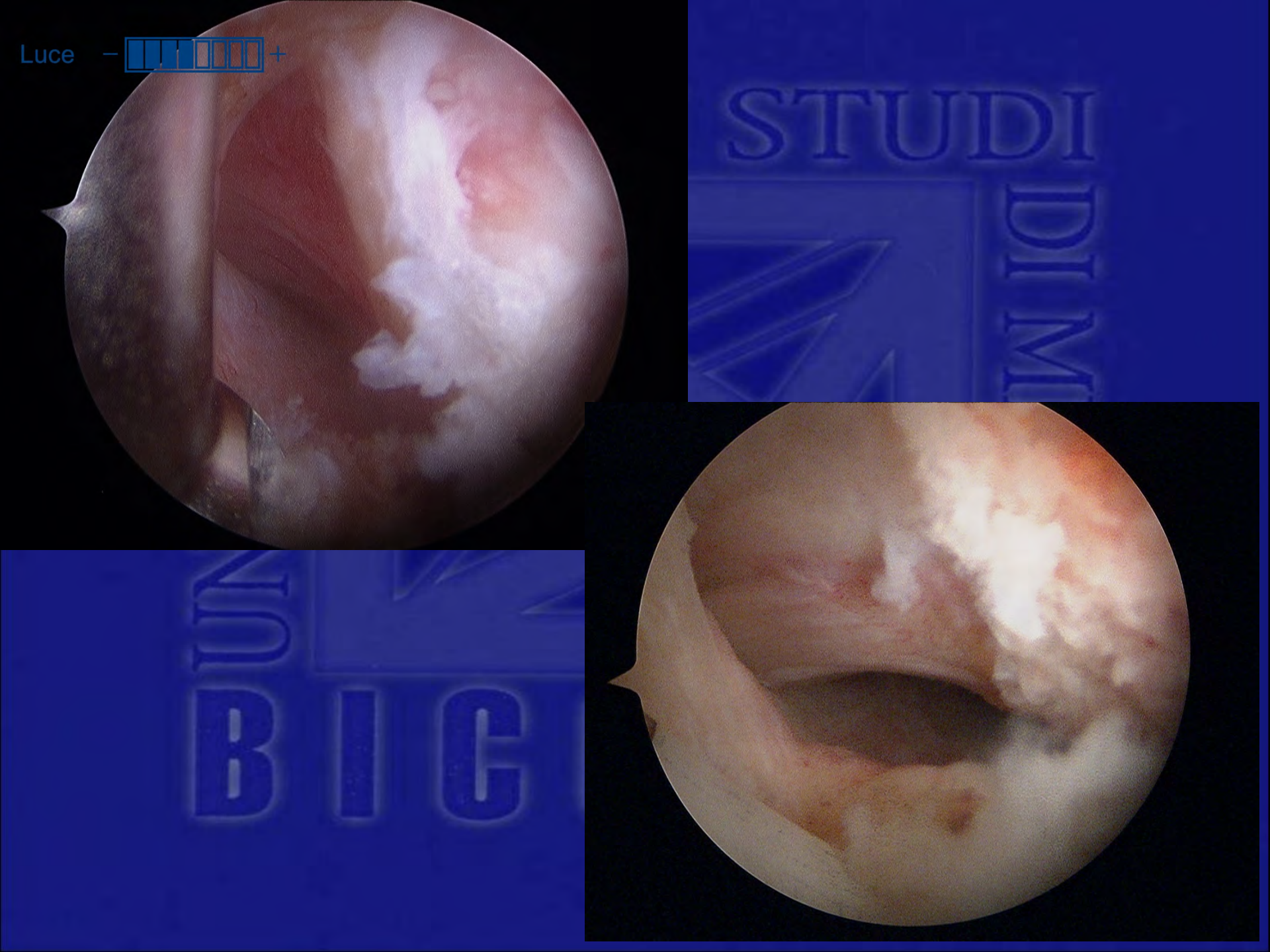






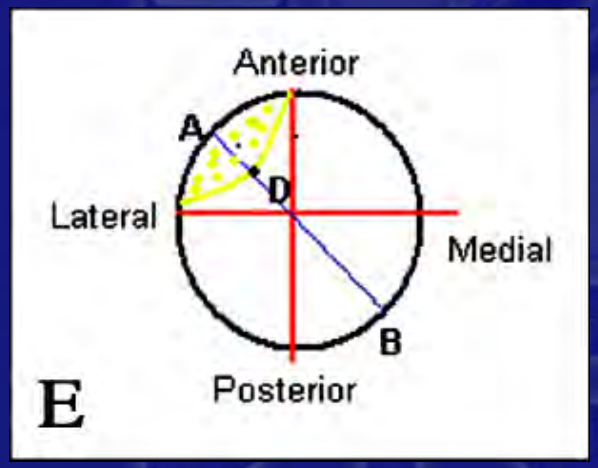



Luce
STUDI
UN
BIC

SURGICAL TREATMENT OF FEMOROACETABULAR IMPINGEMENT: EVALUATION OF THE EFFECT OF THE SIZE OF THE RESECTION

BY RODRIGO M. MARDONES, MD, CARLOS GONZALEZ, MS, QINGSHAN CHEN, MS, MARK ZOBITZ, MS, KENTON R. KAUFMAN, PHD, AND ROBERT T. TROUSDALE, MD

Investigation performed at the Department of Orthopedic Surgery and Orthopedic Biomechanics Laboratory, Mayo Clinic, Rochester, Minnesota



B = 30% (right)

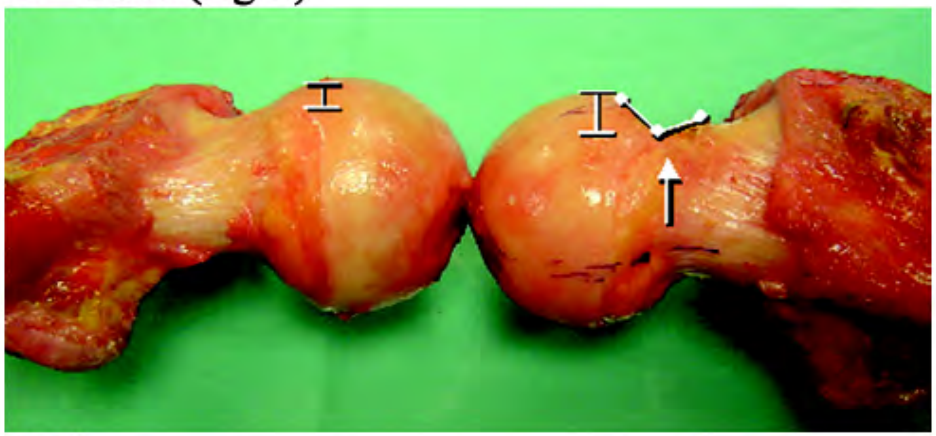


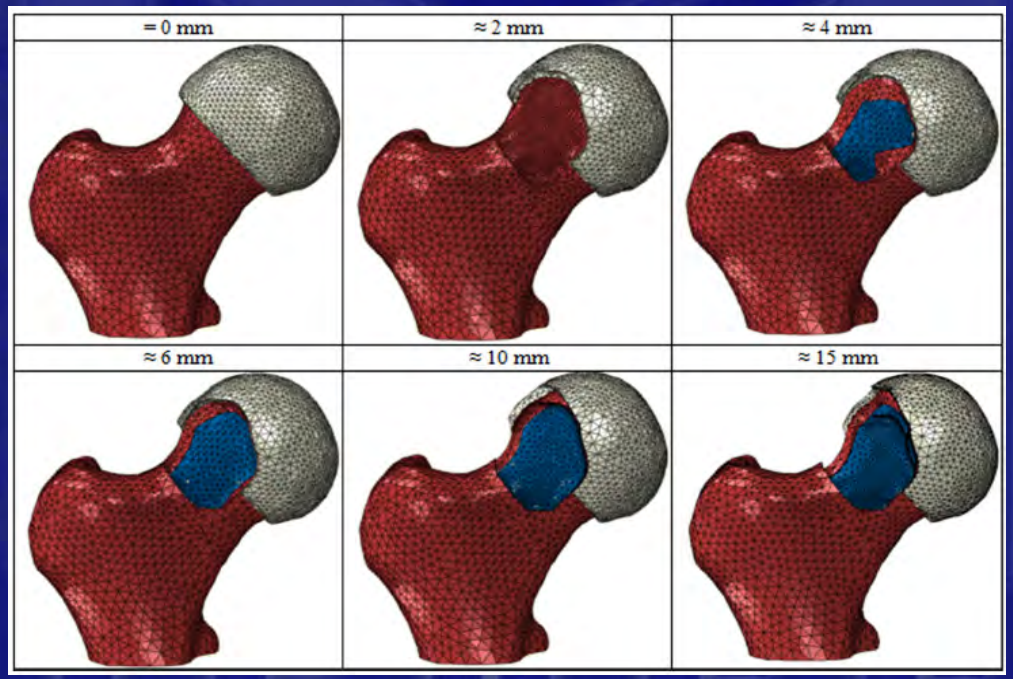
Fig. 2-B

After the 30% resection.

Changes in the Stress in the Femoral Head Neck Junction after Osteochondroplasty for Hip Impingement: A Finite Element Study

Teresa Alonso-Rasgado,[1] David Jimenez-Cruz,[1] Colin G. Bailey,[1] Parthasarathi Mandal,[1] Tim Board[2]

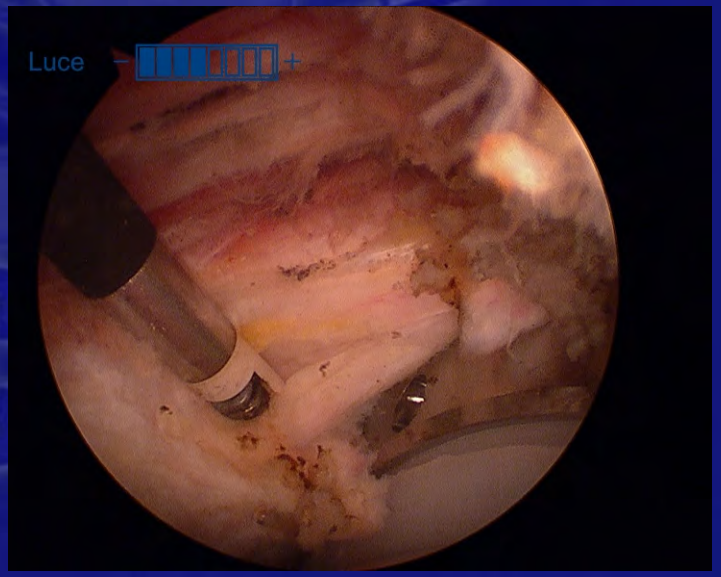
[1]School of Mechanical, Aerospace and Civil Engineering, The University of Manchester, Manchester M13 9PL, UK, [2]Wrightington Hospital, Wigan and Leigh NHS Foundation Trust, Lancashire, UK



highest stresses. The FE model predicts that fracture is likely to occur in the resection area first following removal of a third (10 mm or more of the diameter of the femoral neck. We suggest that when surgeons perform osteochondroplasty for hip impingement the depth of resection should be limited to 10 mm. J Orthop Res 30:1999–2006, 2012

Monitoraggio intraoperatorio

- Controllo temperatura corporea
- Riscaldamento del paziente



- Controllo tensione addominale

J Orthopaed Traumatol (2013) 14:1–13
DOI 10.1007/s10195-012-0214-y

CONSENSUS STATEMENT

II Italian intersociety consensus statement on antithrombotic prophylaxis in orthopaedics and traumatology

Arthroscopy, traumatology, leg immobilization, minor orthopaedic procedures and spine surgery

F. Randelli · E. Romanini · F. Biggi · G. Danelli · G. Della Rocca · N. R. Laurora · D. Imberti · G. Palareti · D. Prisco

Type of prophylaxis VTE prophylaxis is not advisable for patients presenting no risk factors. Pharmacological prophylaxis with LMWH should be considered in patients featuring general or procedure-related risk factors, such as a prolonged surgery or non-weight bearing.

Timing and duration of prophylaxis Administration of pharmacological prophylaxis in the post-operative period is advisable. Prophylaxis should be continued until the patient is able to bear weight, and, in any case, for at least 7 days. GCS may be advisable, as an additional aid, to be worn until the patient resumes ambulation.

Profilassi Ossificazioni

WITHOUT

Autore	Incidenza
Randelli F. 2010 (nessuna profilassi)	33%
Ong C 2013 (nessuna profilassi)	12%
Bedi A 2012 (solo Naprossene 4w)	8.3%
Rath E 2013	44% (26% stadio 1; 10% 2; 8% 3)
Larson CM 2009 (no profilassi)	8.3%
Beckmann JT 2014 (nessuna profilassi)	25%

WITH

Autore	Incidenza
Randelli F 2010	0%
Byrd JW 2009	0.5%
Bedi A 2012 indometacina (75 x 4d) + naprossene (500 x 2 x 4w)	1.8%
Larson CM 2008	6%
Beckmann JT 2014 (Naprossene 3 w)	5.6%

Nostro protocollo

- Celecoxib 400 mg/die x 3 settimane

- Gruppo controllo (35): 11.4% (5 casi: 3 M e 1 F bilaterale)
- Gruppo profilassi (35): 3.2% (1 caso F)

	Gruppo controllo	Gruppo profilassi	P value
mHHS	88.8	90.1	p>0,05
HOS ADL	84.5	88.2	p>0,05
HOS Sport	74.9	78.3	p>0,05

Prevenzione aderenze

Tecniche di circonduzione e mobilizzazione precoce

Idrokinesi

Grazie

INSTABILITÀ DELL'ANCA POST ARTROSCOPIA

Nicola Santori *(Roma)*

Instabilità iatrogena di anca

- Molto temuta ma «…exceedingly uncommon»
    - Asheesh Bedi 2017

- Artroscopie dopo frattura-lussazione
- Artroscopie su displasia
- Displasia borderline
- FAI surgery

Instabilità iatrogena

- Molto temuta ma «…exceedingly uncommon»
  - Asheesh Bedi 2017

- Artroscopie dopo frattura-lussazione
- Artroscopie su displasia
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Instabilità iatrogena

- Molto temuta ma «…exceedingly uncommon»
  - Asheesh Bedi 2017

- Artroscopie dopo frattura-lussazione
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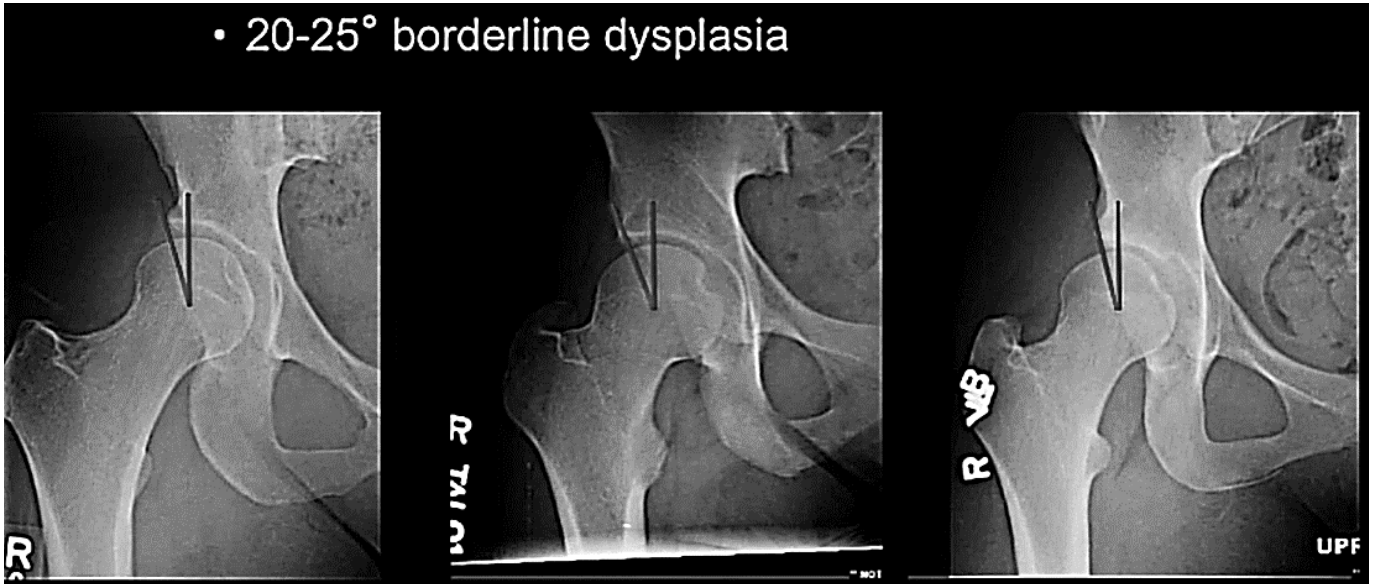
Instabilità iatrogena

- Molto temuta ma «…exceedingly uncommon»
  - Asheesh Bedi 2017

- Artroscopie dopo frattura-lussazione
- Artroscopie su displasia
- **Displasia borderline**
- FAI surgery

BD – descritta normalmente con il solo angolo CE



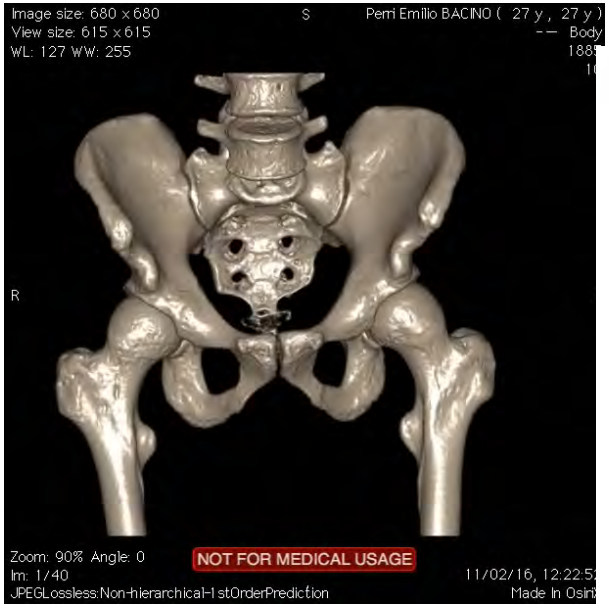
- Morfologia acetabolare: copertura inclinazione, versione, profondità
- Morfologia femorale: versione, angolo cervico-diafisario
- Coesiste Lassità legamentosa?
- Coesiste Cam?

Spesso alla displasia acetabolare si associa un cam e non è sempre evidente capire se la causa del dolore è il cam o la displasia

27 aa - pallanuoto


Dx


Dx

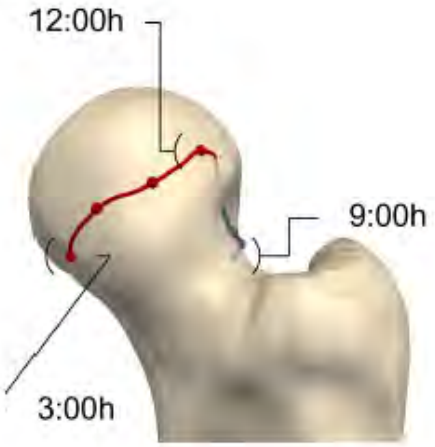


Femur

Head diameter:	51 mm	
Neck diameter:	35 mm	Normal:
Neck inclination:	143.0°	(123.0°-135.4°)*

*(Toogood et al., 2009)

Alpha angles



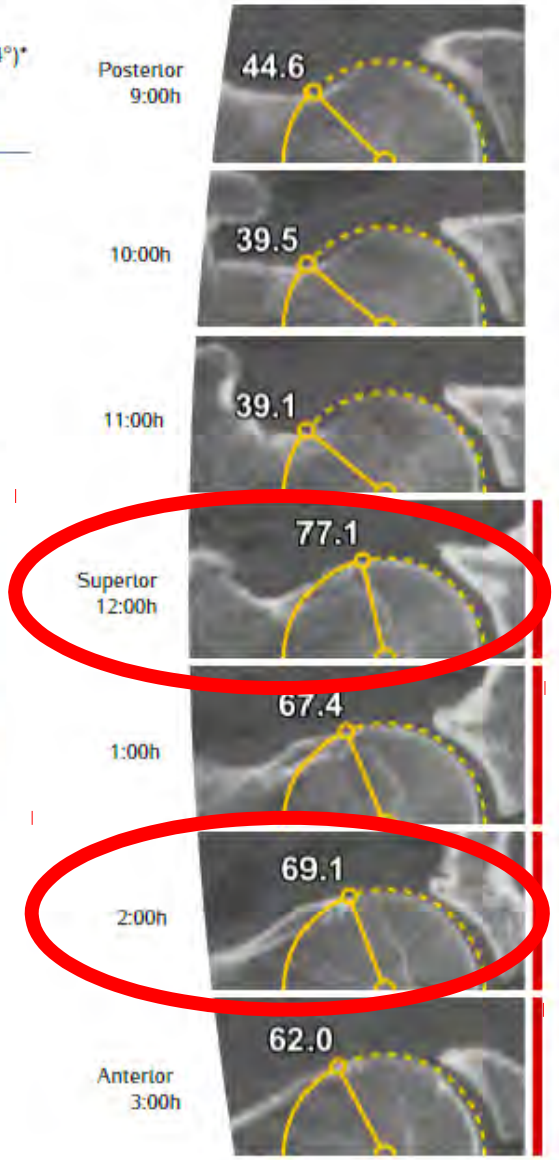
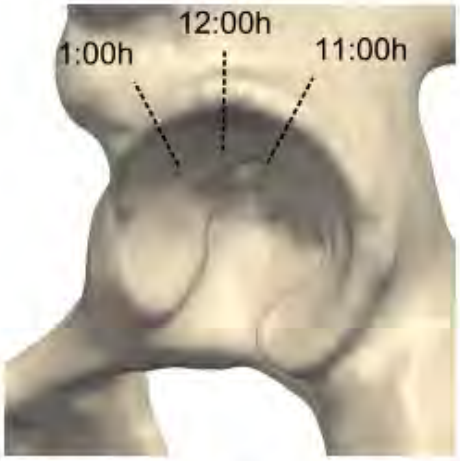


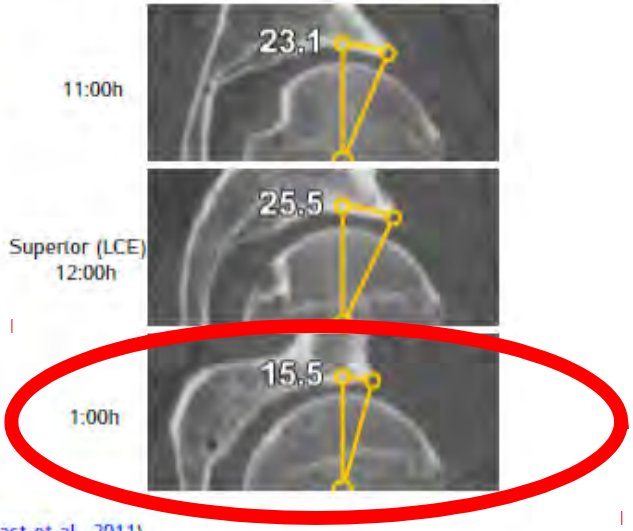
Figure 1: Clockwise alpha angles.

Acetabulum

Acetabular cup diameter: 50 mm

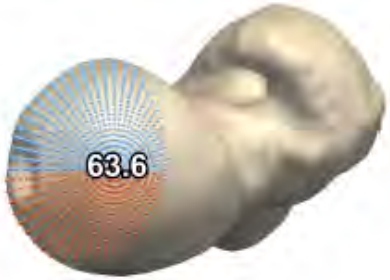
Center edge angle





Expected range for LCE between 22° and 33° (Tannast et al., 2011)

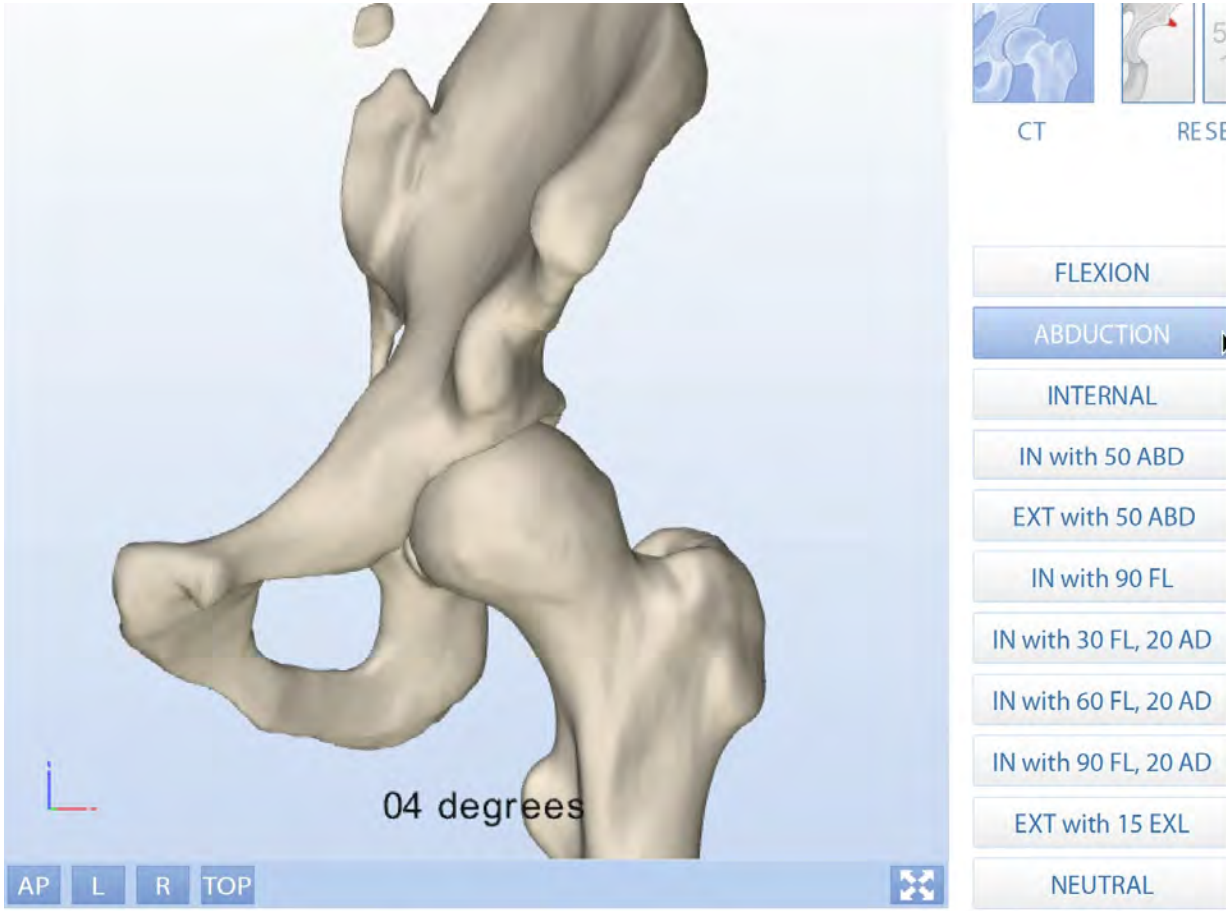
Acetabular coverage

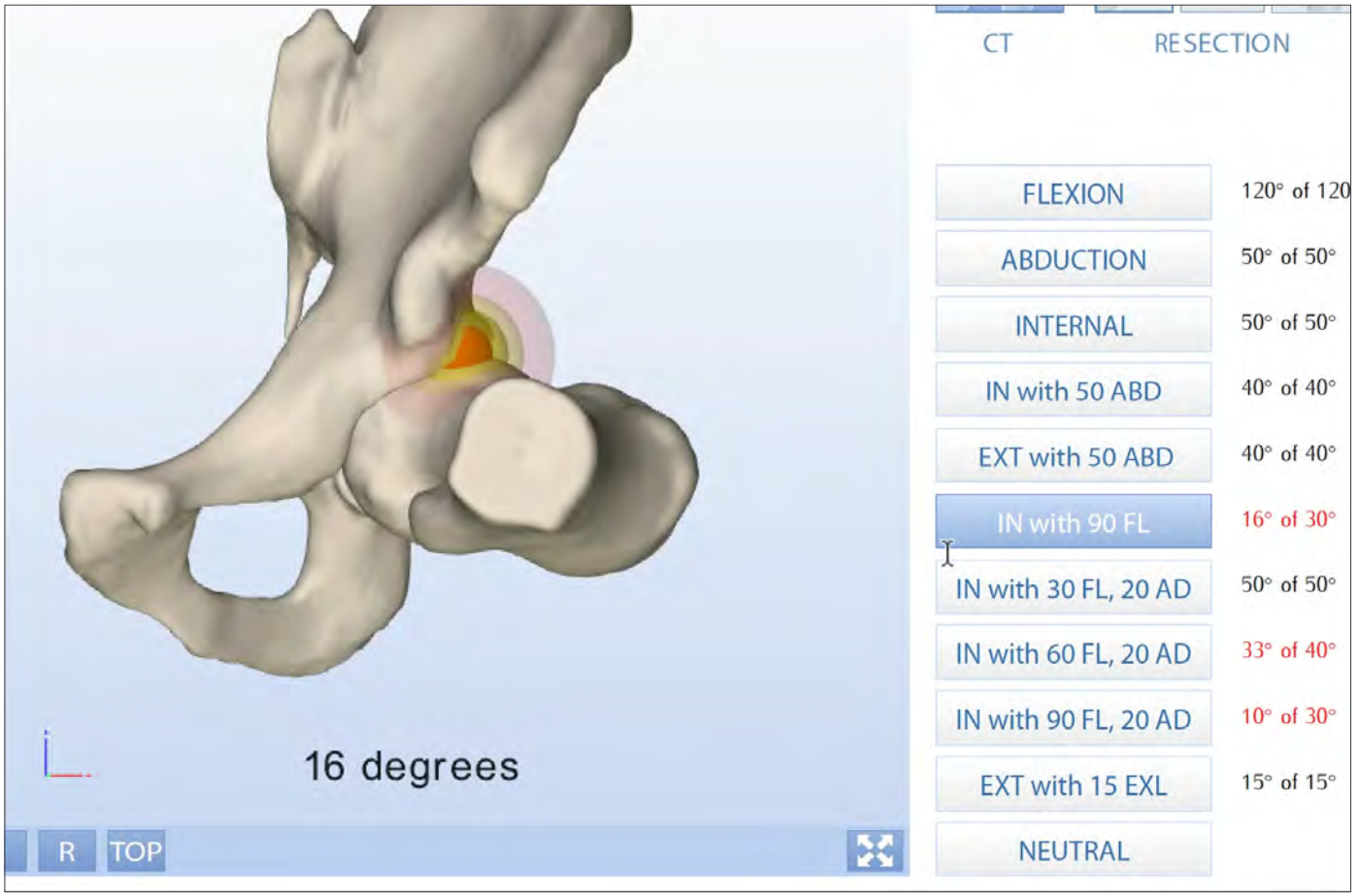


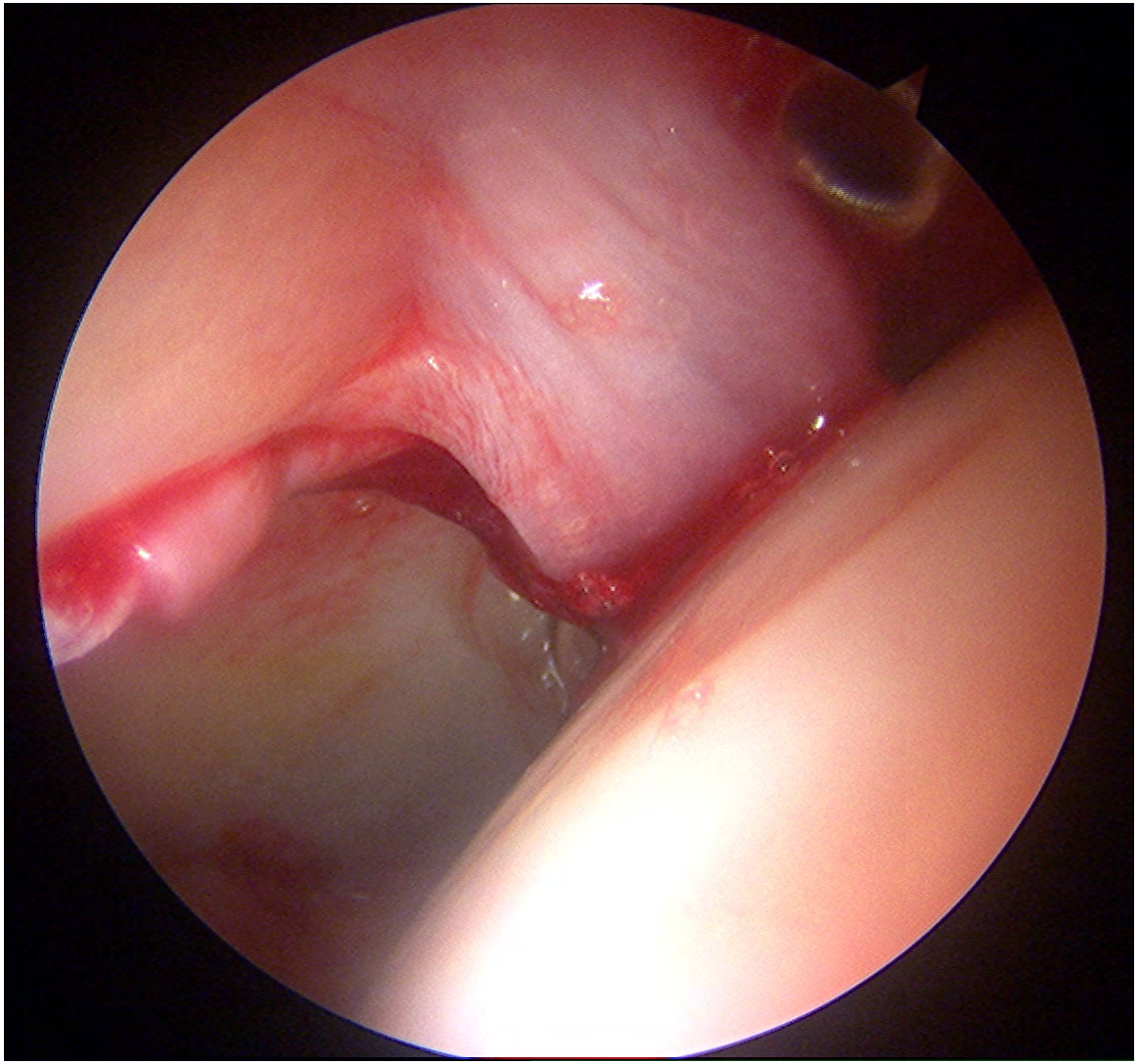
		Normal:
Posterior coverage:	35.8%	(35%-43%)
Anterior coverage:	27.9%	(30%-38%)
Total coverage:	63.6%	(66%-81%)*

(Lodhi et al., 2008)

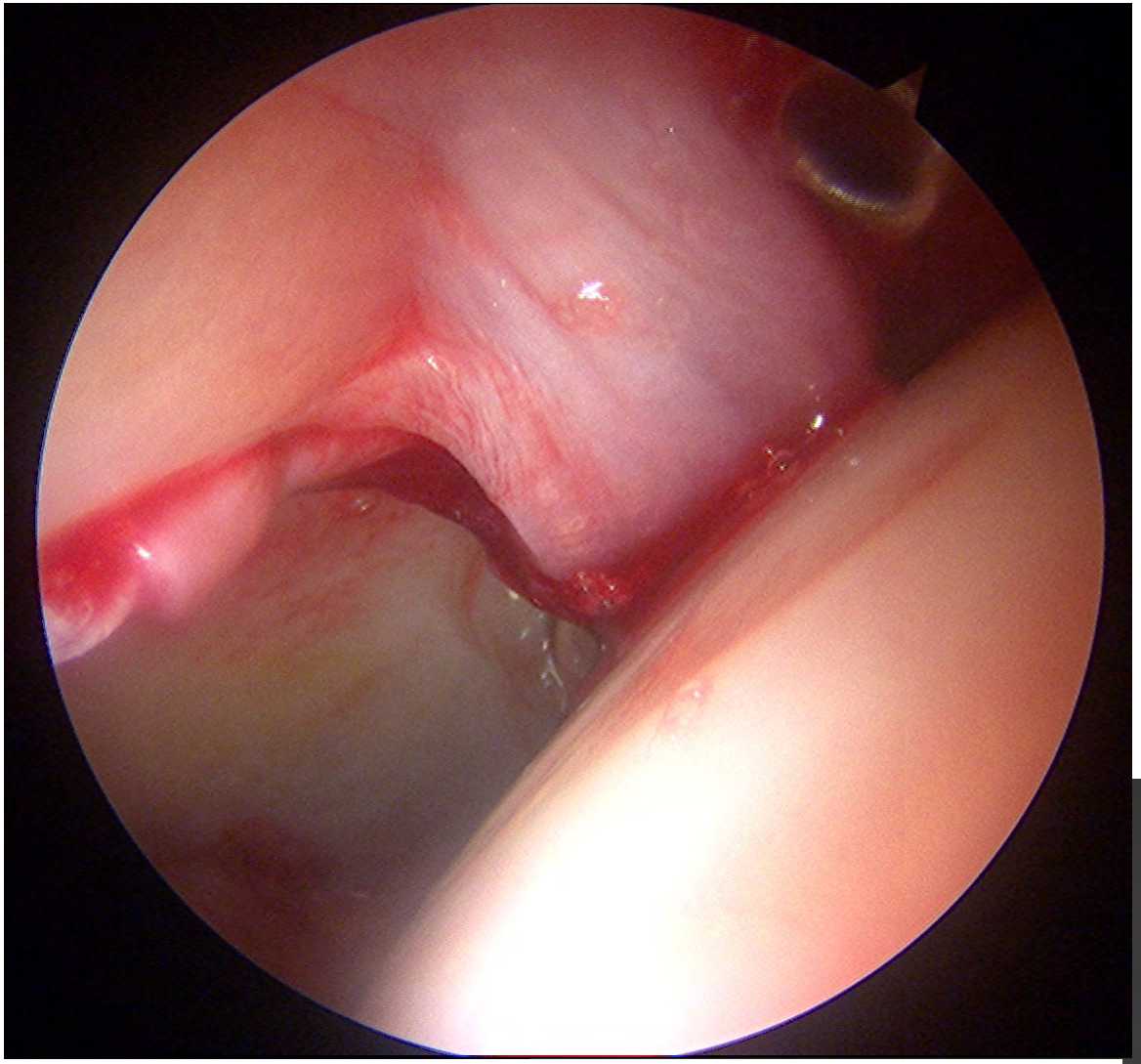

CT
R
FLEXION
ABDUCTION
INTERNAL
IN with 50 ABD
EXT with 50 ABD
IN with 90 FL
IN with 30 FL, 20 A
IN with 60 FL, 20 A
IN with 90 FL, 20 A
EXT with 15 EXL
NEUTRAL
23 degrees
AP
L
R
TOP

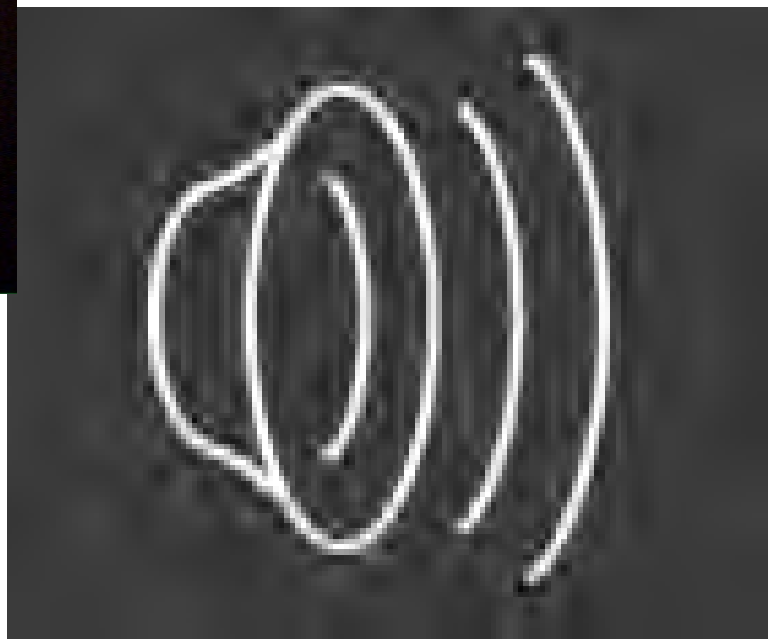

CT
RE SE
FLEXION
ABDUCTION
INTERNAL
IN with 50 ABD
EXT with 50 ABD
IN with 90 FL
IN with 30 FL, 20 AD
IN with 60 FL, 20 AD
IN with 90 FL, 20 AD
EXT with 15 EXL
NEUTRAL
04 degrees
AP
L
R
TOP


CT
RESECTION
FLEXION
120° of 120
ABDUCTION
50° of 50°
INTERNAL
50° of 50°
IN with 50 ABD
40° of 40°
EXT with 50 ABD
40° of 40°
IN with 90 FL
16° of 30°
IN with 30 FL, 20 AD
50° of 50°
IN with 60 FL, 20 AD
33° of 40°
IN with 90 FL, 20 AD
10° of 30°
EXT with 15 EXL
15° of 15°
NEUTRAL
16 degrees
R
TOP



- **ANTERIOR** labral detachment






DS

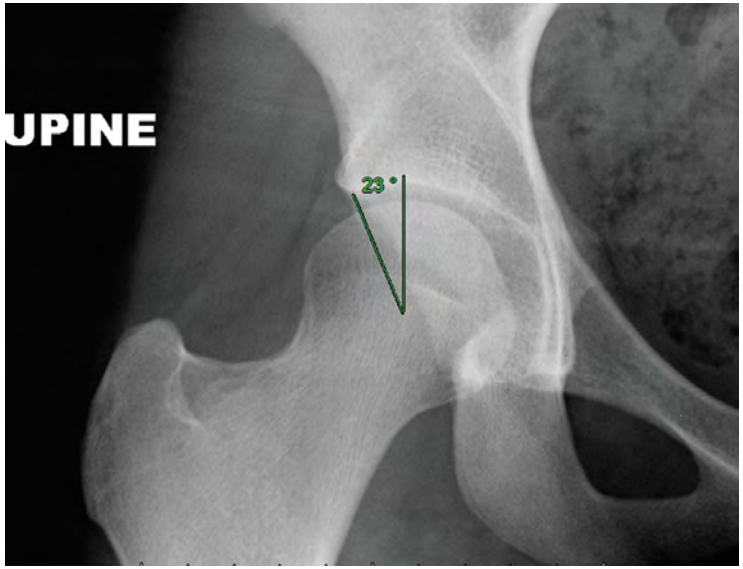
Indicazione discutibile?

- Alternative?

Arthroscopic Capsular Plication and Labral Preservation in Borderline Hip Dysplasia

Two-Year Clinical Outcomes of a Surgical Approach to a Challenging Problem

Benjamin G. Domb,*†‡§ MD, Christine E. Stake,† MA, Dror Lindner,† MD,



Demographics for Patients With Borderline Dysplasia Treated With Arthroscopy

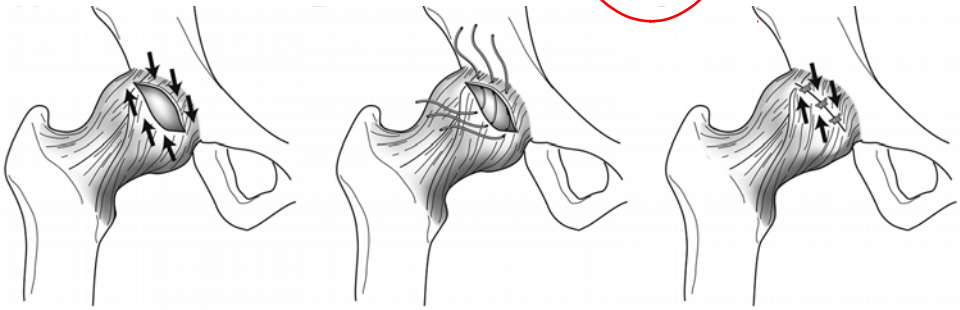
Patients, No.	22
Age, average (range), y	20 (14-39)
Female, No.	18
Male, No.	4
Side, No.	Left, 11; right, 11
Tönnis angle, mean (range)	5.8° (0°-17°)
Lateral CE angle, mean (range)	22.2° (18°-25°)
Length of follow-up, mean ± SD, mo	27.5 ± 5.5

Surgical Findings of Patients With Borderline Dysplasia Undergoing Arthroscopy[a]

Diagnosis	No. of Patients
Labrum tear type—Seldes[28]	
1	11
2	6
Combined	5
Total with labrum tear	22/22
Cartilage damage—ALAD grade[6]	
1	9
2	7
3	3
4	0
Total with cartilage damage	19/22
Ligamentum teres tear	
Partial	12
Complete	1
Total with ligamentum teres tear	13/22

Preoperative and Postoperative Patient-Reported Outcome Scores[a]

Outcome Measure	Preoperative Score	Postoperative Score	*P* Value
mHHS	69.0 ± 12.1	86.2 ± 12.7	<.0001
HOS-ADLS	72.9 ± 12.6	89.6 ± 12.3	<.0001
HOS-SSS	49.0 ± 15.6	77 ± 21.9	<.0001
NAHS	68.6 ± 11.7	85.9 ± 14.2	<.0001
VAS	5.8 ± 2.4	2.9 ± 2.2	<.0001
Satisfaction		8.4 ± 1.4	



Do Patients With Borderline Dysplasia Have Inferior Outcomes After Hip Arthroscopic Surgery for Femoroacetabular Impingement Compared With Patients With Normal Acetabular Coverage?

Cvetanovich et al. Am J Sports Med. 2017

36 BD con angolo CE 23,5°

- 75% donne
- FU 2 aa
- 1 revisione artroscopica
- 25,9 punti di miglioramento HOS-ADL

312 normali con CE 32,5°

- 57%donne
- FU 2aa
- Miglioramento identico al gruppo BD

FAI + displasia con tratt artroscopico

- Byrd JWT 2003 Arthroscopy (n= 32)
- Domb BG 2013 AJSM (n=21) 9.5% revision
- Philippon MJ 2015 Arthros (n=85) 15% revision/6% conversion
- Uchida S 2015 AJSM (n=28) 32% failures
- Philippon MJ 2015 BJJ (n=28) 7% revision/18% conversion

***Retroversion** is present in 12 to 37% of dysplasia*

Assieme ai risultati del trattamento artroscopico della BD appaiono anche i report delle complicazioni

Arthroscopic Capsular Repair for Symptomatic Hip Instability After Previous Hip Arthroscopic Surgery

James D. Wylie,* MD, MHS, James T. Beckmann,† MD, MS, Travis G. Maak,* MD, and Stephen K. Aoki,*‡ MD
Investigation performed at the Department of Orthopaedic Surgery, University of Utah, Salt Lake City, Utah, USA

Am J Sport Med 2015

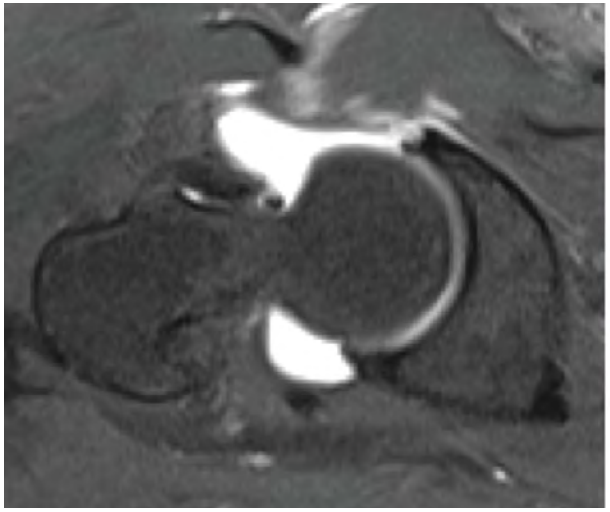
- 1100 artroscopie
- 33 instabilità sintomatiche post artroscopia
- 2 lussazioni anteriori
- 13 esclusi (persi e/o FU <12m)
- 20 sottoposti a revisione artroscopica
    - 18 donne
    - 2 uomini

Arthroscopic Capsular Repair for Symptomatic Hip Instability After Previous Hip Arthroscopic Surgery

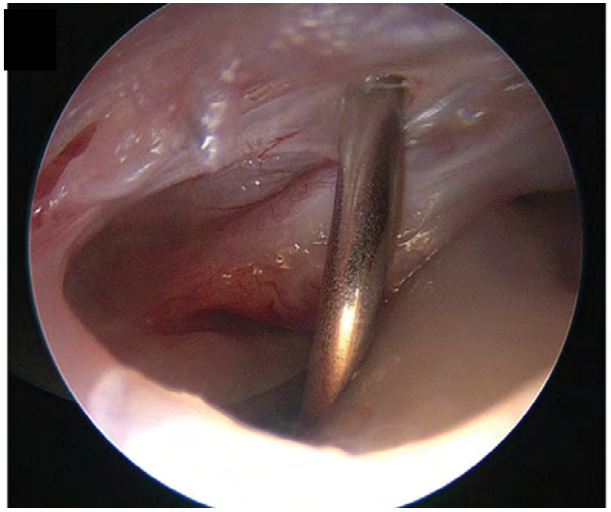
James D. Wylie,* MD, MHS, James T. Beckmann,† MD, MS, Travis G. Maak,* MD, and Stephen K. Aoki,*‡ MD
Investigation performed at the Department of Orthopaedic Surgery, University of Utah, Salt Lake City, Utah, USA

Am J Sport Med 2015

- Età media 29.7 aa
- Angolo CE 25°
- acetabular index 7 (normal value 1-10)

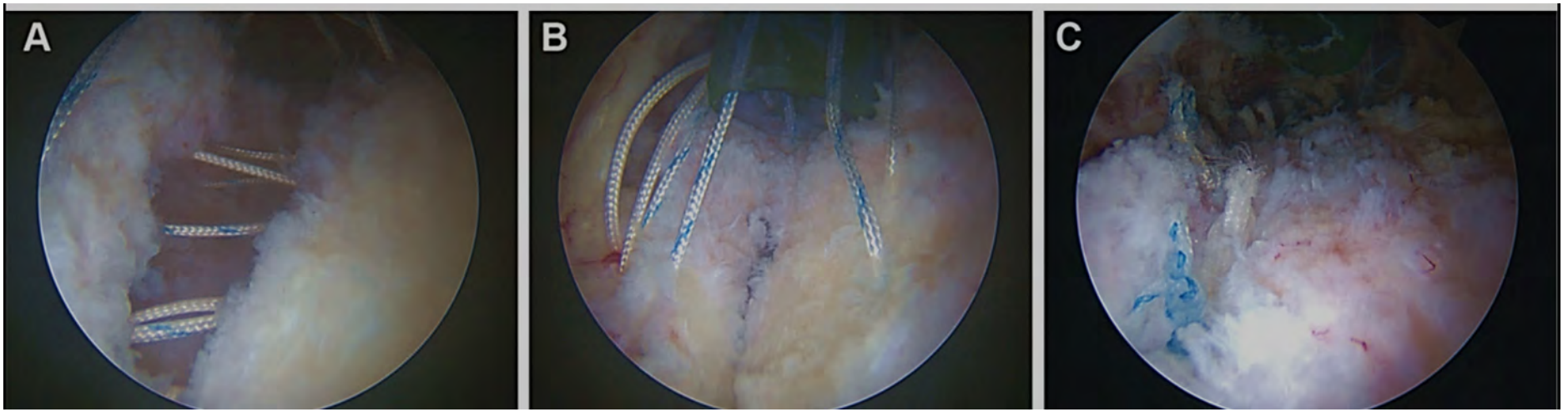


Artro RMN post FAI

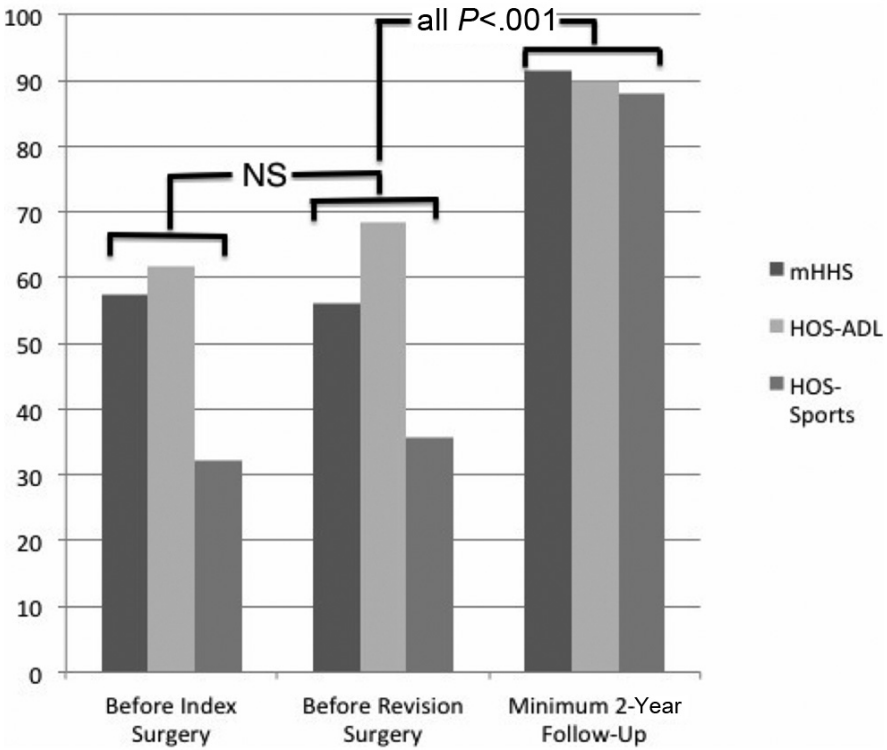


Capsulotomia 1° intervento

osteocondroplastica



Minimum 2 y FU



U·P·O·J

Anterior Hip Dislocation Five Months After Hip Arthroscopy: A Case Report and Review of the Literature

2014

[1]Daniel C. Austin, BA
[2]John G. Horneff III, MD
[2]John D. Kelly IV, MD

[1]Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA

Introduction

Hip arthroscopy has increased in frequency over 300% between 2004 and 2009, as it

and catching sensation associated with hip movement. Her exam was notable for a positive impingement sign and decreased right hip

- 19 aa – sesso femminile
- Salto in alto
- Sintomi da «impingement»

- Capsulotomia a T
- Limbectomia
- Cam
- Sezione psoas

Rimossi /indeboliti 3 stabilizzatori

22 settimane durante un salto

After this incident, the patient underwent an MRI arthrogram of her right hip. No capsular tear was visible upon dye injection

Journal of the American Academy of Orthopaedic Surgeons
2017

Case Report

Iatrogenic Hip Instability Treated With Periacetabular Osteotomy

Andrew J. Sheean, MD
Aaron E. Barrow, MD
Travis C. Burns, MD
Matthew R. Schmitz, MD

Abstract

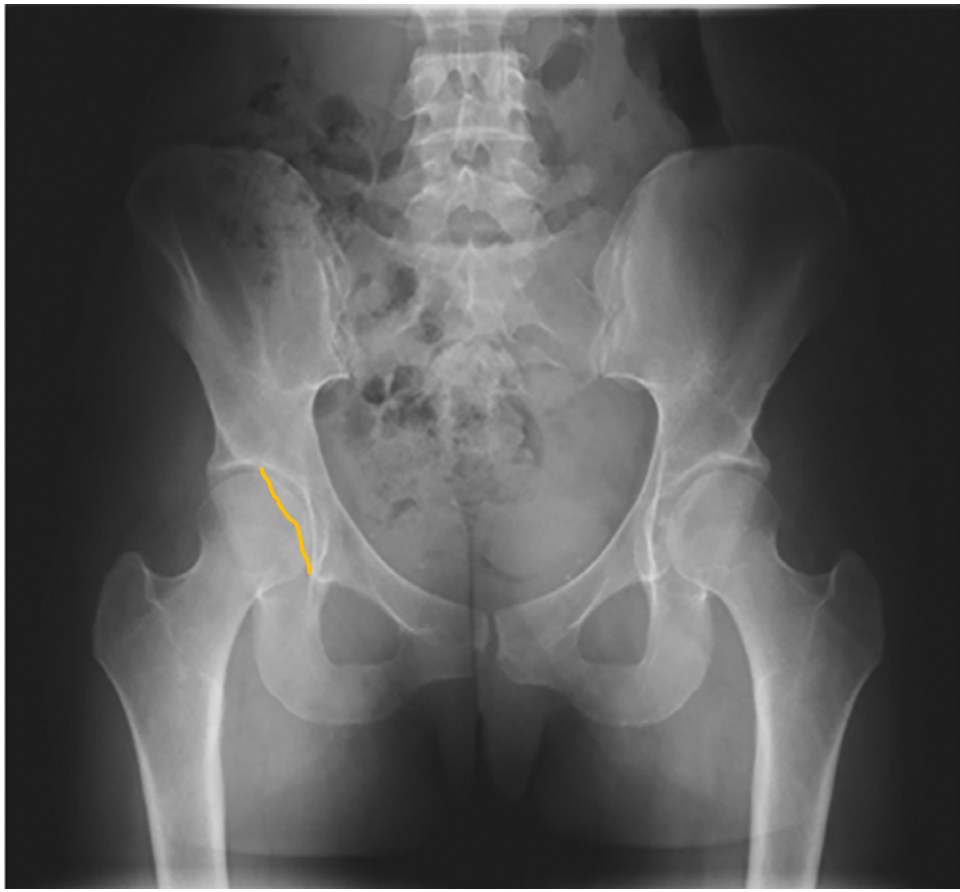
Hip dislocation following hip arthroscopy is a devastating complication. Previous reports of arthroscopy–related iatrogenic instability have focused on strategies aimed at restoring the stabilizing effects of the hip joint capsuloligamentous complex. Less has been written about treatment options for patients in whom deficient acetabular coverage of the femoral head is implicated in the functionally unstable hip joint. Given this relative paucity of

- 26 anni – sesso femminile
- Artroscopia anca dx 2012 labbro + psoas release + acetabuloplastica

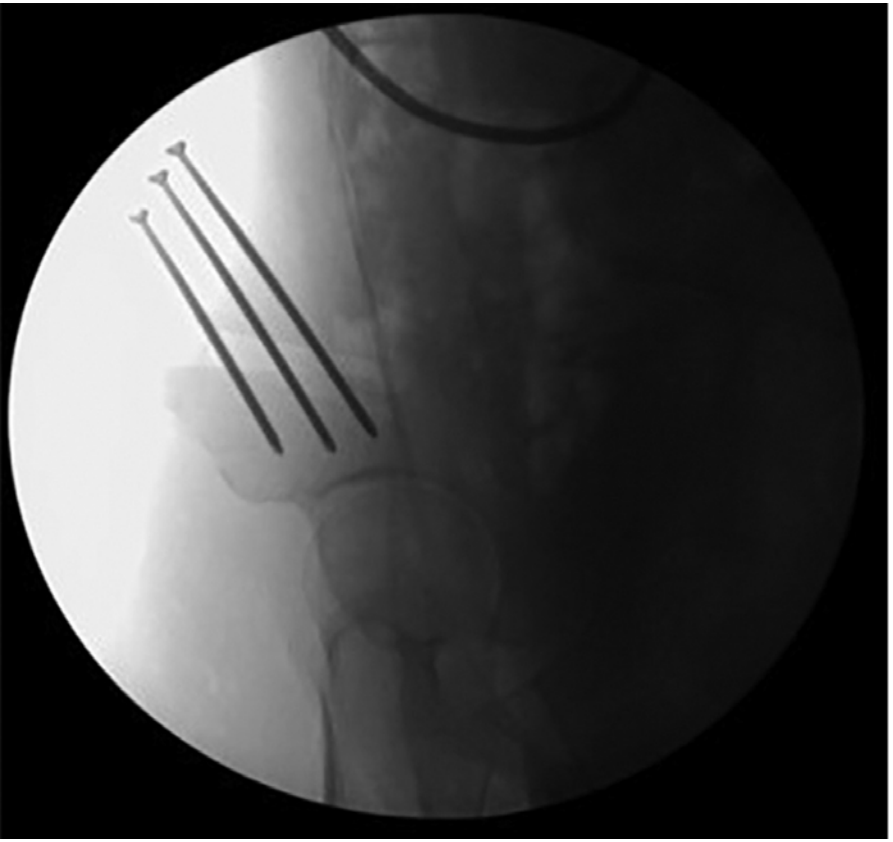
- Dolore cronico postop e lussazioni anteriori recidivanti

pre

post



Post osteotomy



Contents lists available at ScienceDirect

Journal of Orthopaedic Science

journal homepage: http://www.elsevier.com/locate/jos

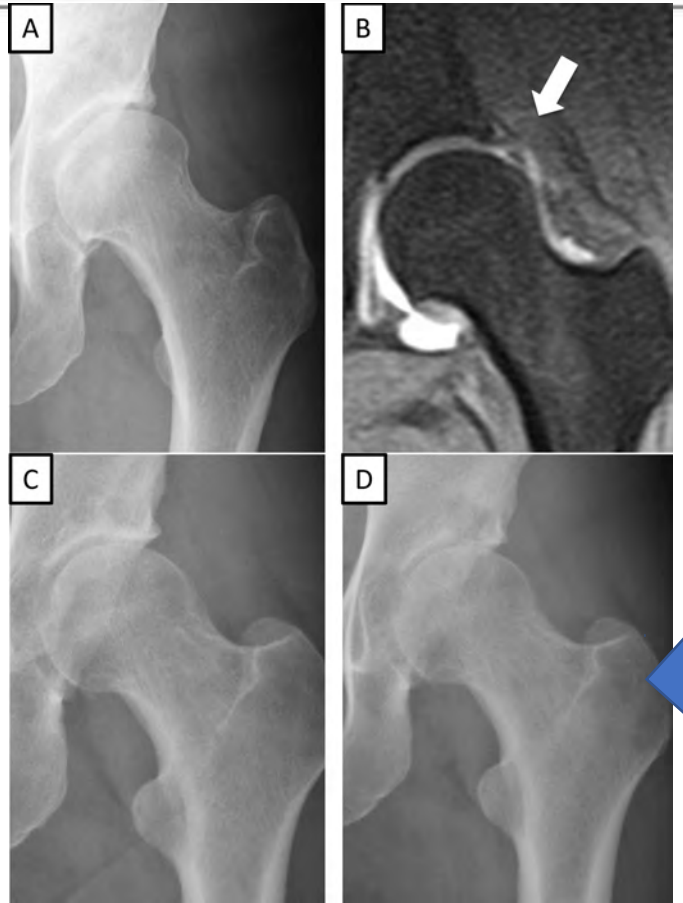
Case Report

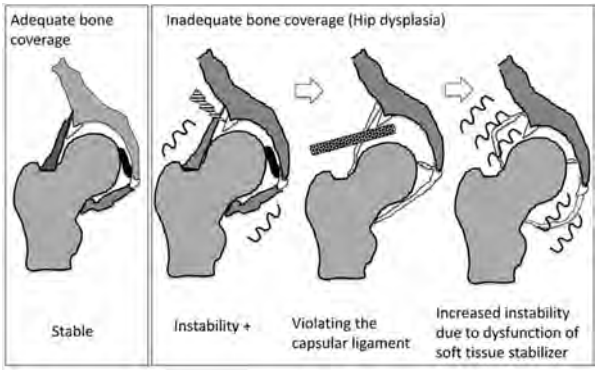
The importance of the soft tissue stabilizers of the hip: Three cases of rapid onset osteoarthritis following hip arthroscopy

Yasuhiro Homma [a,*], Tomonori Baba [a], Hideo Kobayashi [a], Colin G. Murphy [b], Kazuo Kaneko [a]

[a] Department of Orthopaedic Surgery, Juntendo University, 2-1-1 Hongo, Bunkyo-ku, Tokyo 113-8421, Japan
[b] Department of Orthopaedic Surgery, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland

- Donna
- 55 a

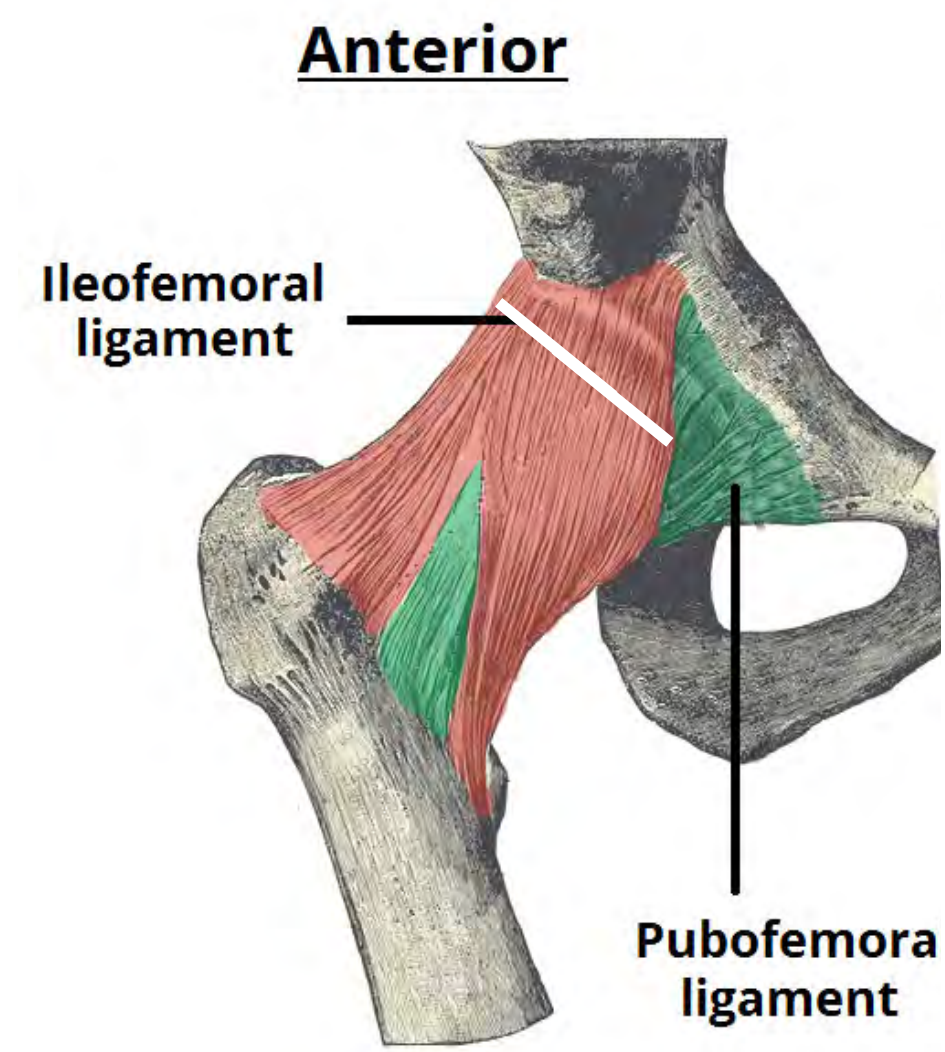


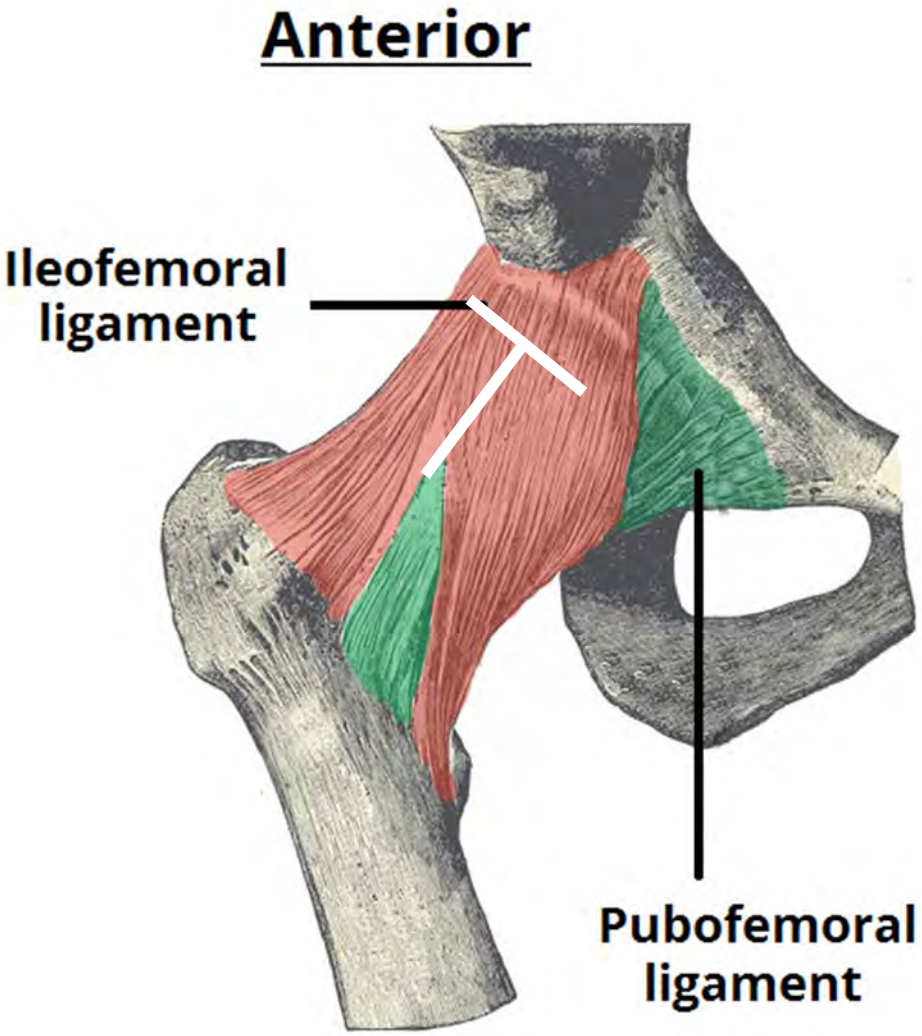


1 aa

Post hip arthroscopy

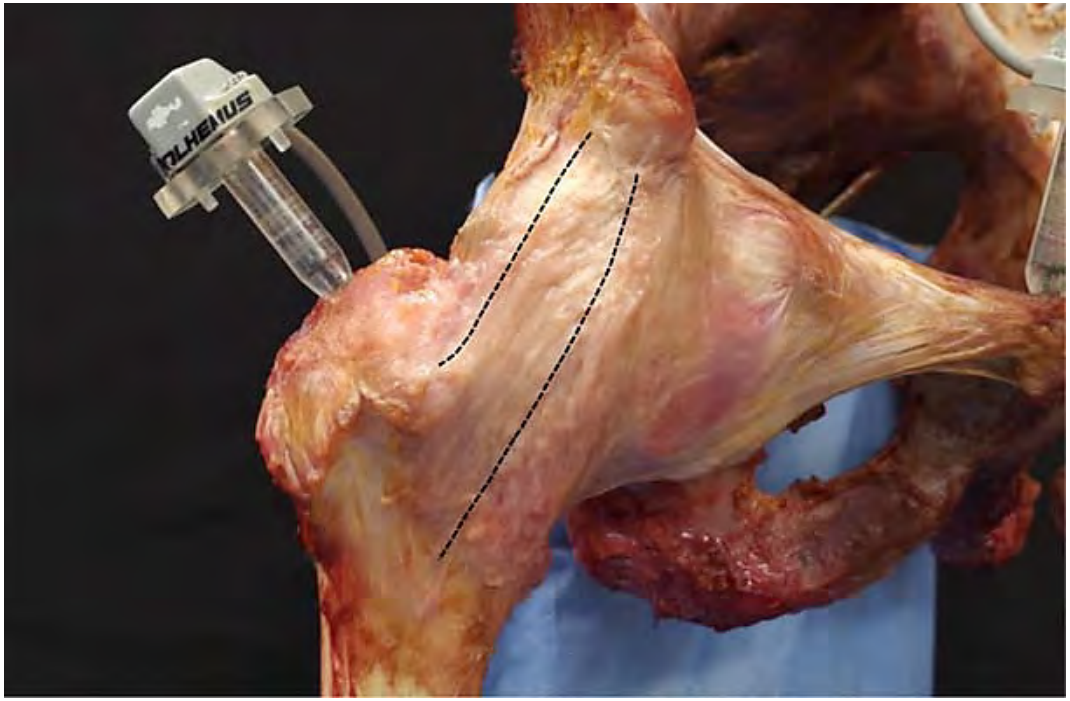
Quale è l’impatto sulla stabilità dell’accesso artroscopico all’anca


Anterior
Ileofemoral ligament
Pubofemora ligament


Anterior
Ileofemoral ligament
Pubofemoral ligament

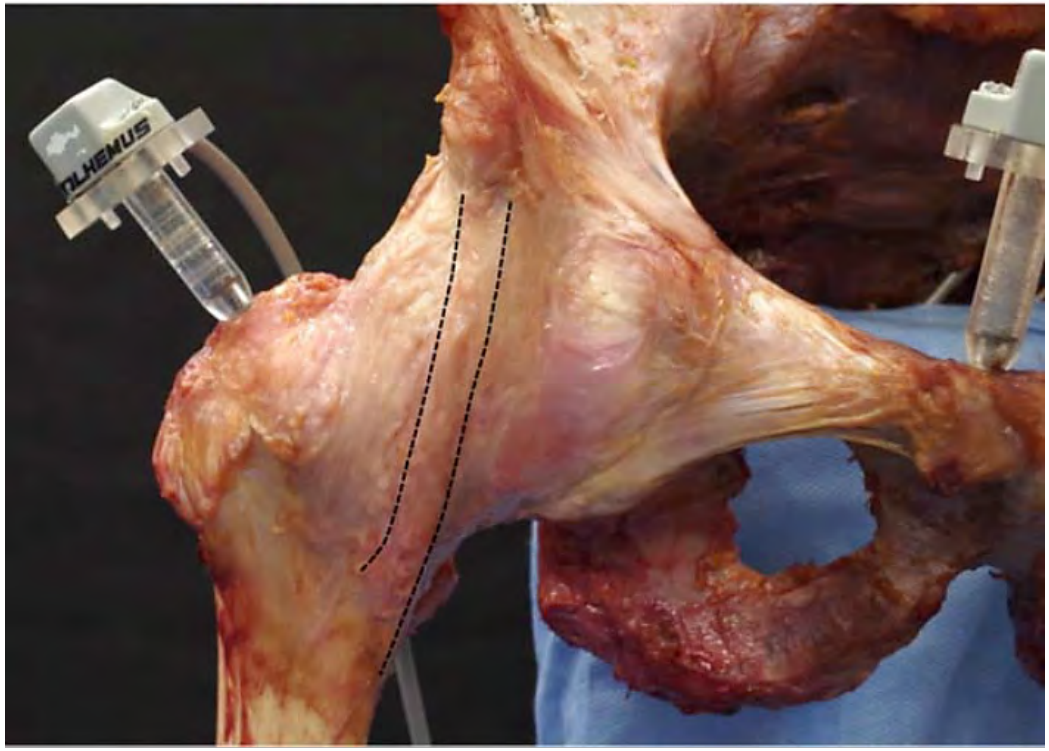
Porzione superiore del legamento ileofemorale

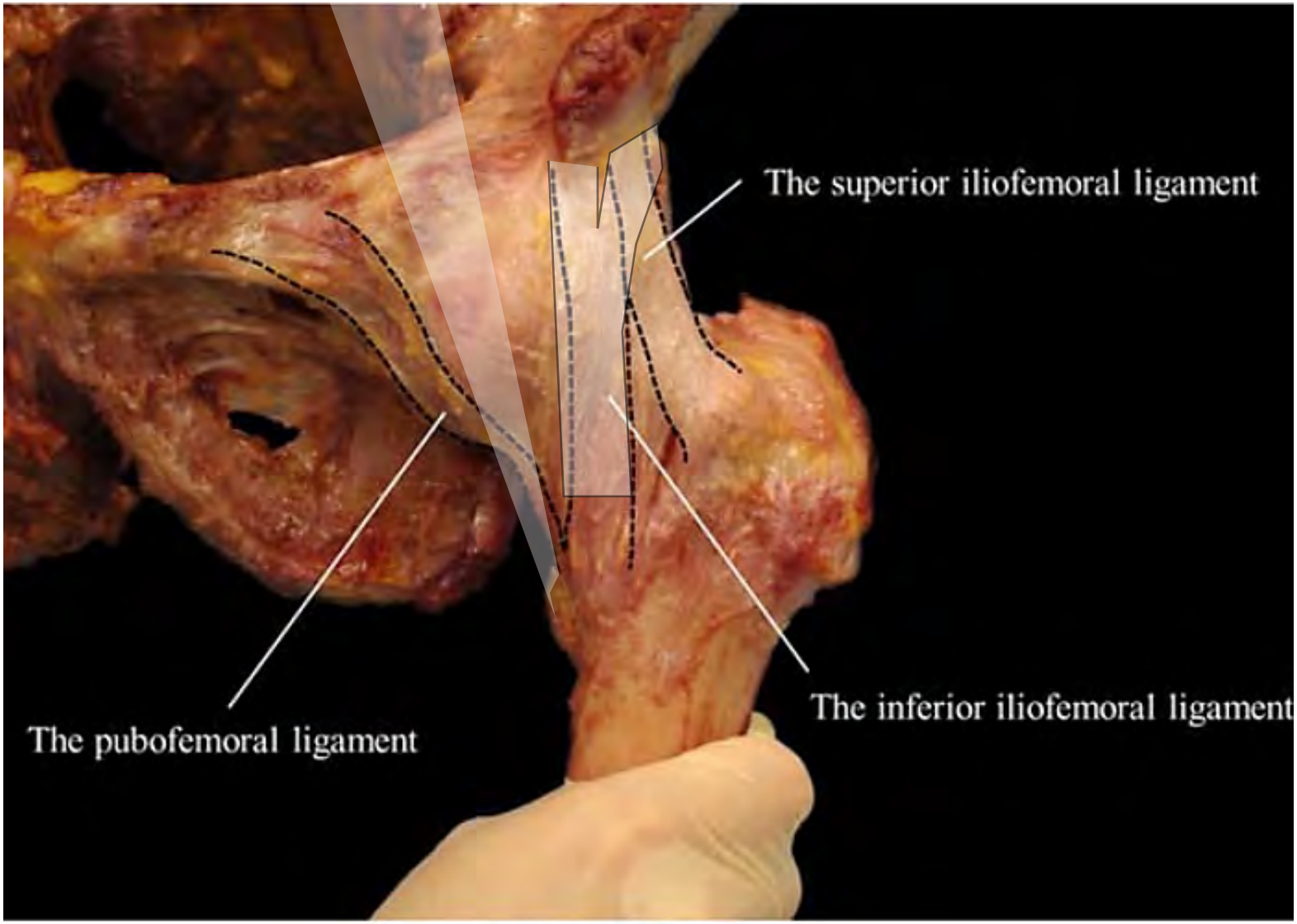
Entra in tensione in massima extrarotazione

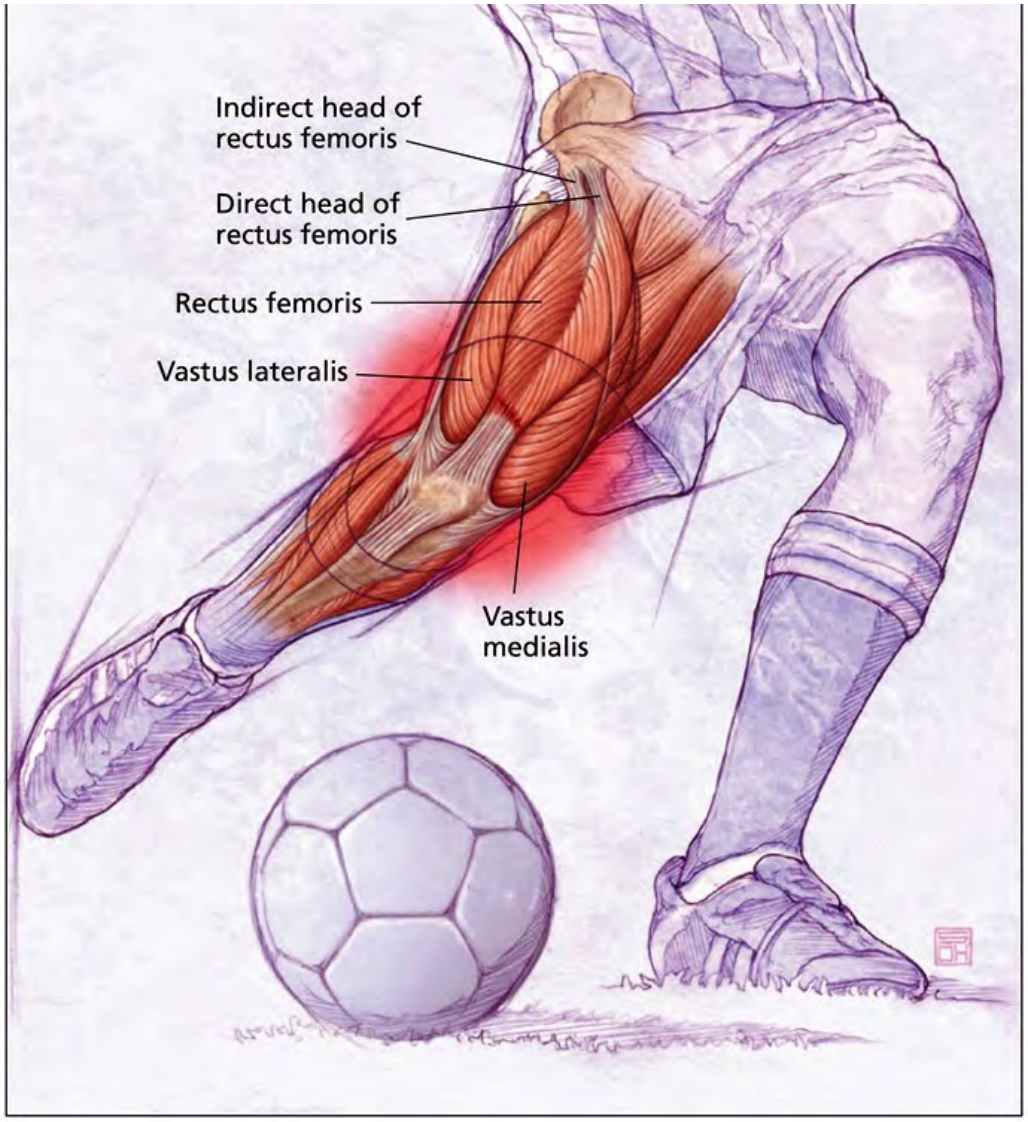


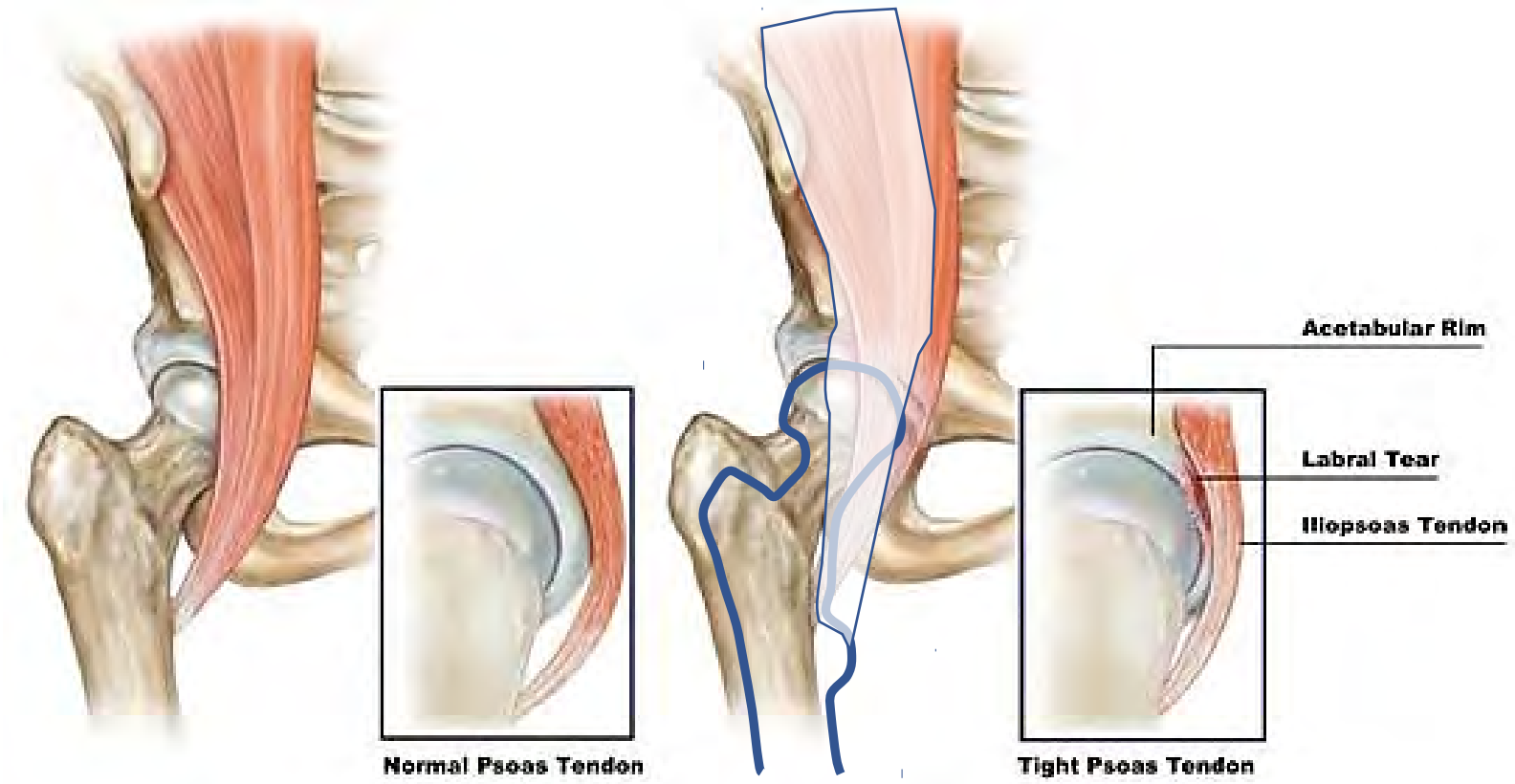
Porzione inferiore del legamento ileofemorale

Entra in tensione in massima estensione

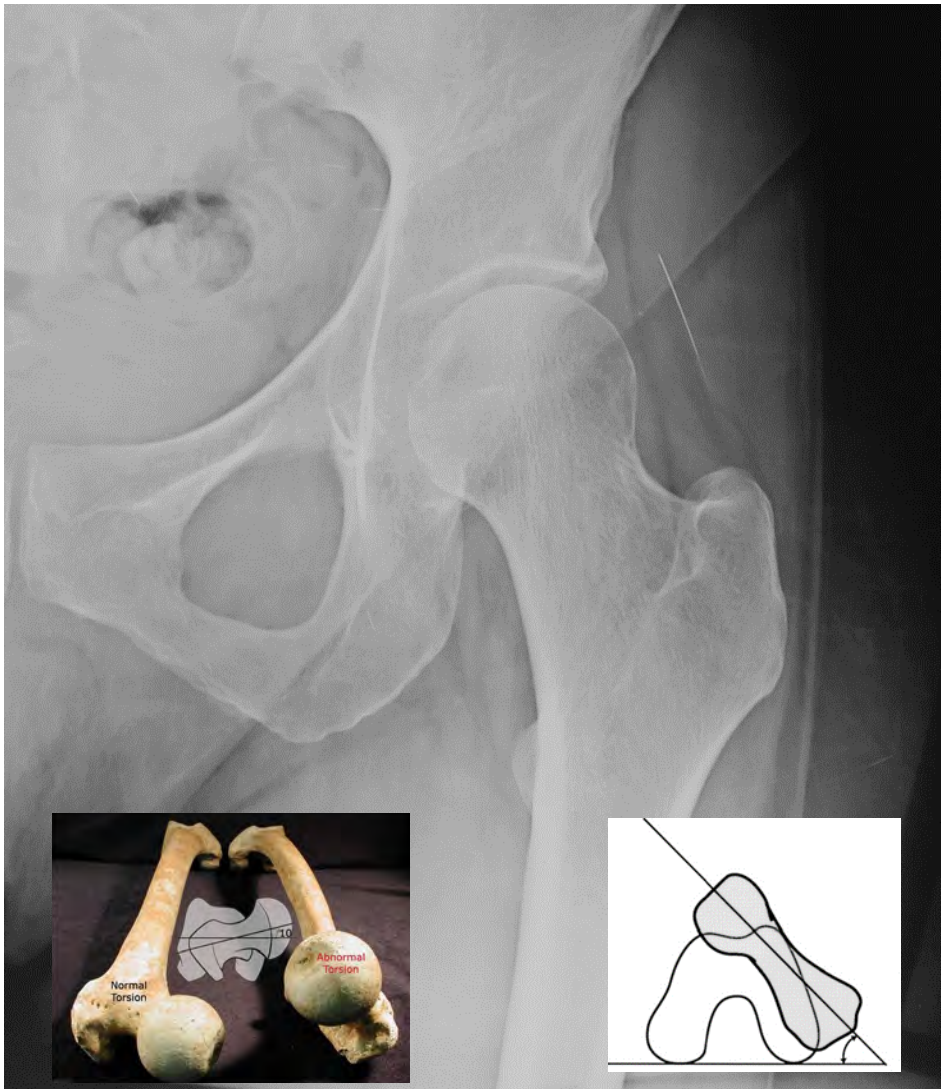



The superior iliofemoral ligament
The pubofemoral ligament
The inferior iliofemoral ligament


Indirect head of rectus femoris
Direct head of rectus femoris
Rectus femoris
Vastus lateralis
Vastus medialis

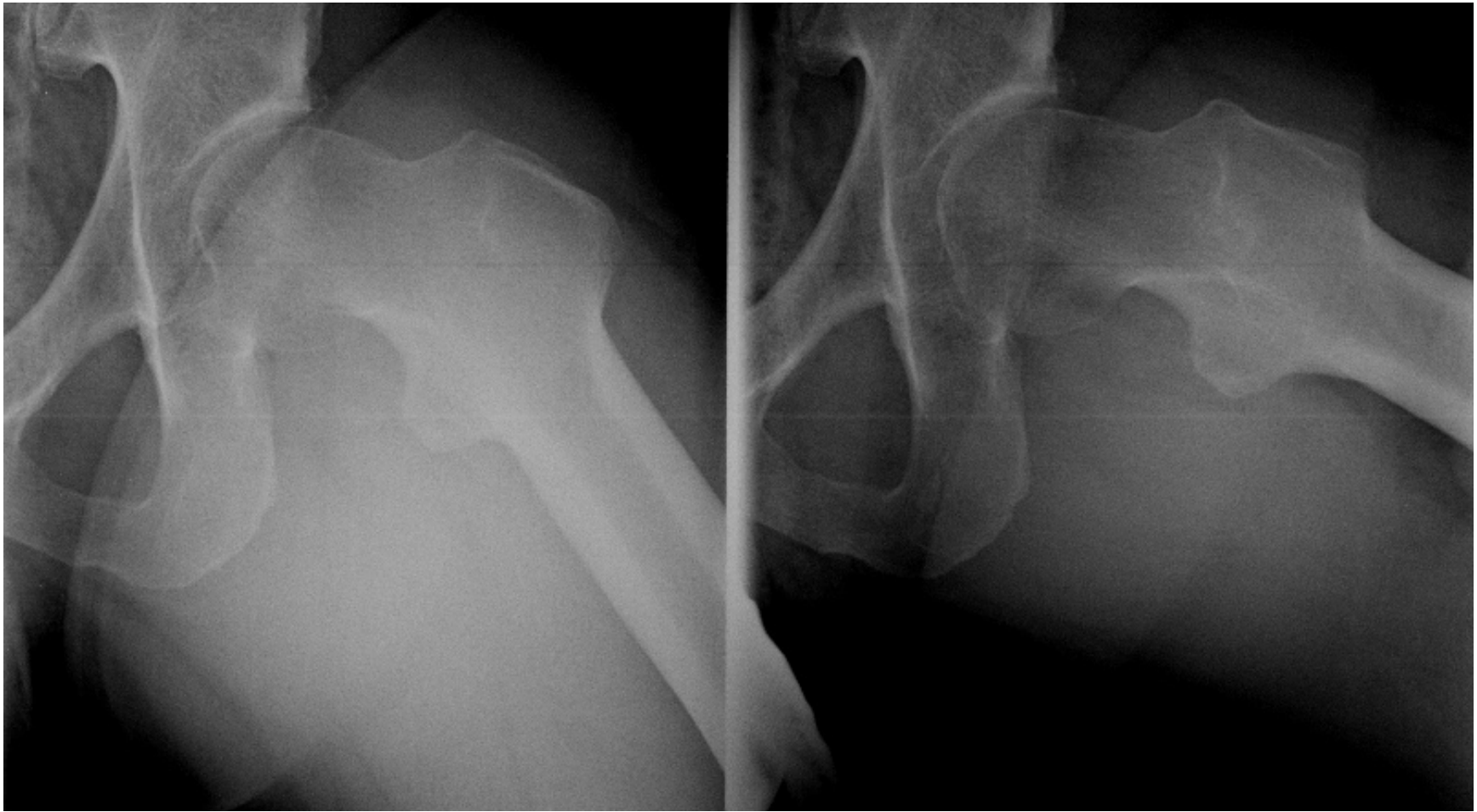

Normal Psoas Tendon
Acetabular Rim
Labral Tear
Iliopsoas Tendon
Tight Psoas Tendon

Il ruolo dell IP come stabilizzatore è minimo nel femore varo e retroverso e massimo nel collo valgo ed antiverso

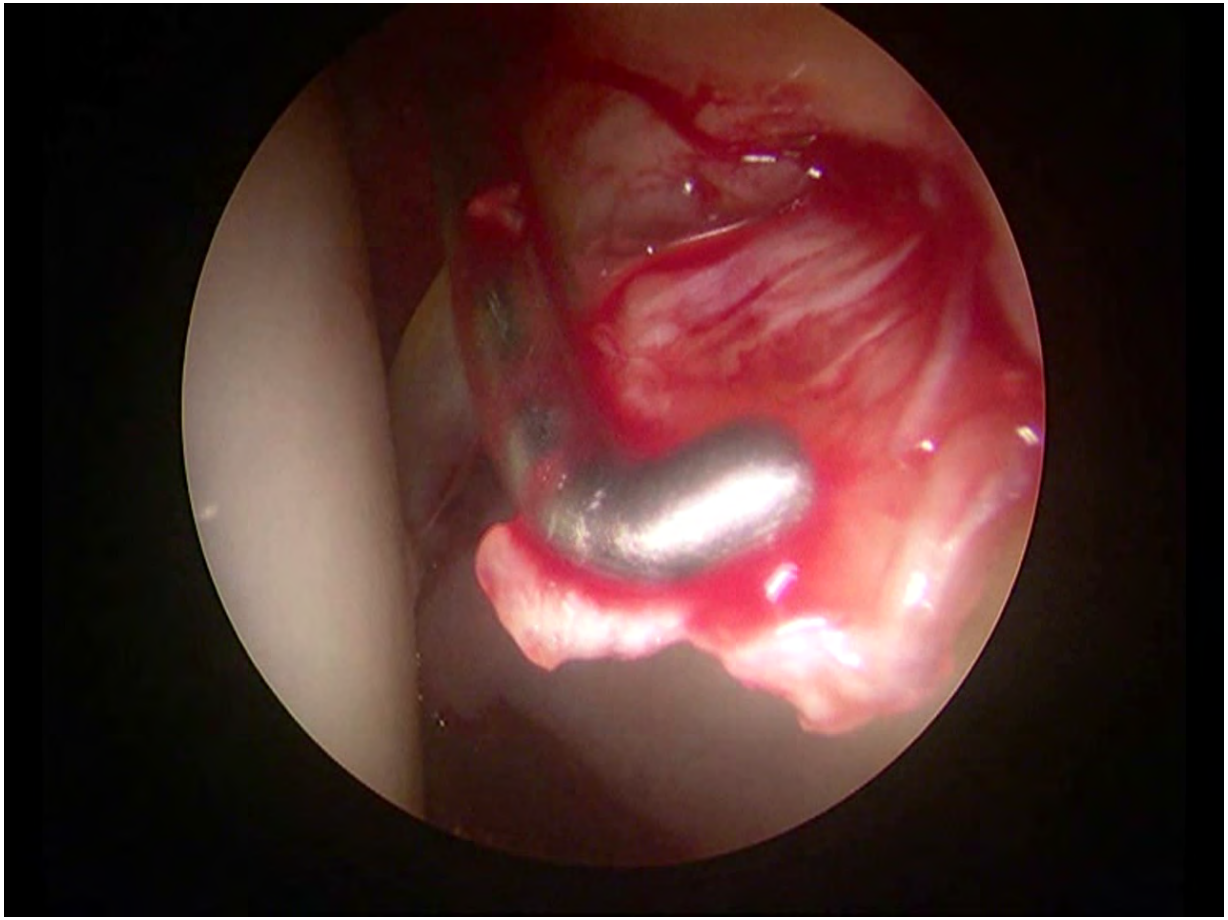


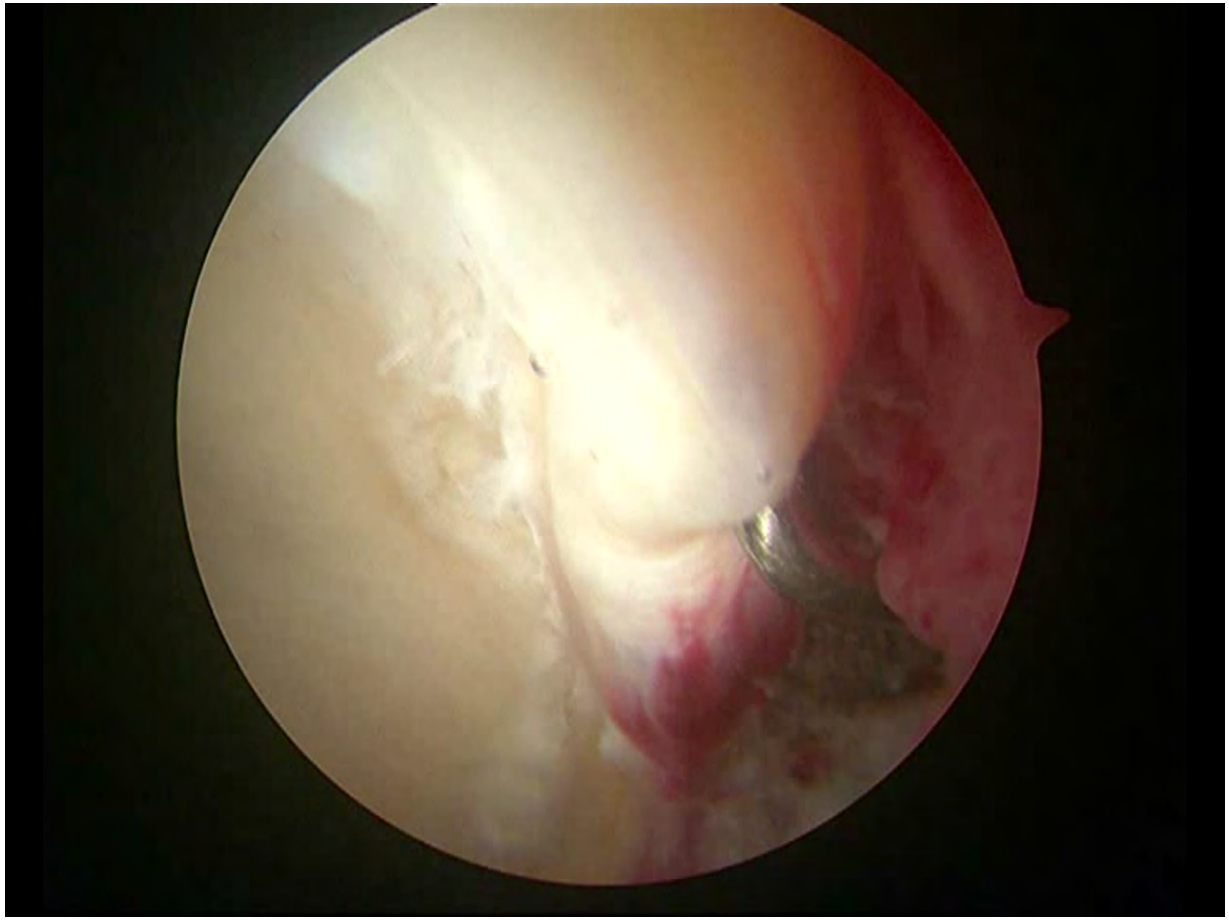
41 aa – molto sportivo - radiologo (calcio –sci tennis jogging)

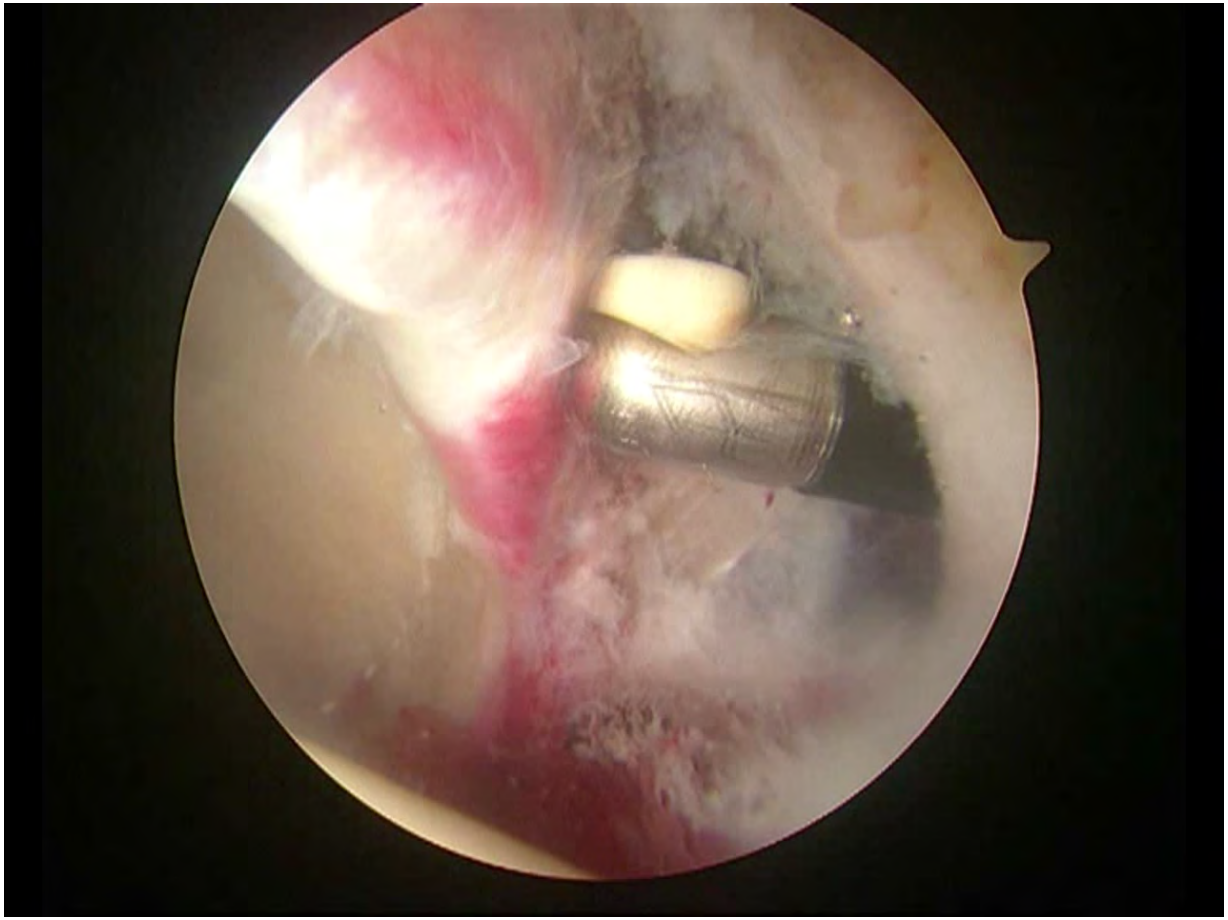
Coxalgia sn da 5 mesi
nessun giovamento con infiltrazioni
deambula con canadesi
algie notturne

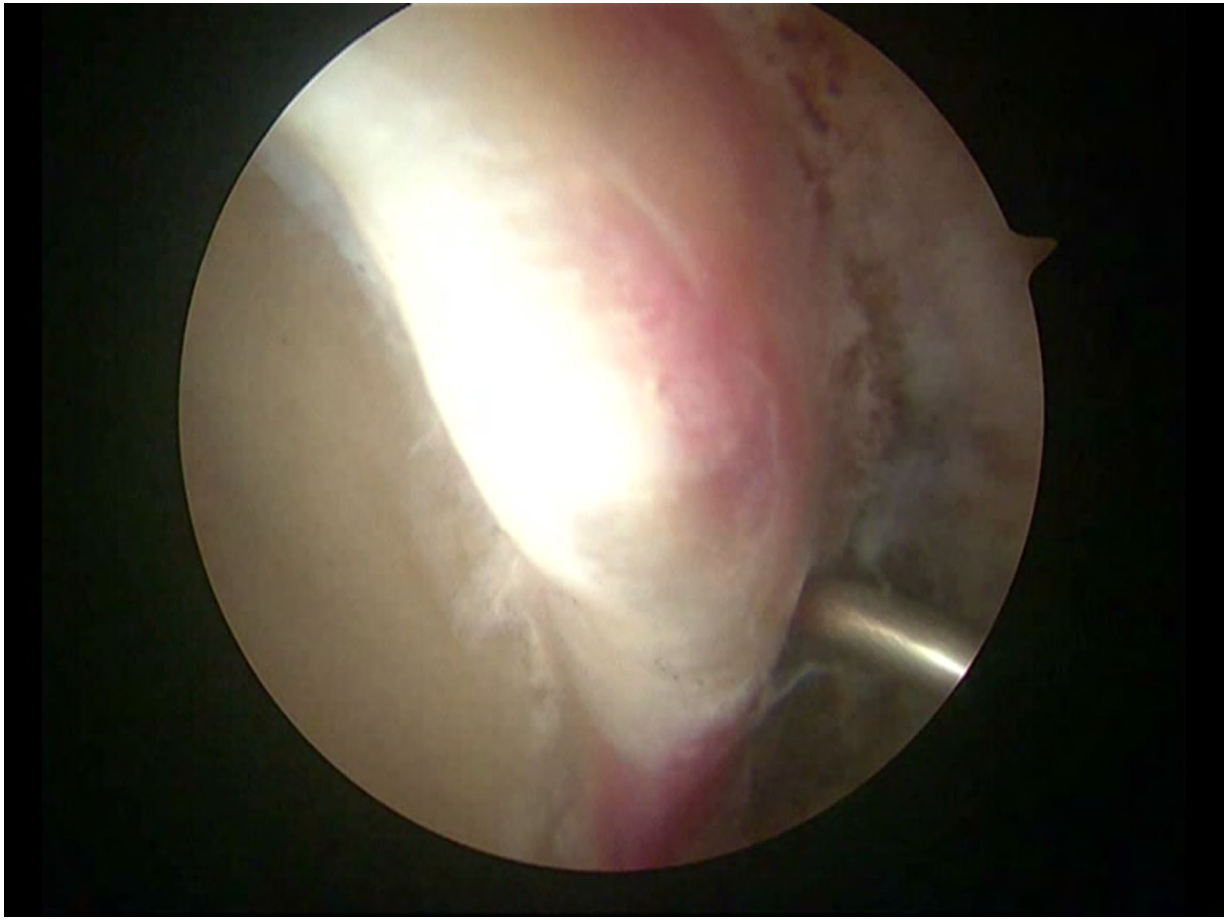


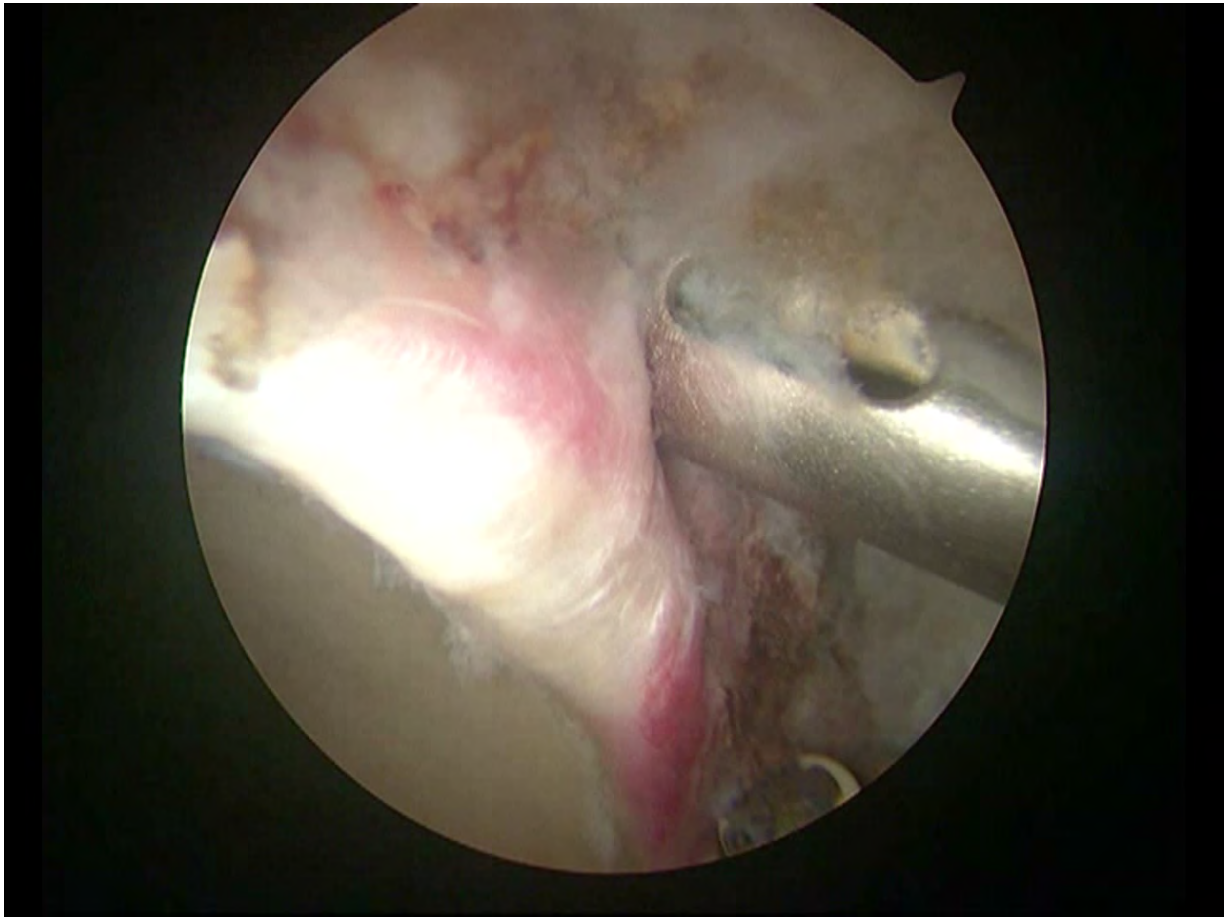

WARNING
40enne
sportivo artrosico
con acetabolo
incontinente!!

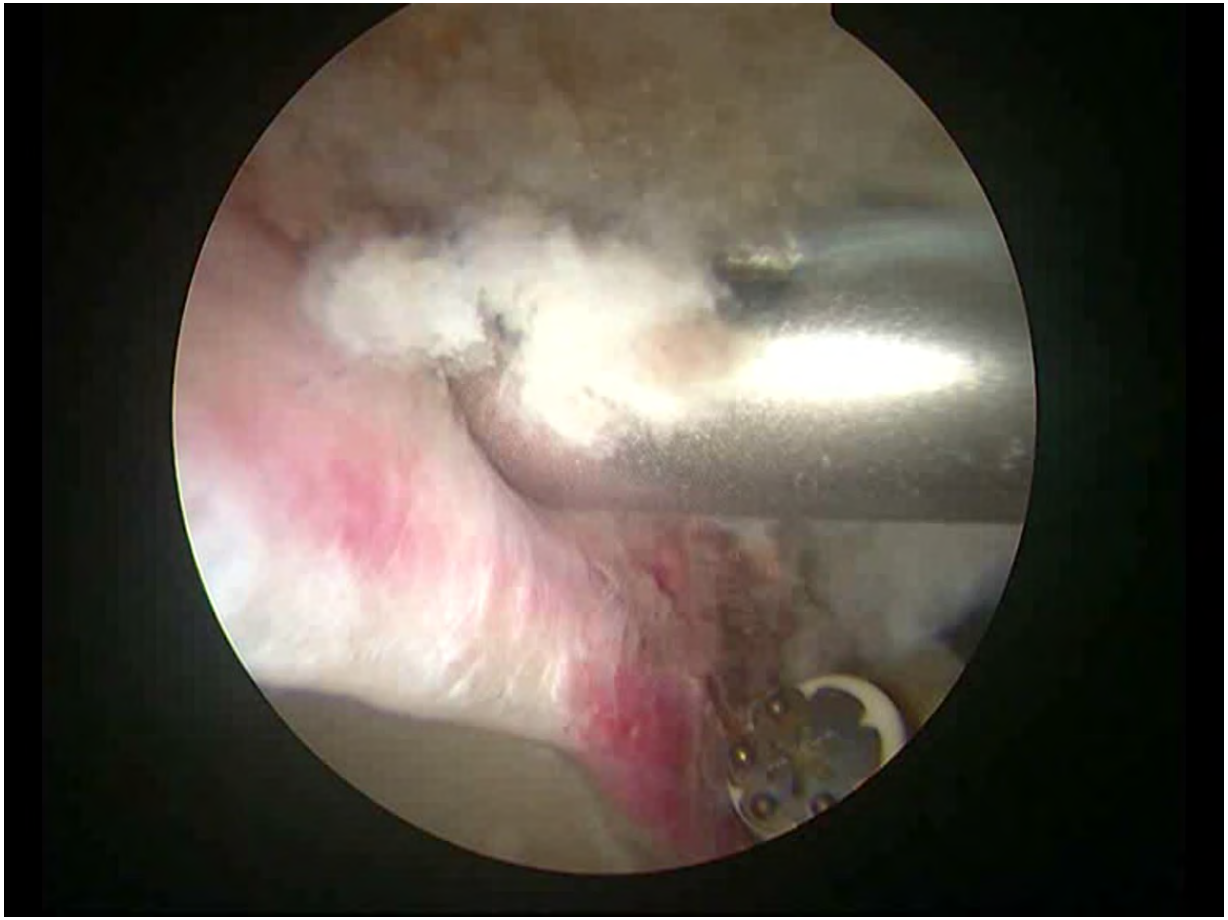


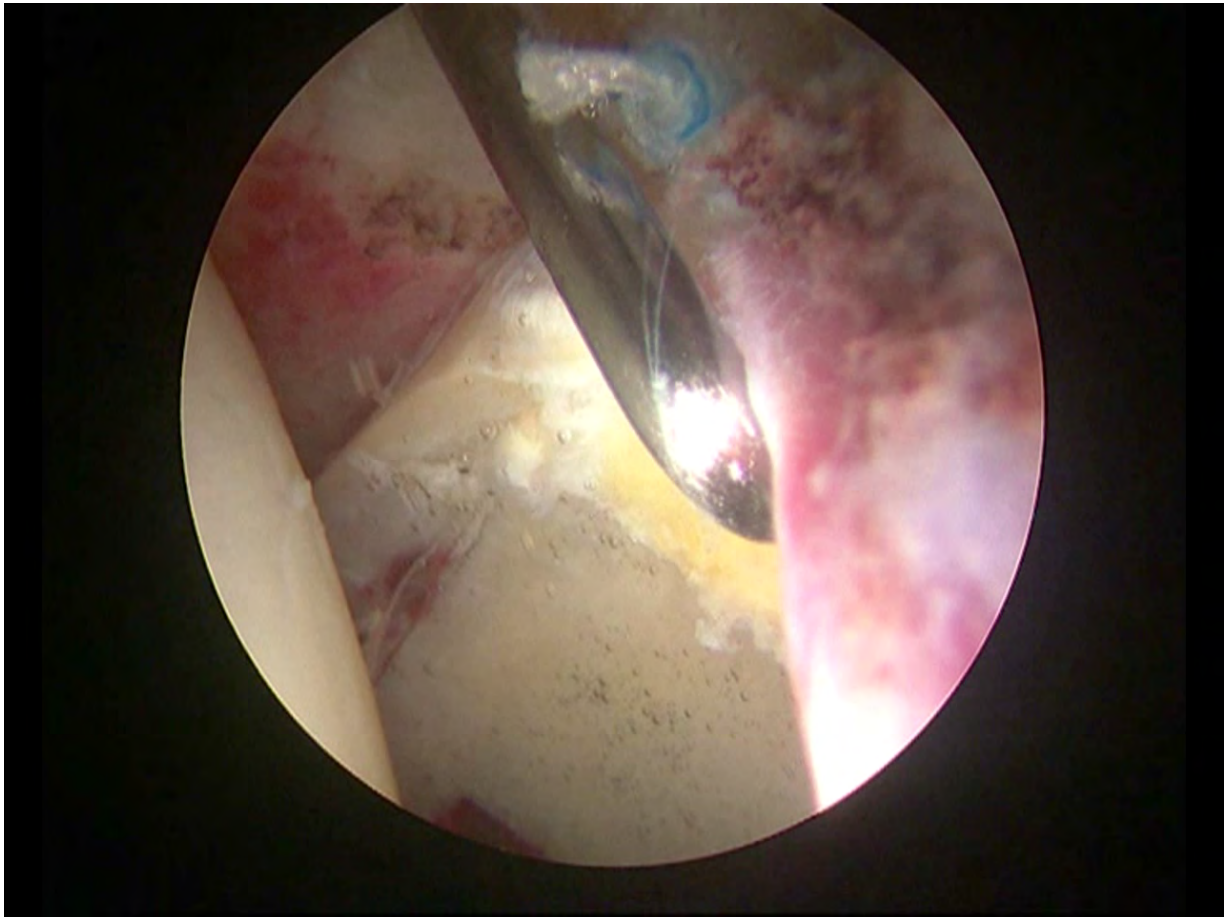


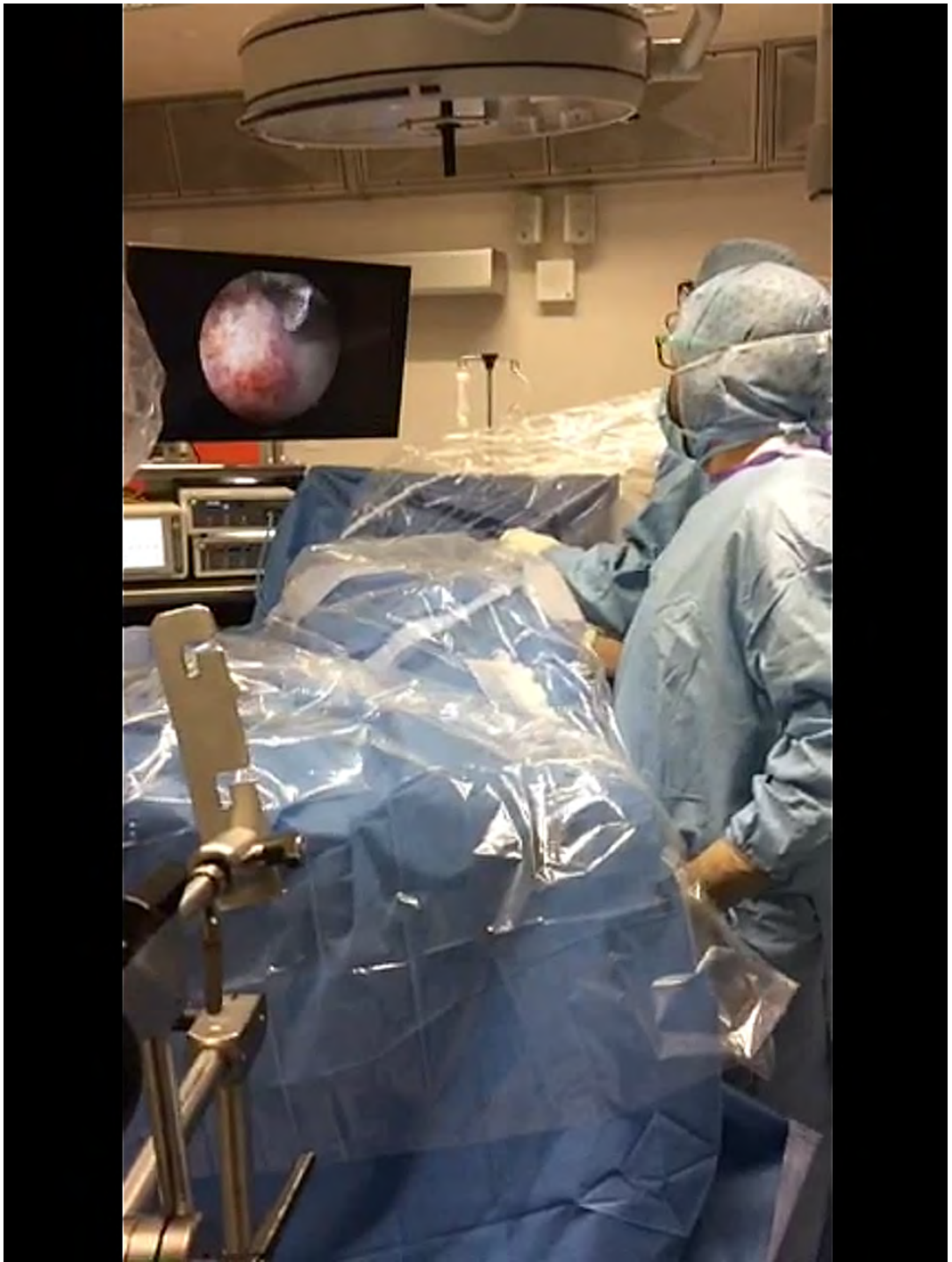






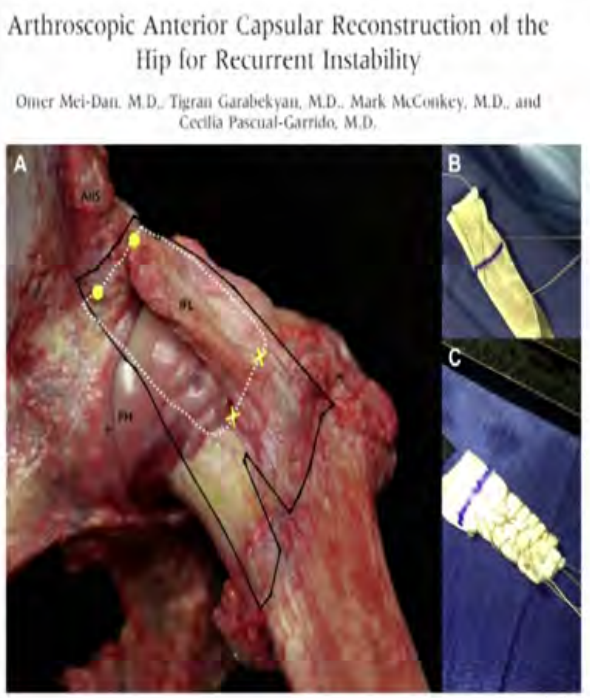






Conclusioni

- L’instabilità post HA è rara
- È quasi sempre un errore di indicazione o di tecnica
- Il trattamento va dalla revisione della sutura capsula alla ricostruzione alla osteotomia alla protesi



Conclusioni

- Nella BD indicazioni molto selettive e rispetto assoluto degli stabilizzatori «molli» dell'anca
- Dovremmo fare più osteotomie acetabolari ma, in Italia, questa tecnica non decolla….

13th Congress of the European Hip Society

Congress President:
Dr. Berend Willem Schreurs,
Nijmegen

SAVE THE DATE

20–22 September 2018
The Hague, The Netherlands

www.ehs-congress.org