

SAFE SURGICAL DISLOCATION

FOR HIP PRESERVATION

We present our experience in the Safe Surgical Dislocation approach to the Hip Joint in young adults for various conditions performed at our institute over last 5 years.

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AKOLA

Femoro Acetabular

CAM

Impingement

PINCE



There are two types of Femoro Acetabular Impingement. Cam Type has a deformity of the femoral head or the Head-Neck junction with a reduced offset. The Pincer type is due to retroversion of acetabulum with overcoverage. These can be diagnosed on plain xrays of the Hip . Awareness of this condition. Enable us to see more and more of these pathologies in day to day practice

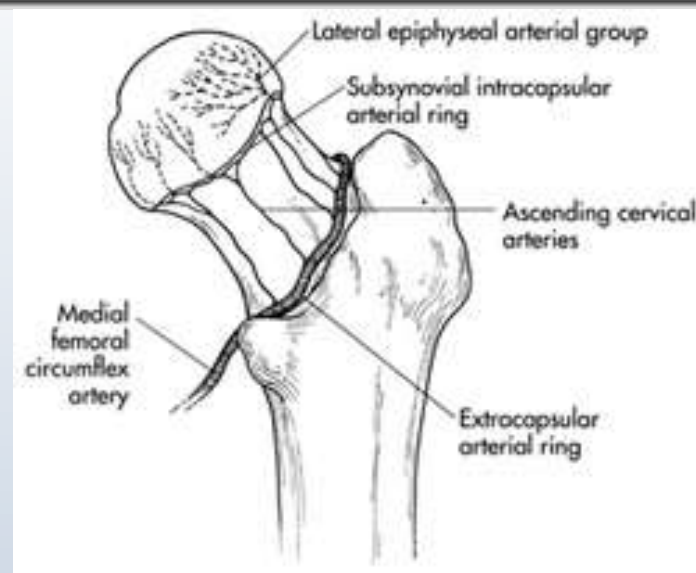
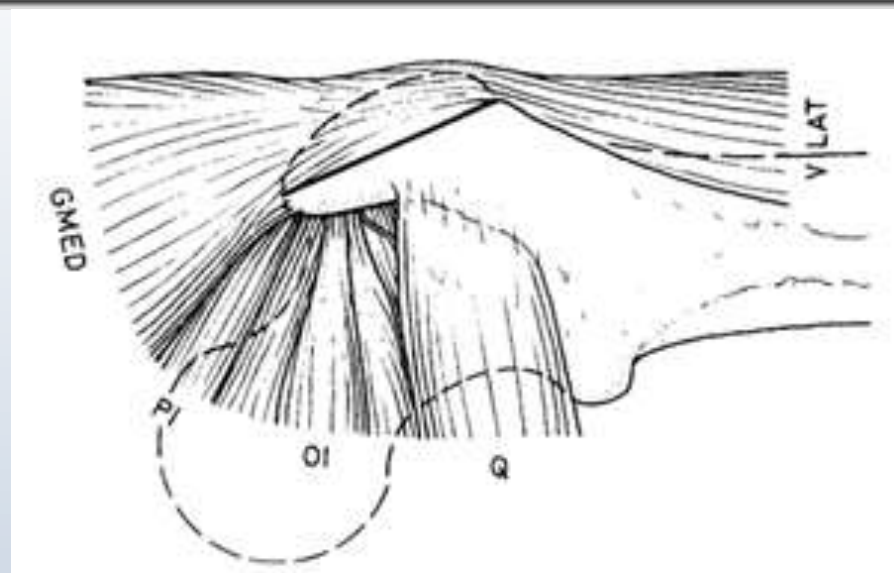


Surgical dislocation of the adult hip

A TECHNIQUE WITH FULL ACCESS TO THE FEMORAL HEAD AND ACETABULUM WITHOUT THE RISK OF AVASCULAR NECROSIS

R. Ganz, T. J. Gill, E. Gantier, K. Ganz, N. Krügel, U. Berlemann

From the University of Bern, Switzerland

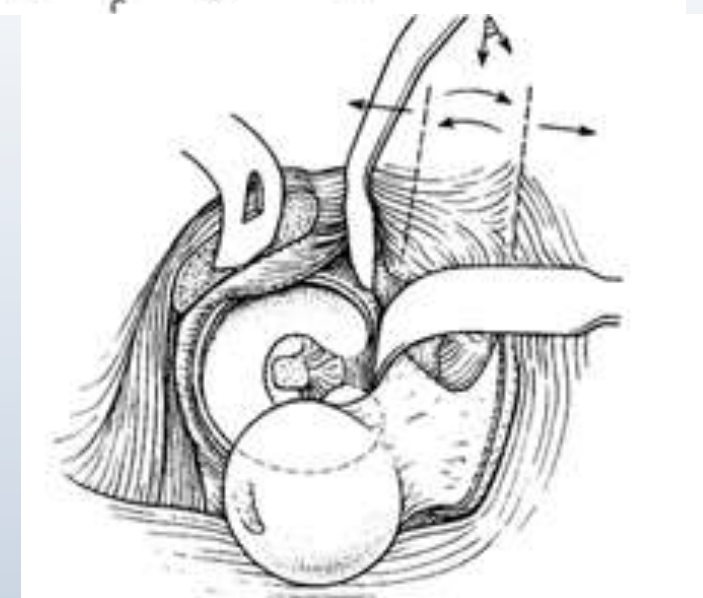
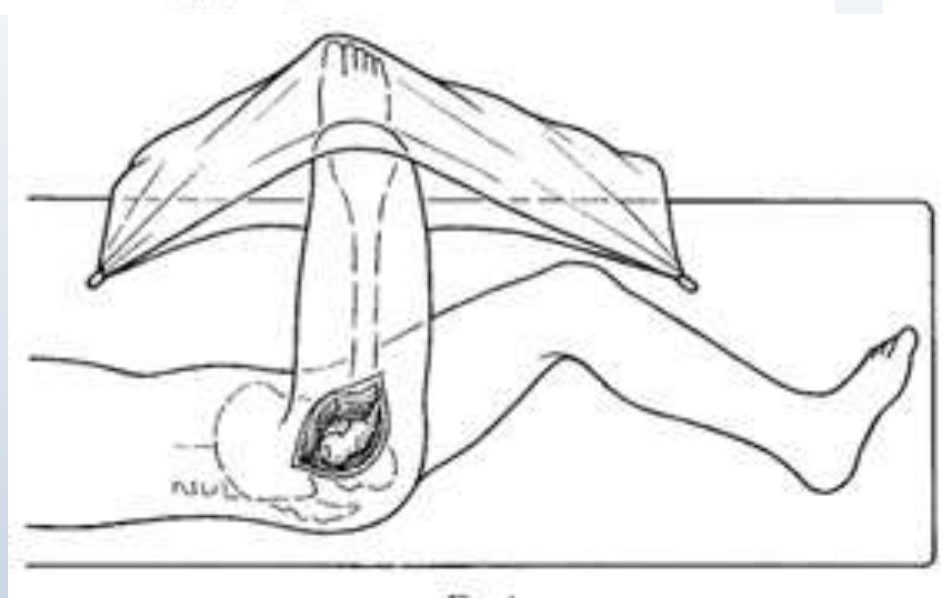
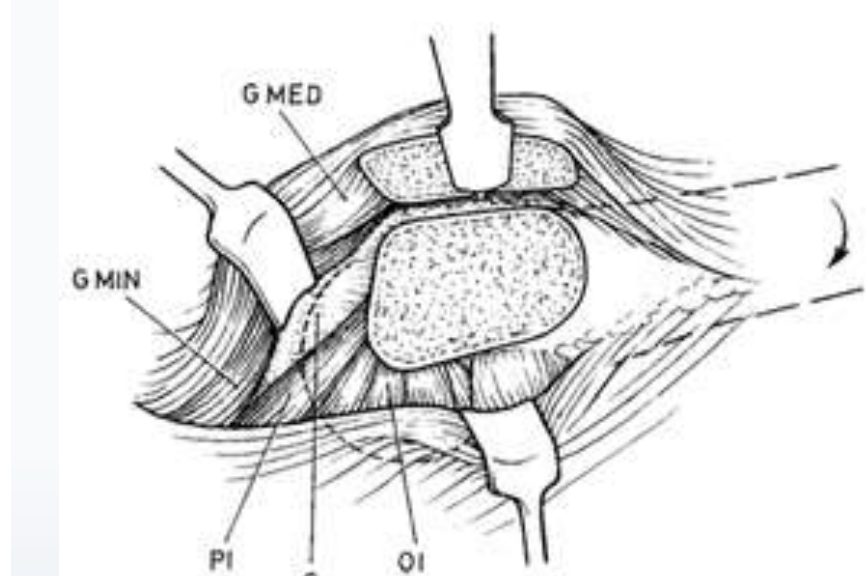
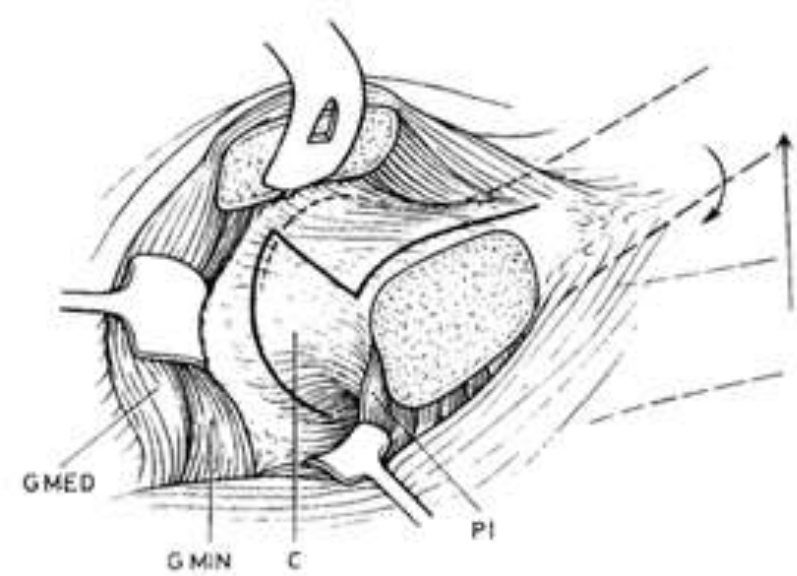


Ganz safe surgical approach to the hip was followed, as described in this landmark article in the British Journal of bone and joint surgery.

Full exposure of the head of the femur and the acetabulum is possible along with protection of blood supply to the femoral head from the branches of Medial Femoral Circumflex artery..

Surgical Steps

- Lateral position
- Kocher incision
- Trochanteric flip osteotomy
- Dissection betn Piriformis & Gl. Minimus
- Z- shaped capsulotomy
- Dislocation of femoral head



Trochanteric Flip osteotomy has attachments of Gluteus Medius & Vastus Lateralis & is about 1.5 cm thick. Z shaped capsulotomy is done and labrum is preserved. Hip is dislocated in External rotation and full 360 degree view is obtained.

17 pts in 5 yrs

AVN.....	9
Perthes	2
Dysplastic hip.....	2
Retroversion & Pincer FAI.....	2
Pipkin Type II #.....	1
Neck exostosis.....	1

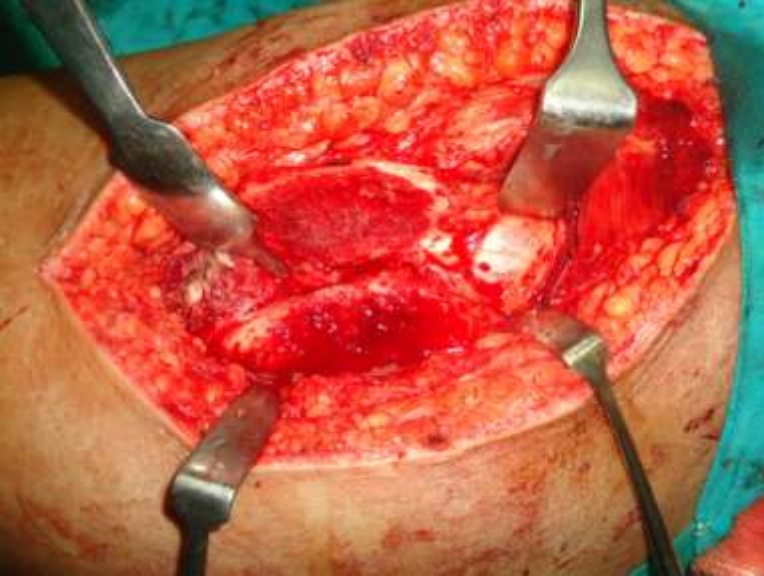
TYPES OF OPERATION

- Osteochondroplasty (done in all patients)
- Intertrochanteric osteotomy (in 3)
- Intra-articular reduction osteotomy (in 2)
- Pipkin # Fixation (1)
- Excision of exostosis (1)

26 yrs / M
2 yrs old # NOF



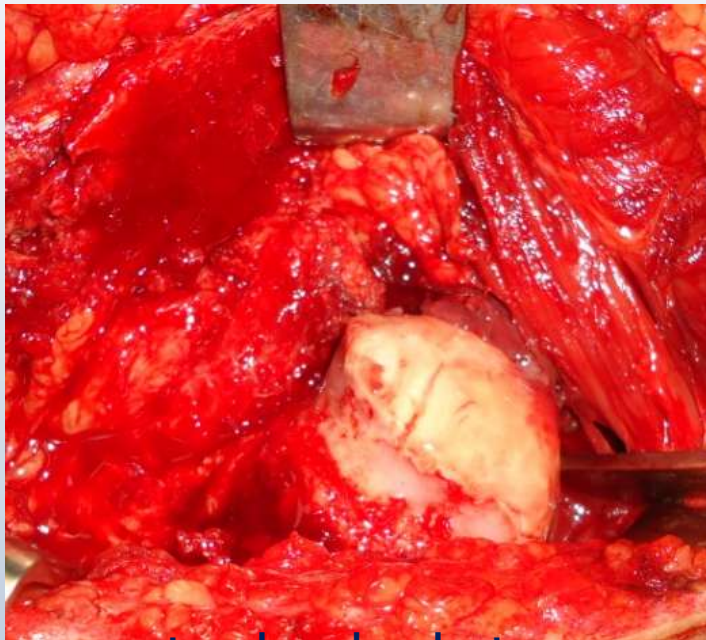
AVN lead to partial collapse and extrusion of the femoral head. Anterior aspect of head had a large bump caused by the extrusion seen on cross table lat xray.



Trochanteric flip osteotomy



Exposed femoral head



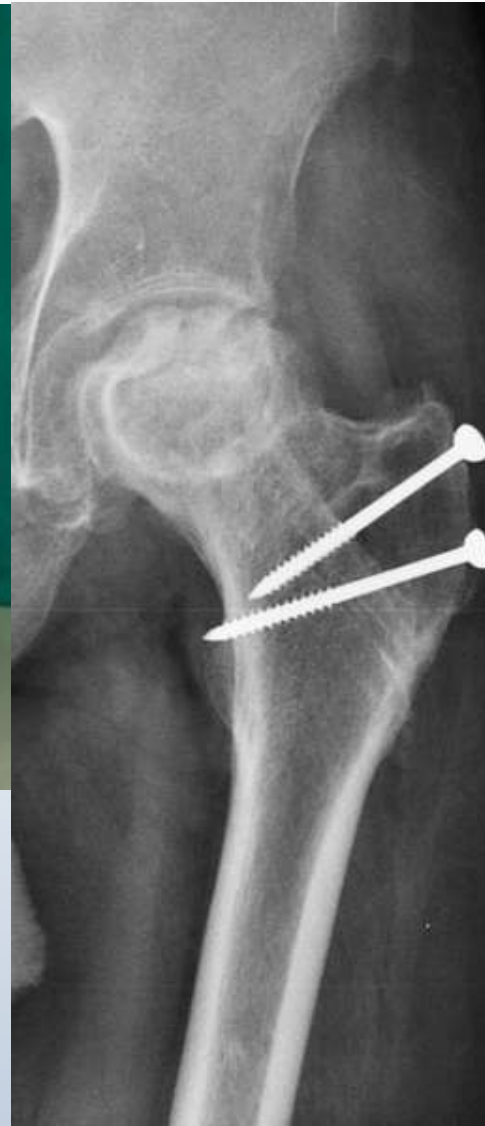
osteochondroplasty



Excised pieces

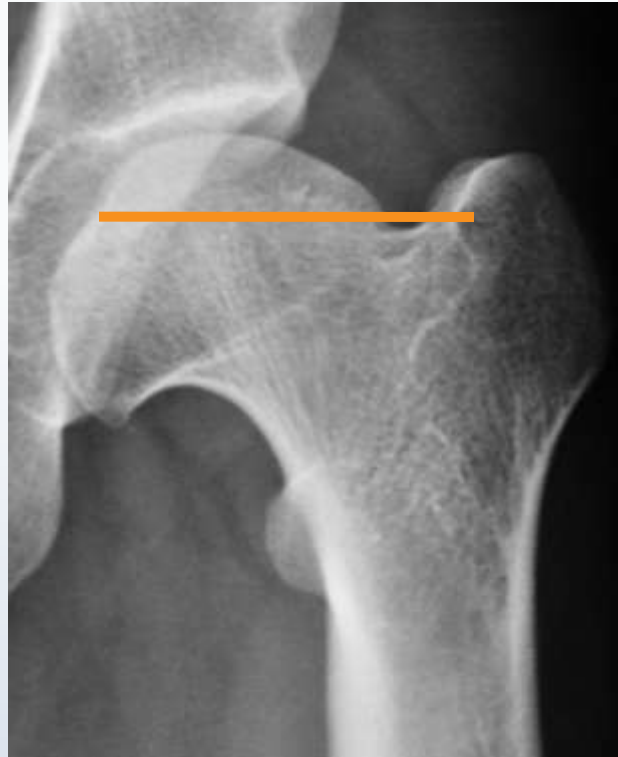
Trochanteric Flip osteotomy done. Head has large anterior bump due to its extrusion while in the soft state of AVN.. Resection of all extra bone is done, Offset is recreated.

Post-op



There is no trendelenberg lurch.
Hip scores and range of motion
have increased. There is no pain.
The head is spherical.

Perthes



20 yr old with Perthes. Trochanter is high riding and head is oval and large with reduction of Adduction & Internal rotation in flexion. There is a mild lurch.



. Lateral Incision was taken. The Gibson interval was located between the gluteus maximus and the tensor fascia lata muscles. The trochanteric osteotomy was performed such that the flip fragment was only 1.5 cm thick. It contained the insertions of the gluteus medius and the vastus lateralis and a part of the gluteus minimus as well. Capsulotomy was done to approach the head which was dislocated with the hip in external rotation.

Reduction of the or worried and extruded part of the head was done to recreate semblance of spherical shape. An osteochondral plasty was performed and hence Head reduction was done. See the picture on the right is the amount of bone that was resected

Harris Hip Score: 88

Gr. Troch advancement



Trochanter is brought down and Relative Neck lengthening has been done. Tip of trochanter to centre of Femoral head are now in same line. There is mild heterotopic ossification and the site of surgery which is not symptomatic and does not block the movements



He has full movements in the Hip with no lurch, full ability to squat and sit cross legged.

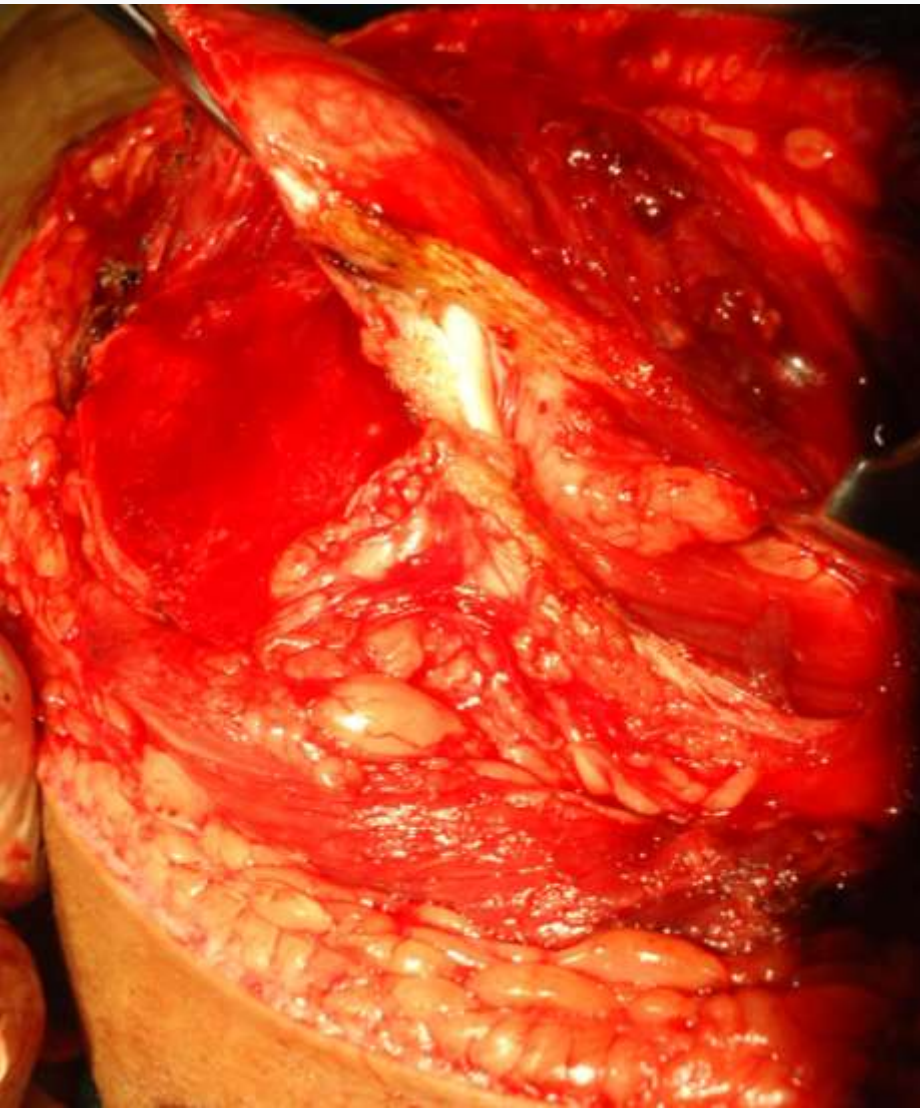
Harris Hip Score = 39.6



Severe destruction of head after AVN. Since the last 2 years Has severe pain and cannot walk. Deformed and extruded Femoral head. Which has become saddle shaped. The portion under the acetabular lip has undergone maximum damage and is depressed. The lateral part of the femoral head is extruded also and the cartilage is in reasonably good shape though very few movements of the hip joint other than 60° of flexion

Ganz's
Safe Surgical
Dislocation &
Intra-Articular
Osteotomy

Trochanteric Flip osteotomy



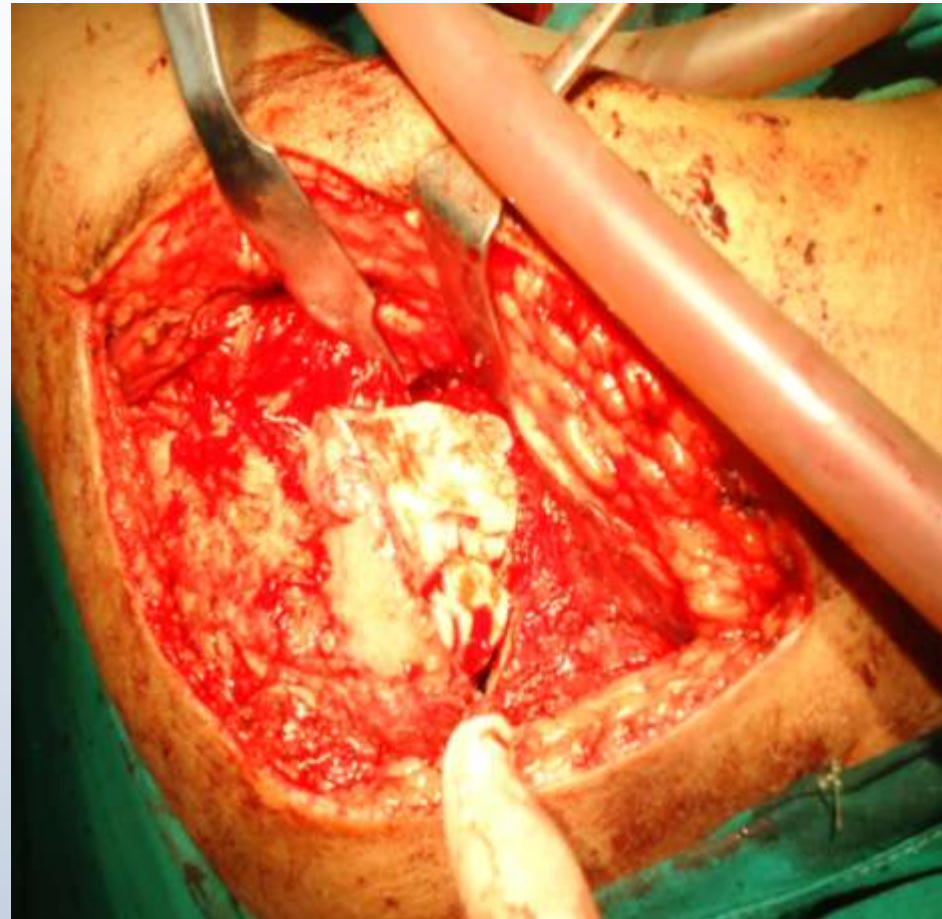
1.5 cm thick

Gl. Medius

V. Lateralis

Gl. Minimus(partly)

Capsulotomy

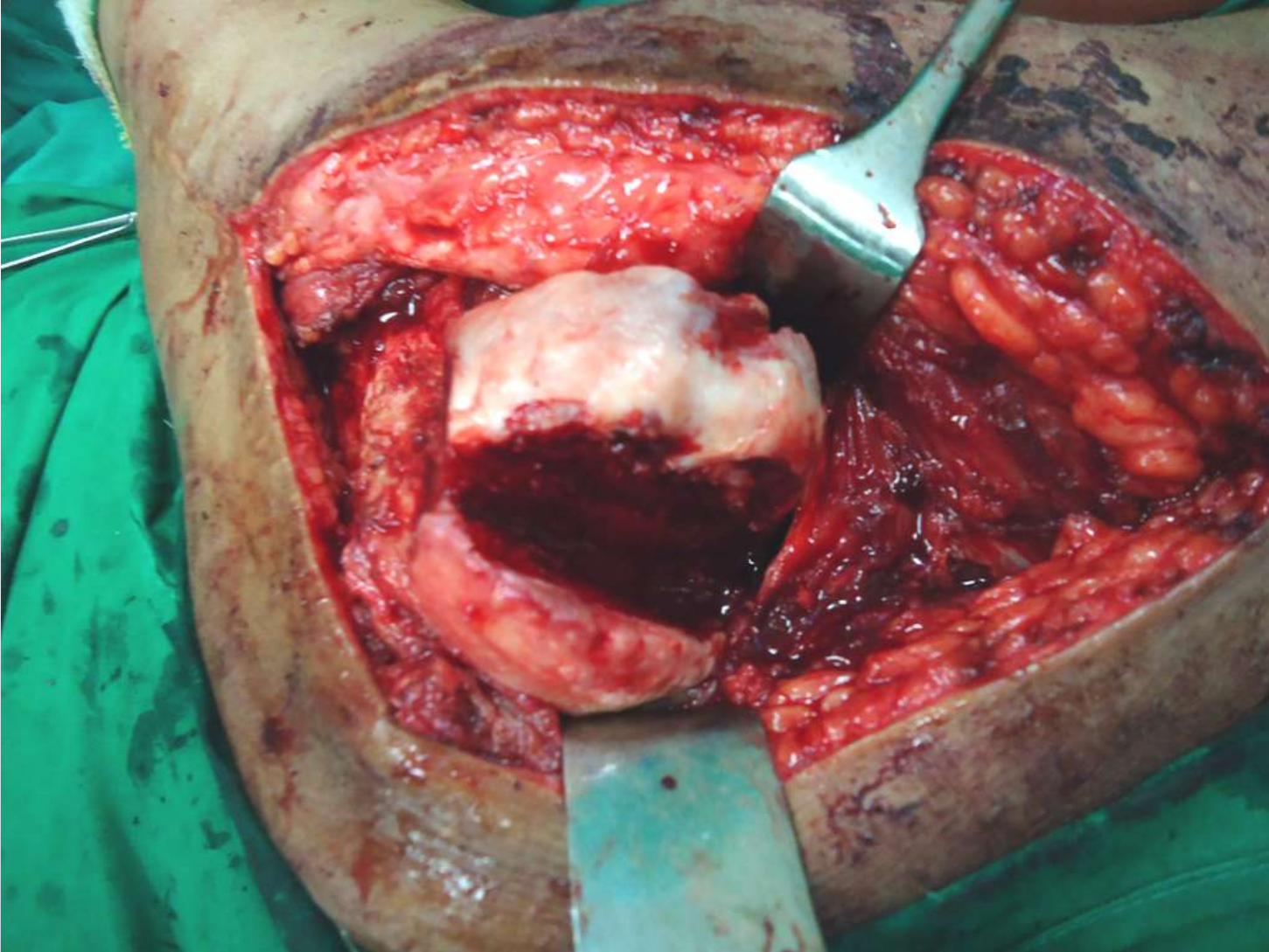


Saddle shaped & distorted femoral head



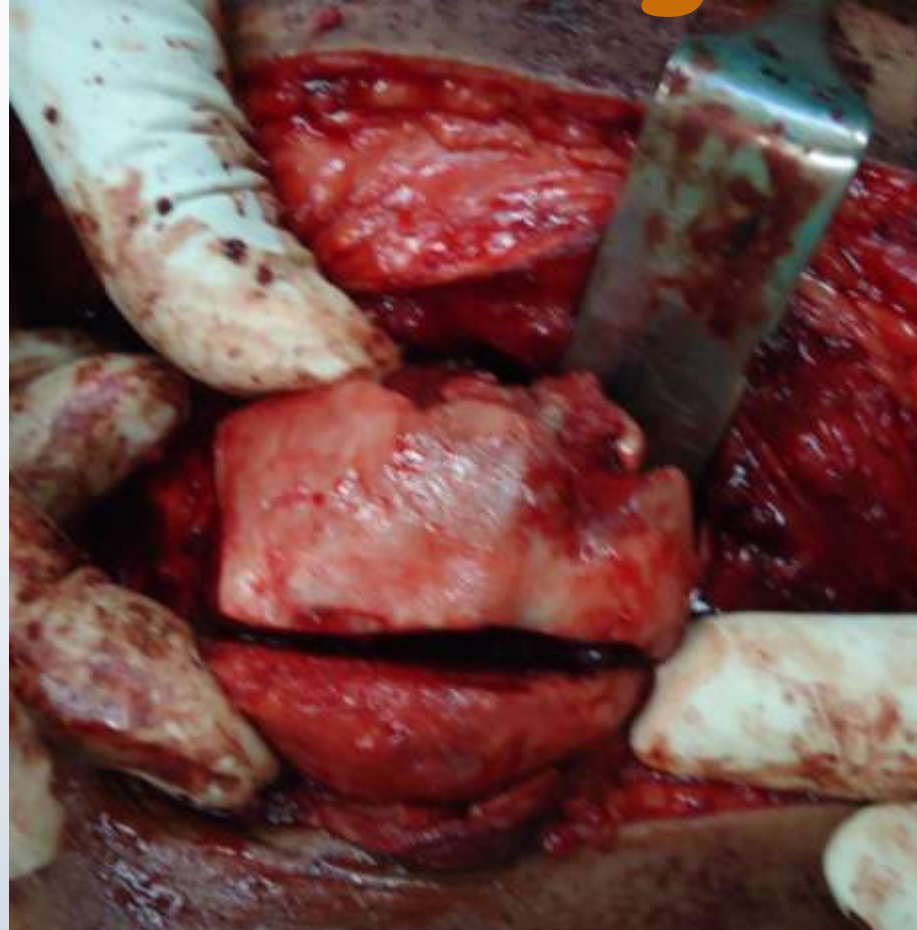
Saddle shaped distortion of Femoral head. Central portion under lip of acetabulum maximally damaged with depression. Medial portion and extruded Lateral portion have relatively good cartilage.

Intra-articular osteotomy

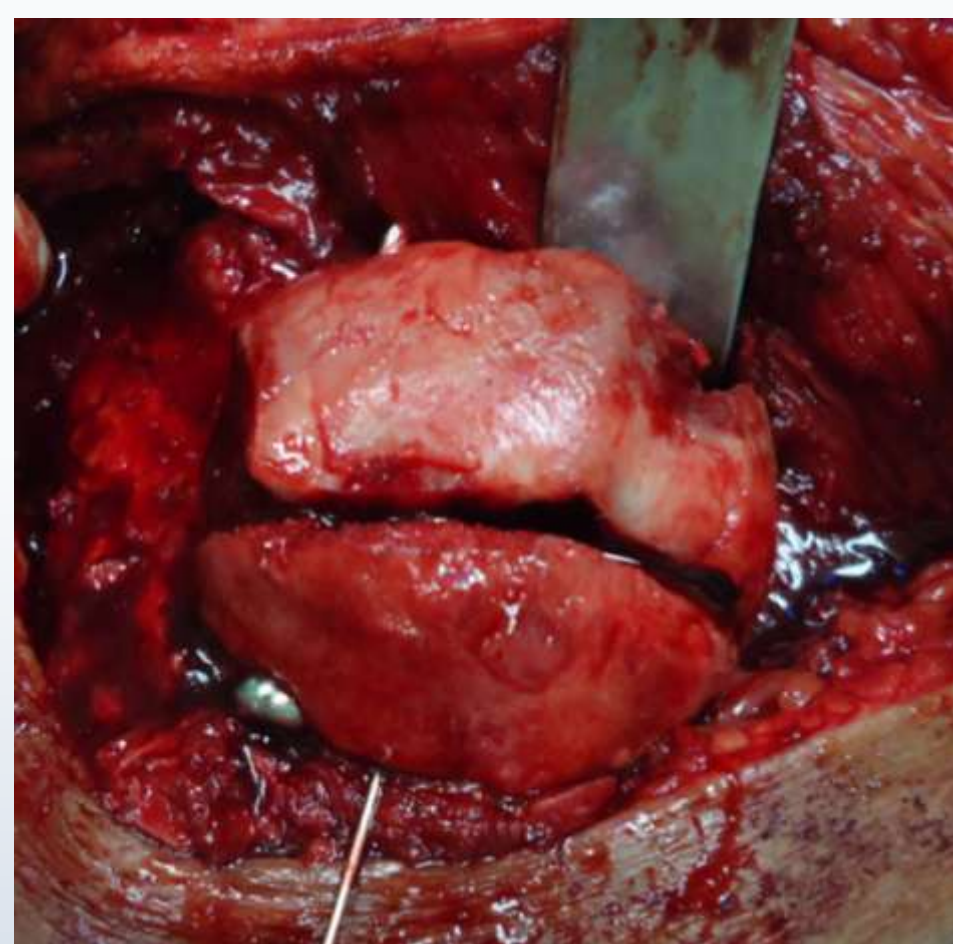


Central damaged portion resected. Adequate bleeding noted from the cut bony surfaces.

Reduced fragments

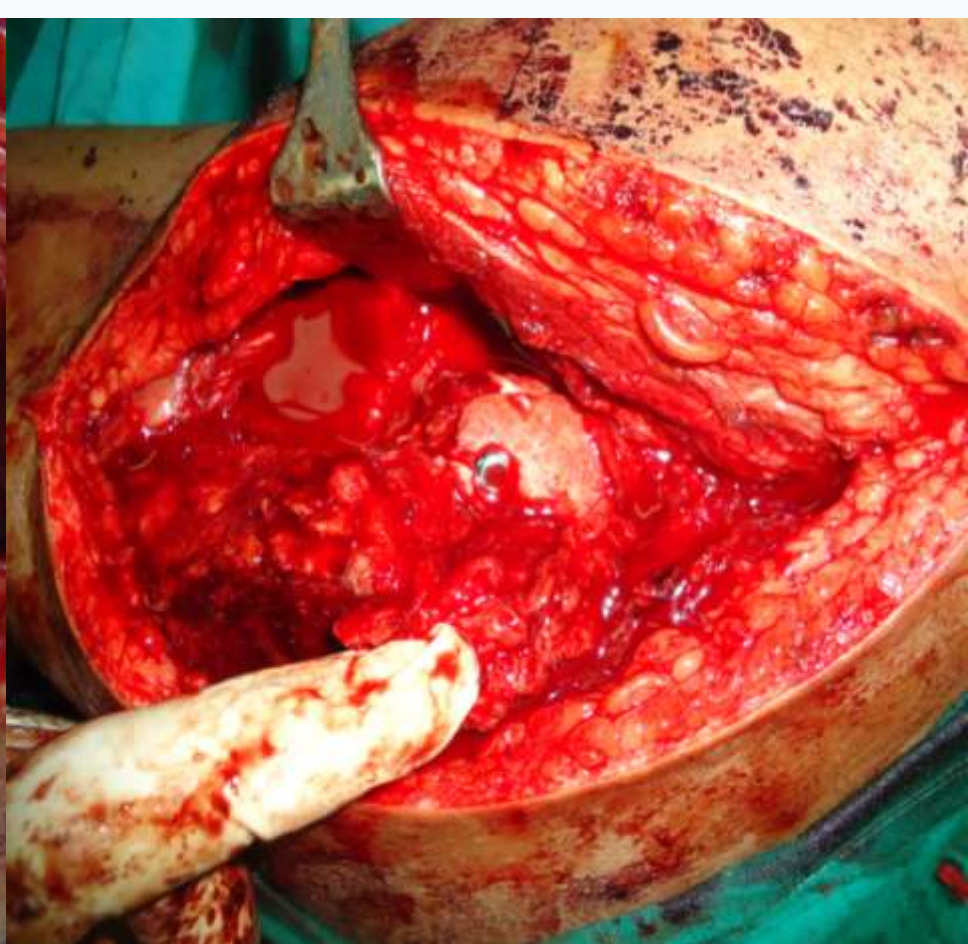


Lateral Fragment brought close to the medial large fragment. Contour was matched. Reasonably spherical shape was achieved.



Screws fixation

Head was fixed with screws and reduced. Had good Range of Motion after reduction into acetabulum.



Reduced femoral head

Imm. PostOp



Head shape was recreated as best as possible. Patient allowed to walk partial weight bearing.

2 yrs follow-up



At two years there is no sign of AVN. Head contour is maintained.



Minimal lurch is seen at one year. Adduction –Abduction are now free.
Rotations were last to resume after 9 months

HARRIS HIP SCORE >90



He has absolutely no pain in the hip and only has restricted External rotation and cannot sit cross legged. His hip score is well above 90 now.

AP Retroverted Hip



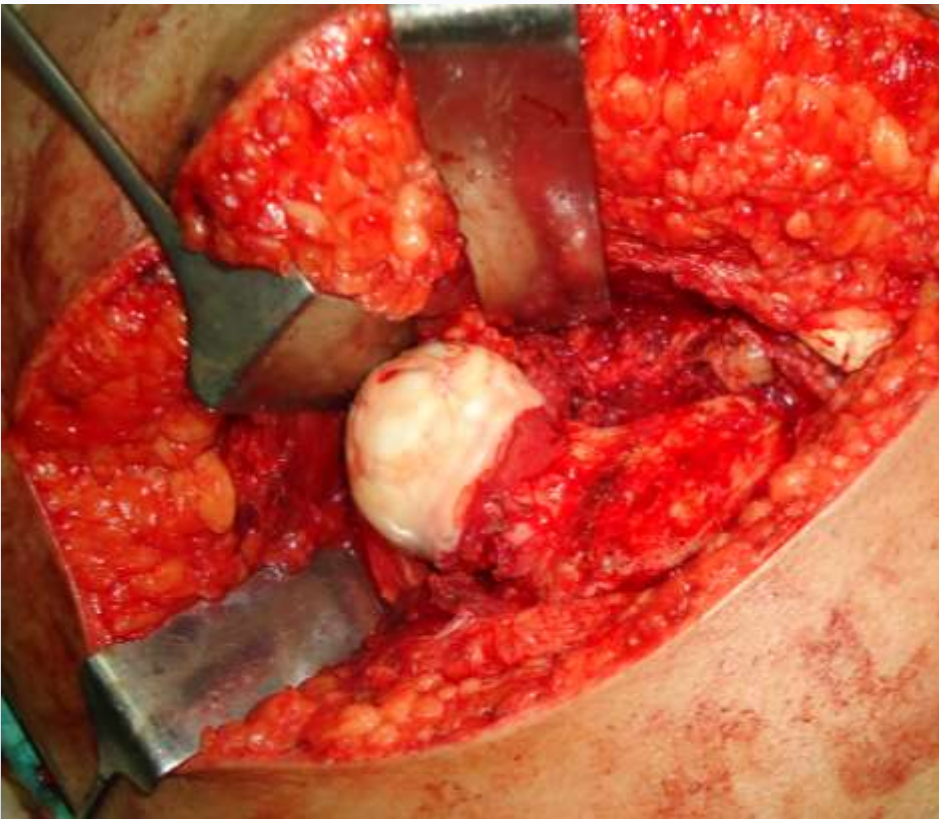
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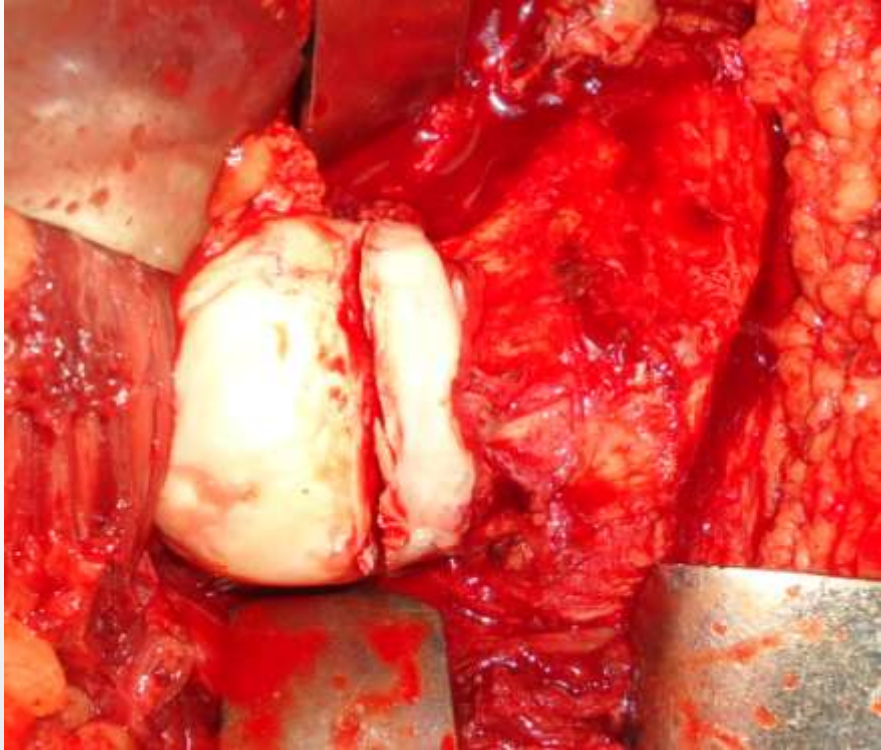
Cross table
- Lat

It is easy to diagnose Pincer Impingement caused by a retroverted hip on plain xrays. This hip has a combination of CAM and pincer impingement

Dislocated femoral head



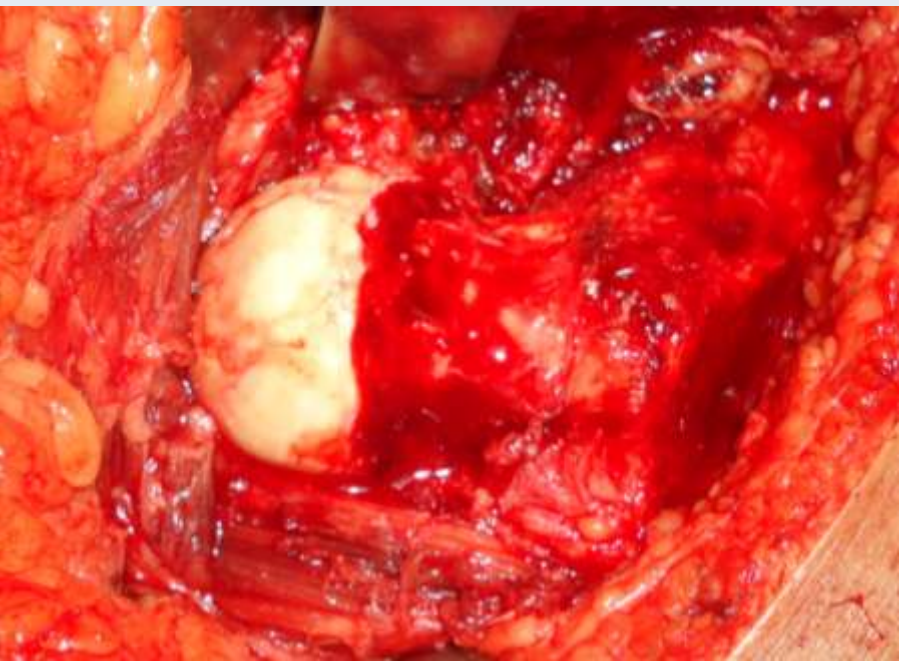
Loss of Femoral Head Neck offset is seen .



← Osteochondroplasty



Medial displacement osteotomy



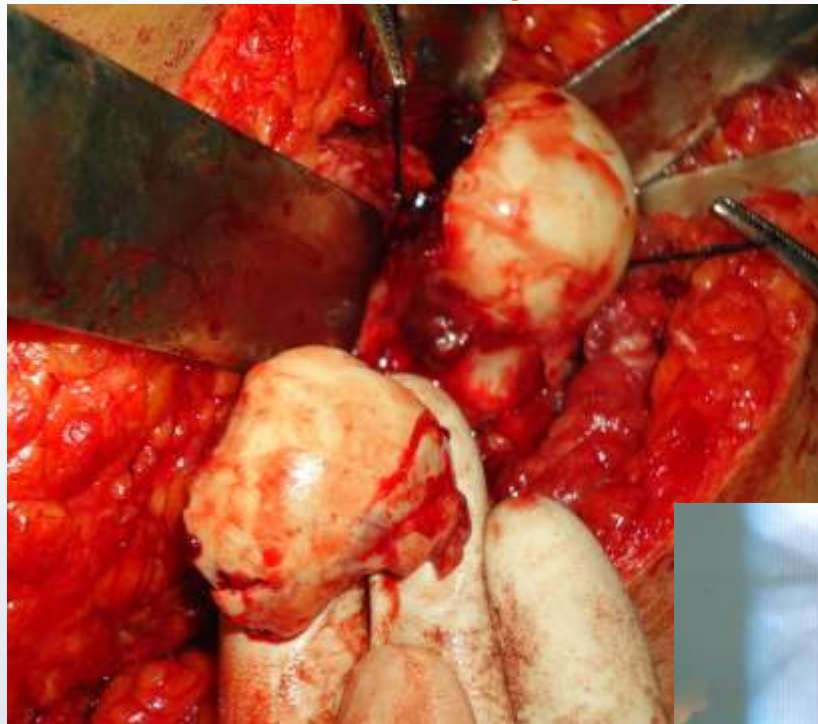
We performed a Osteochondroplasty with recreation of the Head Neck Offset and also performed a medial displacement osteotomy to reduce loads on the Hip. We should have performed a rim-trim but did not have the skills at that time.

No pain



She has no pain 3 years following surgery. She can sit cross legged.

Pipkin type II



We also used this approach to fix a Type II Pipkin # as it gave us an excellent reduction.

RESULTS

No AVN

No trochanteric NU

Hip ROM better in most.

Harris Hip Score - improved in all cases

Take Home Message

If patient does not want a THR

Safe surgical dislocation

 can improve the life of the Hip joint

Thank you