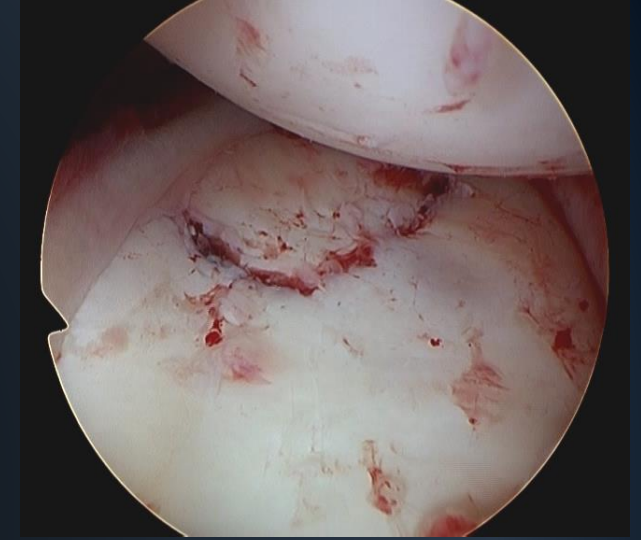


Role of Arthroscopy

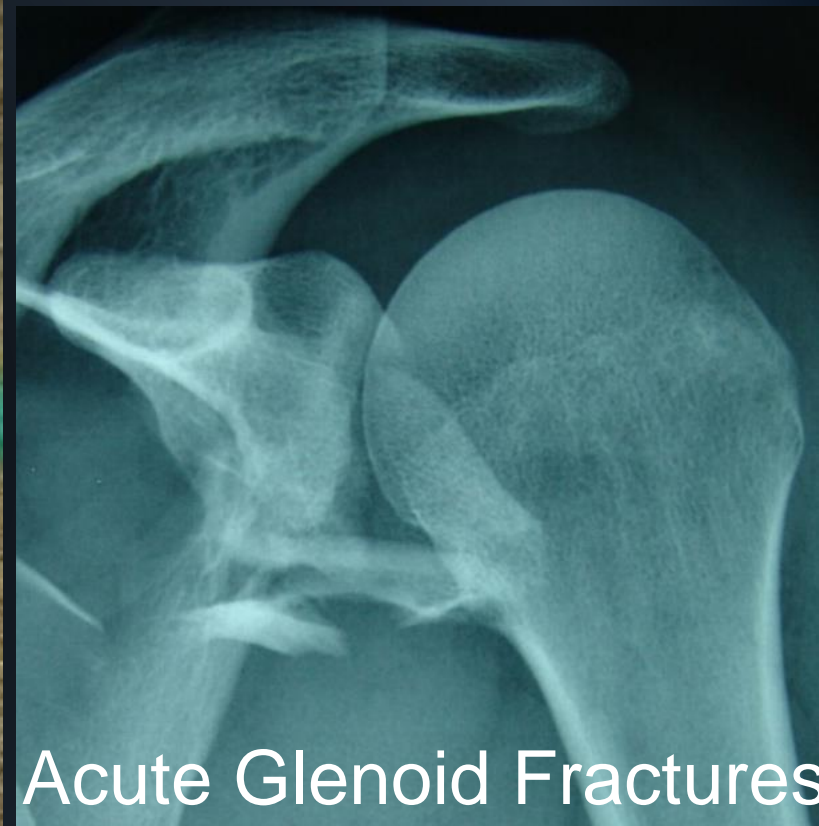
for

Treatment of Acute Displaced Glenoid Fractures



Guillaume Herzberg, Marion Burnier, Lyliane Ly, Louis Ducharme,
LYON, France

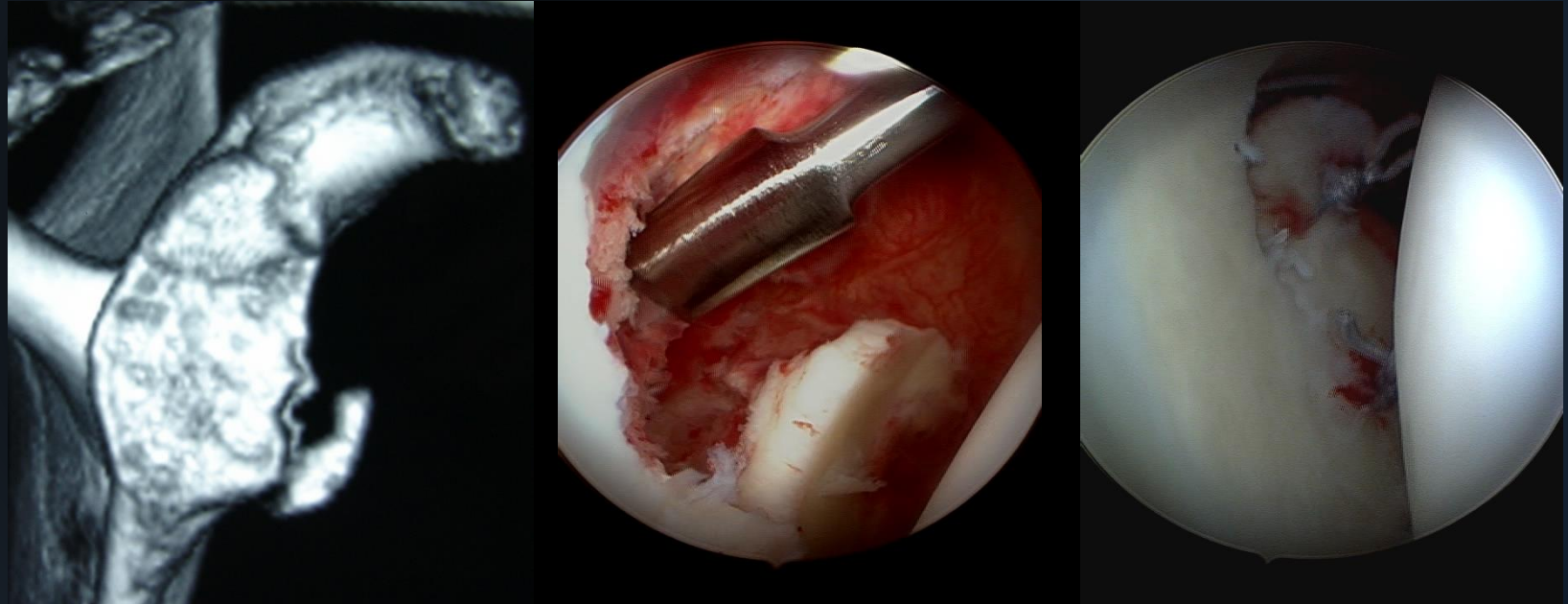




Acute Glenoid Fractures
are Rare, Severe
High-Energy Injuries

Arthroscopy for Large Acute Glenoid Fractures: Relatively Recent, mostly for Rim Fractures

Cameron	1998
Perez Carro	1999
Porcellini	2002
Schneider	2003
Gigante	2003
Sugaya	2005
Bauer-Hardy	2006
Tauber	2007
Scheibel	2008
Millett	2009
Scheibel	2016
Seidl	2020
Park	2023

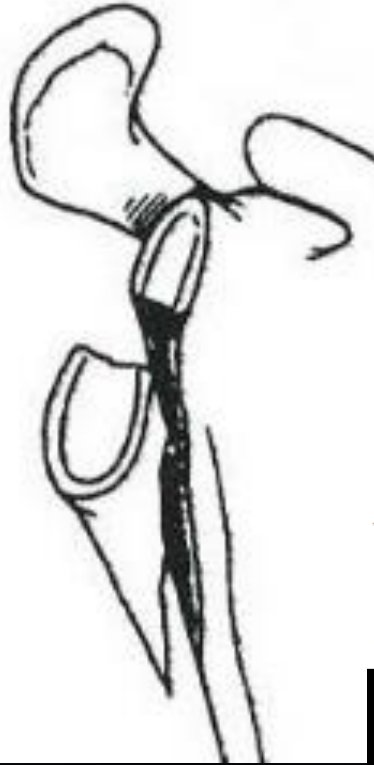
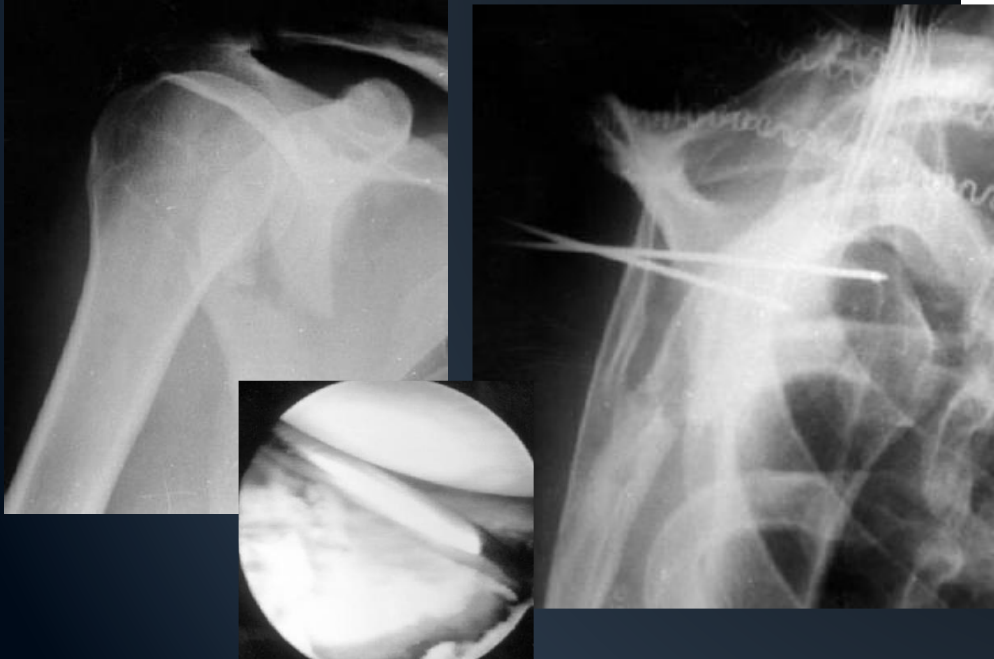


Anecdotal Reports on Arthroscopically-Assisted Treatment Of Glenoid Fossa Fractures

1999

Arthroscopic-Assisted Reduction and Percutaneous External
Fixation of a Displaced Intra-articular Glenoid Fracture

L. Perez Carro, M.D., Ph.D., M. Perez Nuñez, M.D., Ph.D., and J. I. Echevarria Llata, M.D.



2015

Arthroscopic Reduction and Internal Fixation of an
Inferior Glenoid Fracture With Scapular Extension

Jeffrey M. Tuman, M.D., Julius A. Bishop, M.D., and Geoffrey D. Abrams, M.D.



Purpose

To Report our Experience with
Arthroscopic and Arthroscopic-Assisted Treatment
of Acute Displaced Glenoid Fractures (Rim and Fossa)
Using a Modified Goss Classification System

Methods

Modified Goss Classification

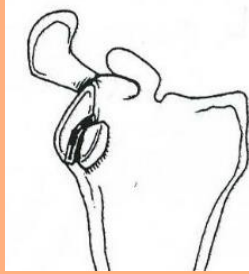
2008 – 2023

25 Acute
Glenoid Fractures
(23 Male)
Treated with
Arthroscopy
(Lateral Decubitus)
1 Surgeon

11

Type 1
Glenoid Rim

a

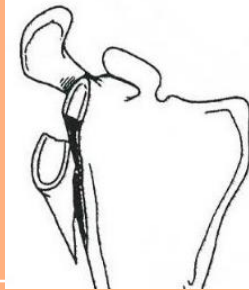


Arthroscopic Fixation (Anchors)

12

Type 2
Lower
Glenoid

a

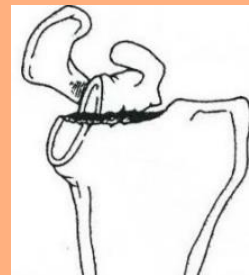


Arthroscopic-Assisted
Fixation (Hardware)

2

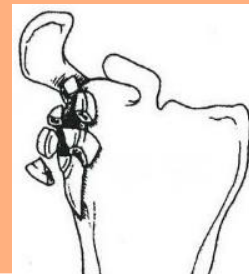
Type 3
Upper
Glenoid

a



Arthroscopic Fixation (Screws)

Type 4
Comminuted



Results

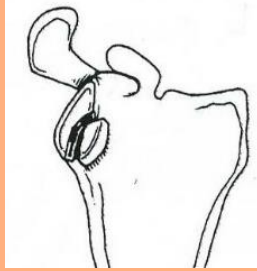
Average Clinical & Radiological F-Up
36 Months In 20 Patients
Pre & Post-operative CT Scan in All

(5 Lost to Follow-up)

7

Type 1
Glenoid Rim

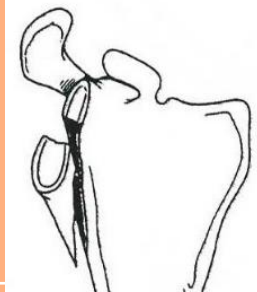
a



11

Type 2
Lower
Glenoid

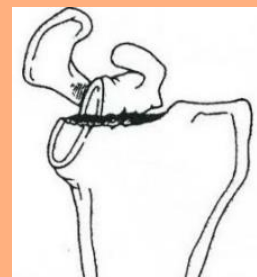
a



2

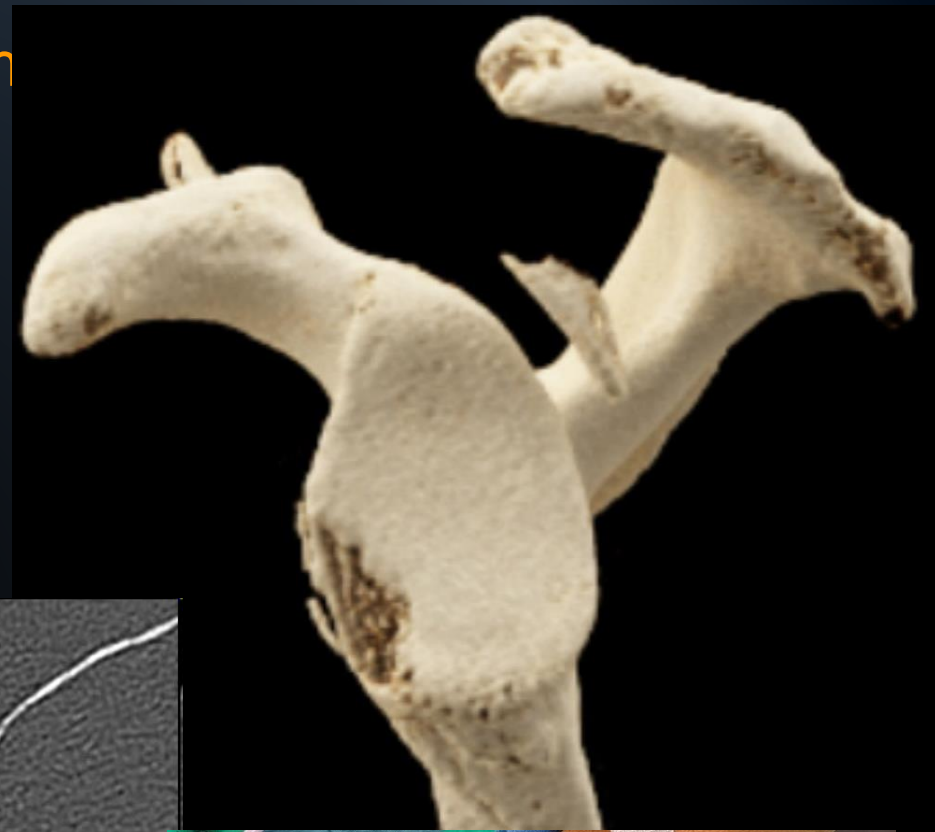
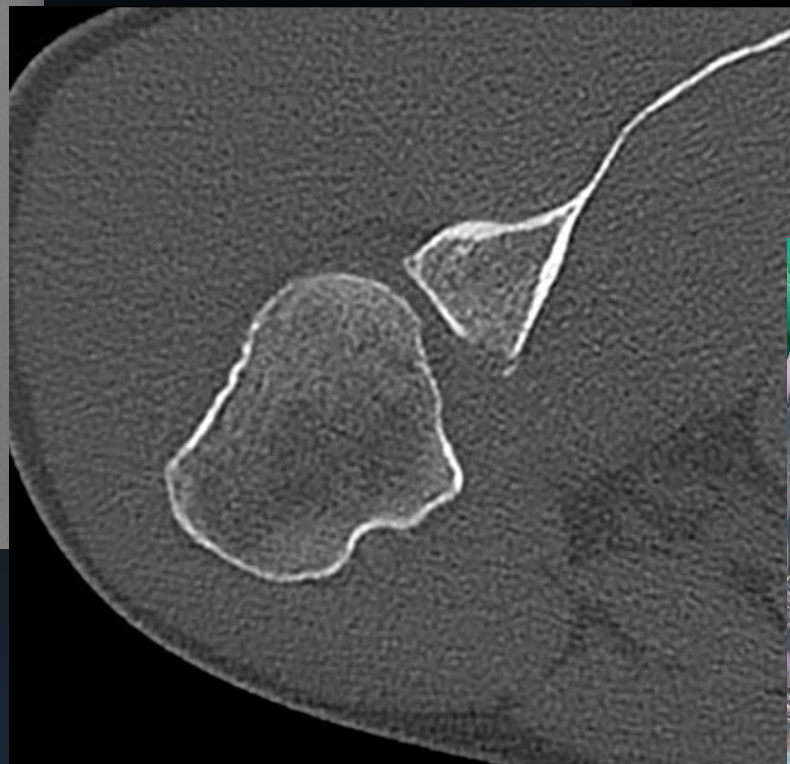
Type 3
Upper
Glenoid

a



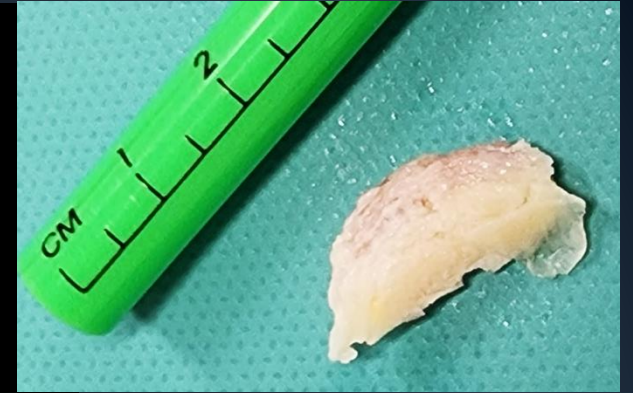
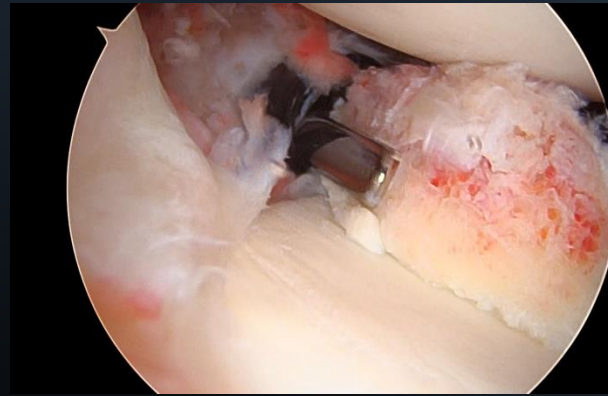
No Intra-operative Complications, 2 Capsulitis
Mean VAS pain 1/10
Mean Active AAE, ER1, IR1 77% of Contralateral
Step-off / Gap
from 10 / 12 mm Preop to 1 / 1 mm Postop
All Glenoid Fragments Healed

Example 1 Anterior Rim #: 36 y old male Fell from
Self Reduced LT Anterior Fx-Dislocation
Enucleated Glenoid Rim Fracture

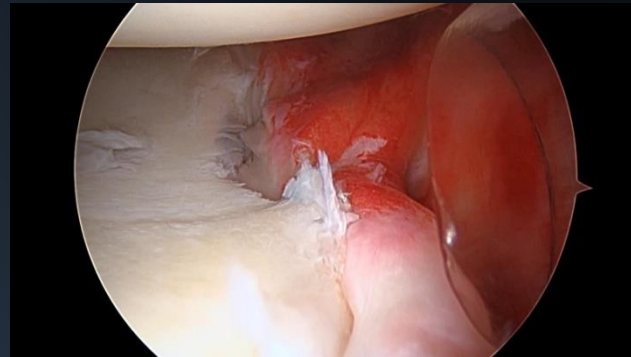
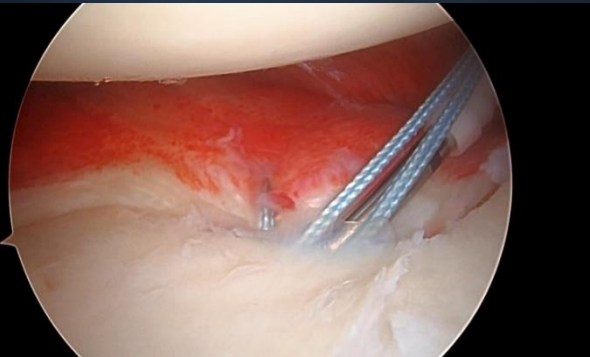
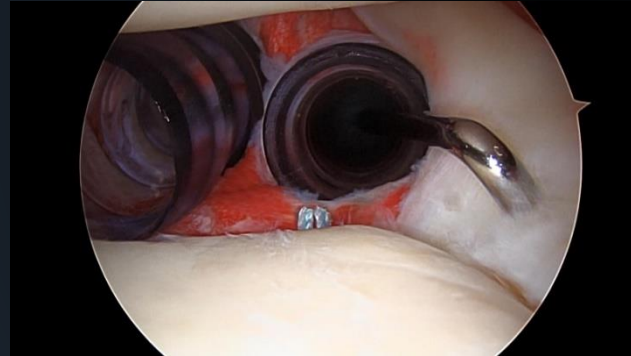
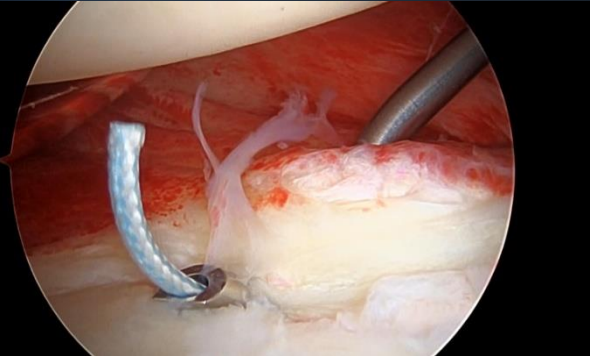




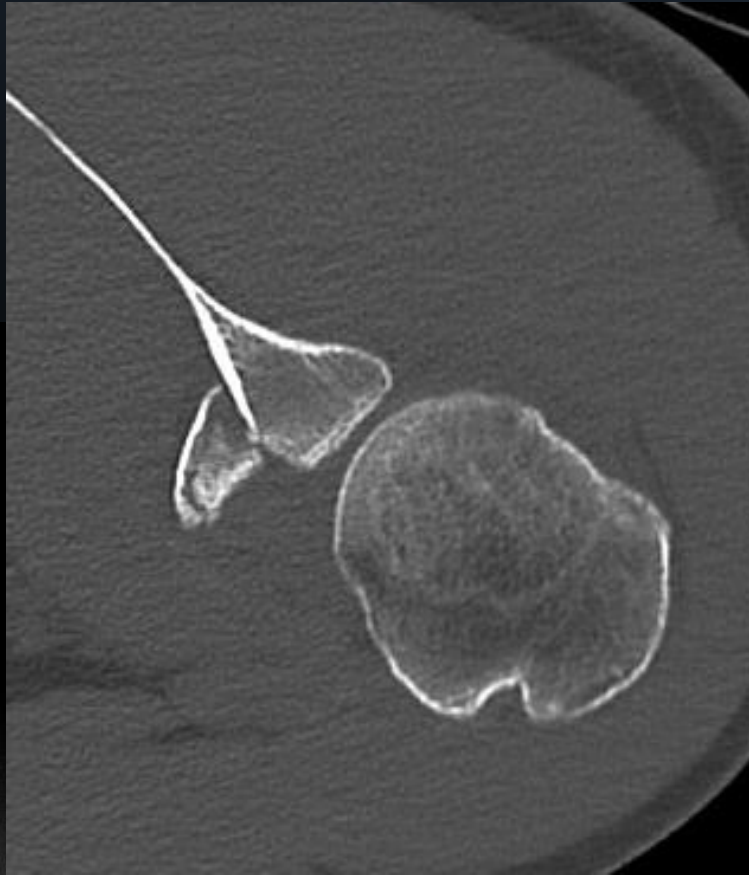
All Arthroscopic:
Fragment Removal
Bankart Labrum Reinsertion

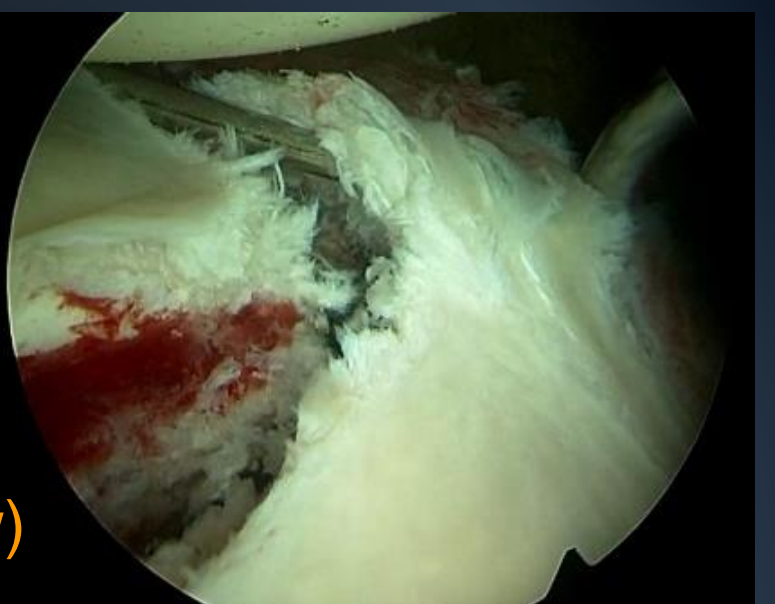
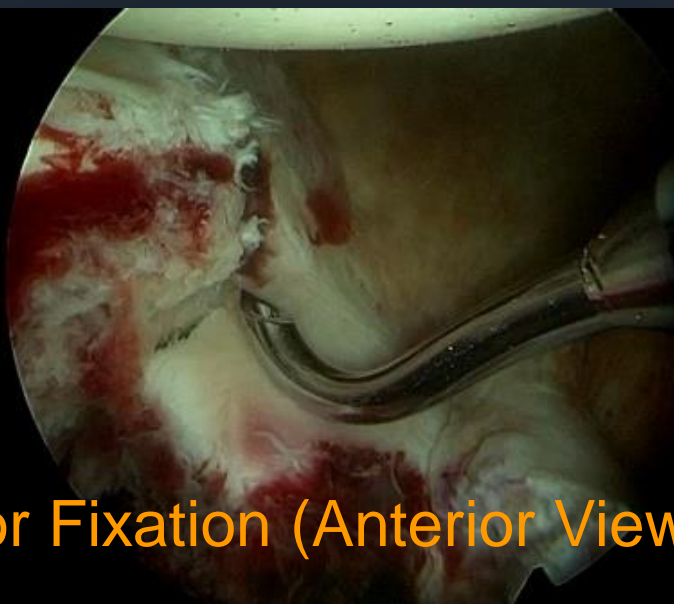


Excellent Clinical Result,
At 1 year
No anterior Instability

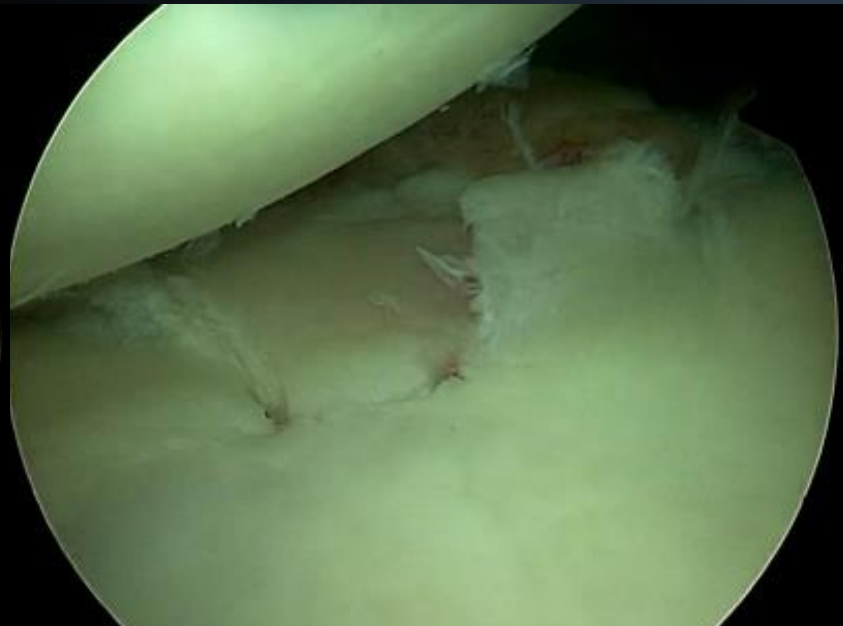
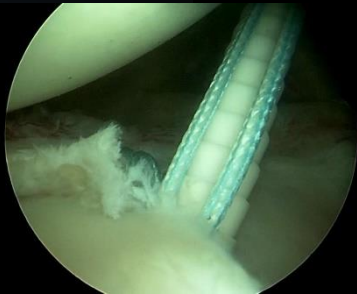
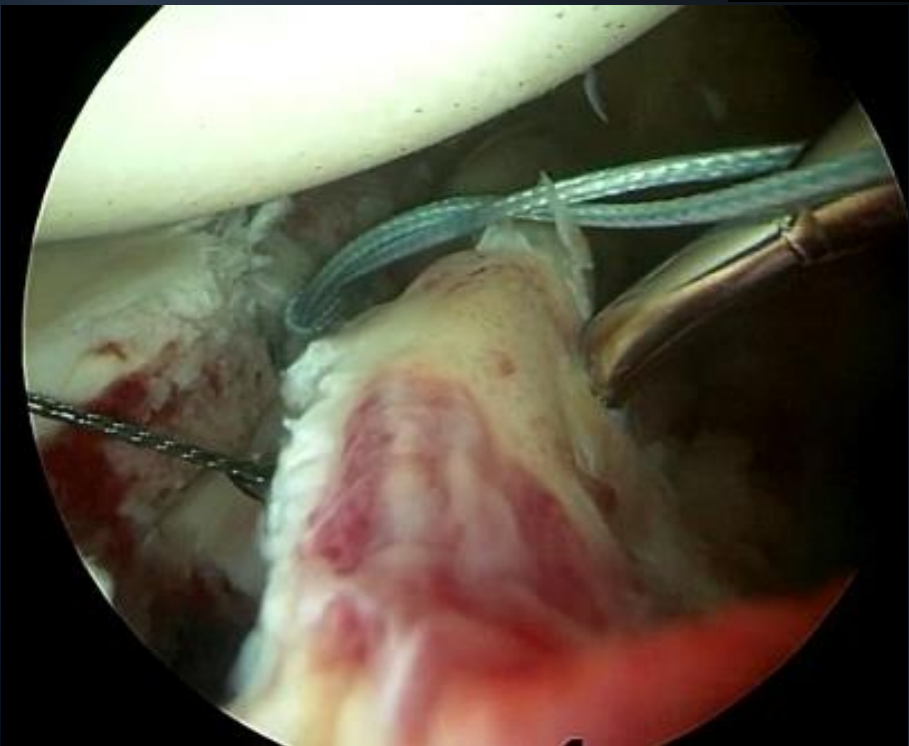


Example 2 Anterior Rim #: : 24 y old male Fell from a 2m height
Reduced LT Anterior Fx-Dislocation
Large Displaced Glenoid Rim Fragment





Anchor Fixation (Anterior View)

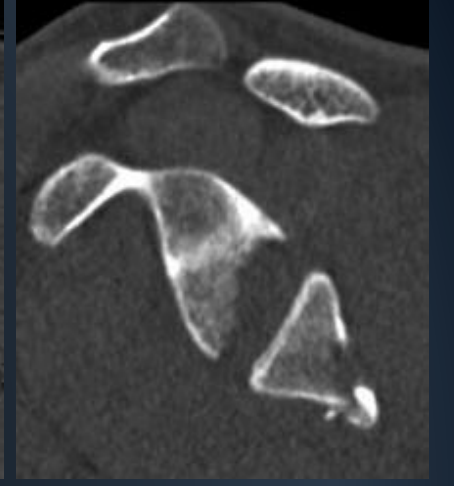
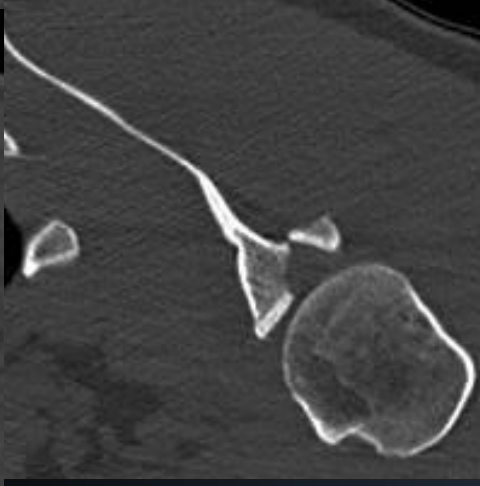
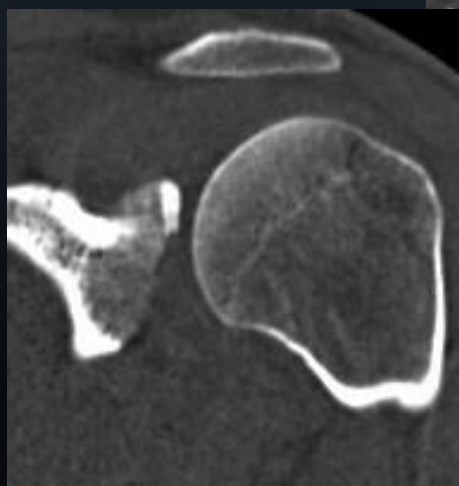


Final Aspect from (Posterior View)

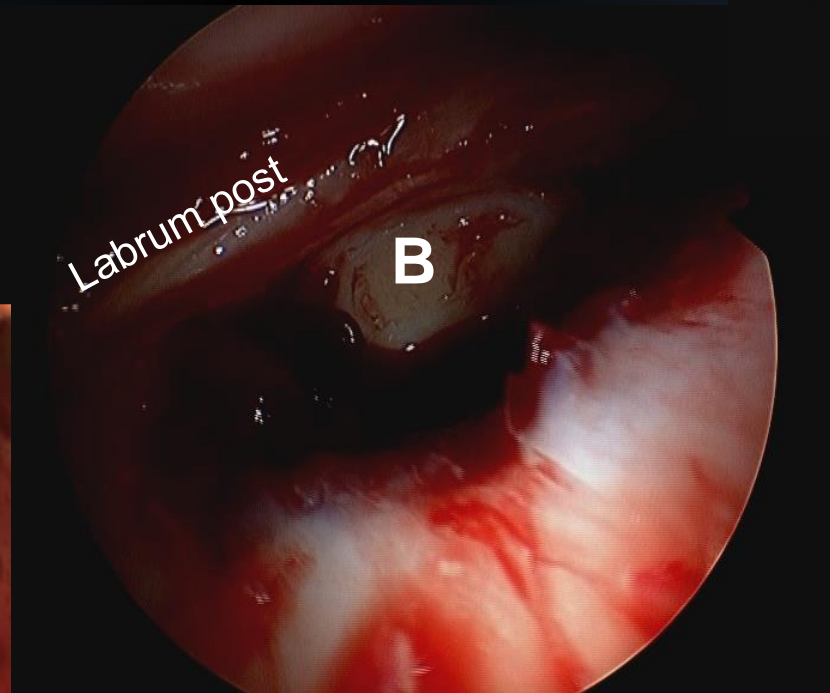
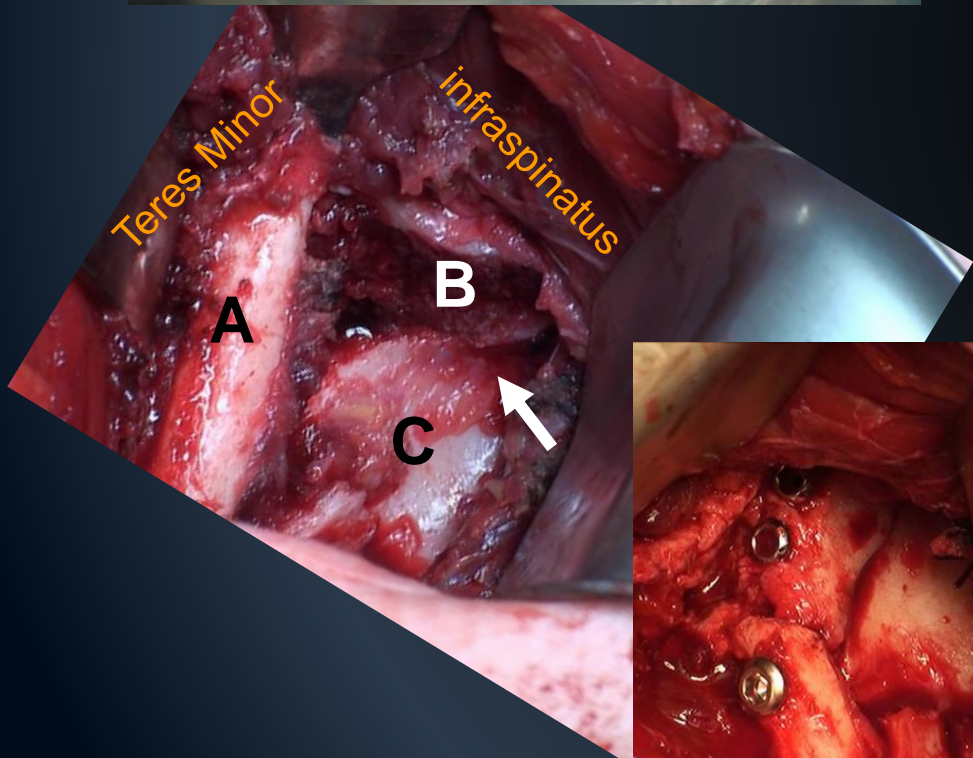
Excellent Clinical Result,
At 6months
No anterior Instability

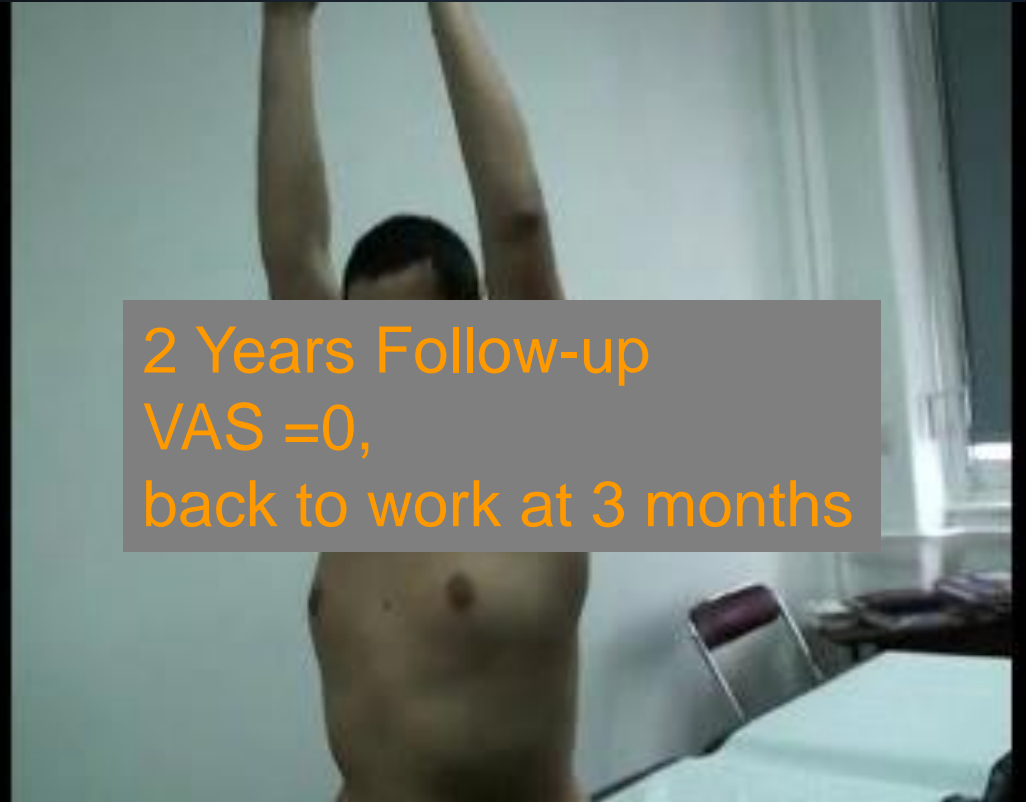
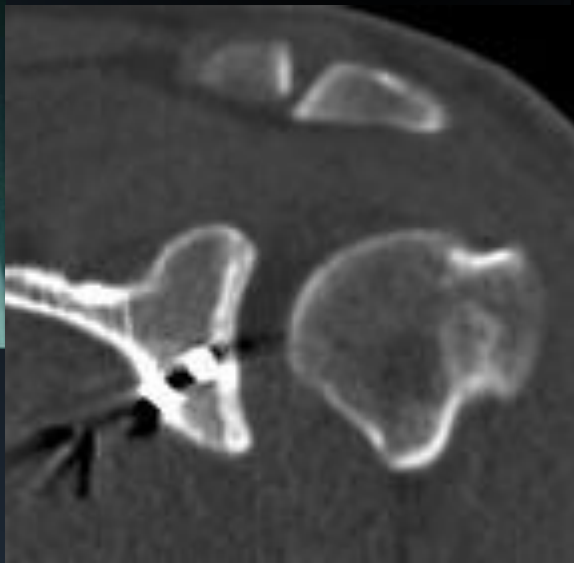
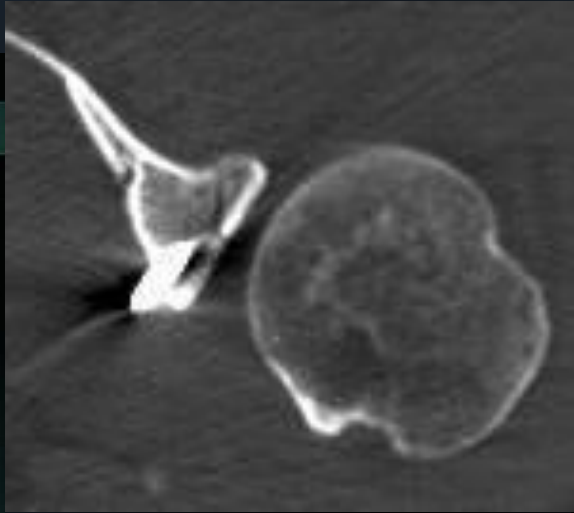
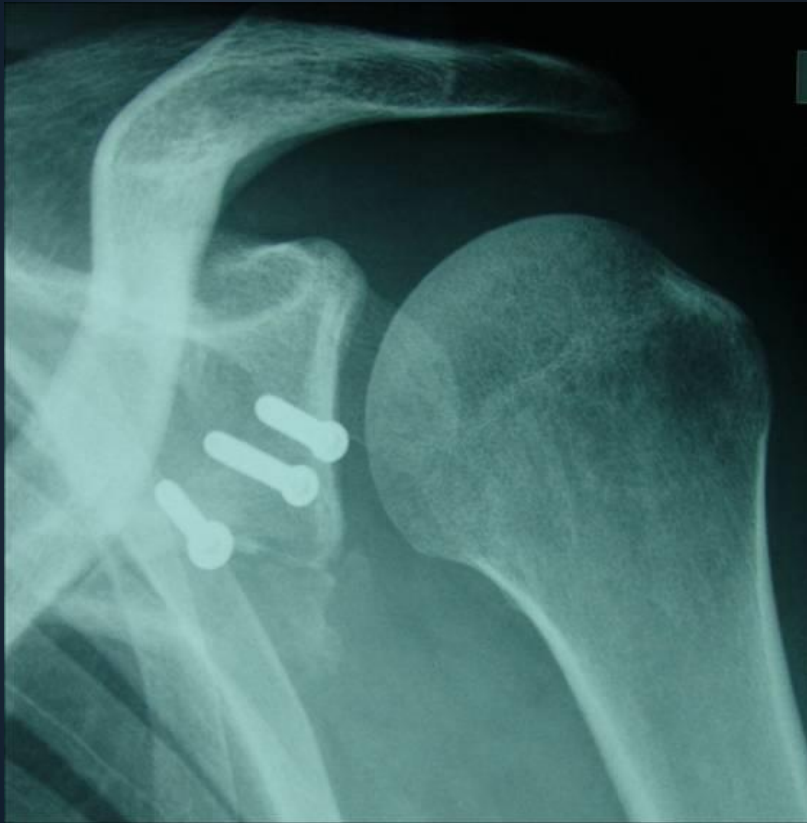


Example 3 Glenoid Fossa #: : 28 y old male High Energy Motorbike Accident
Large Displaced Glenoid Fossa Fracture



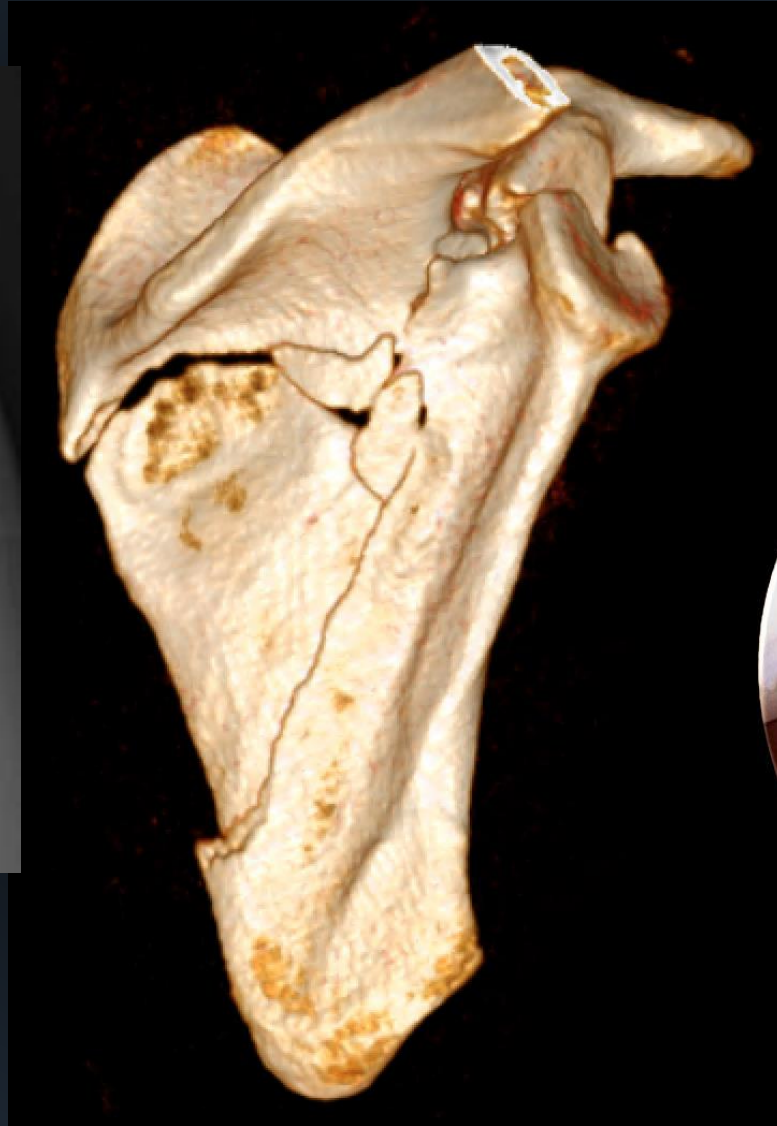
Combined Mini-open fixation under Arthroscopic Assistance

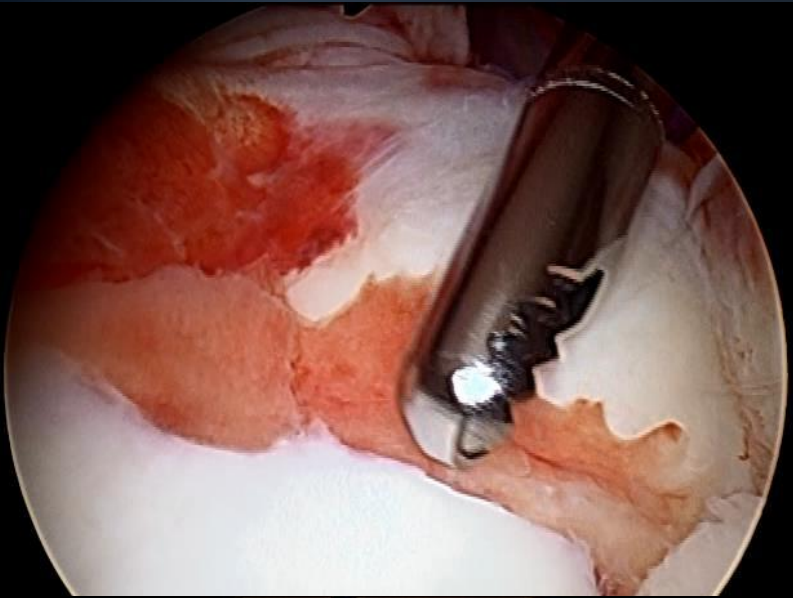




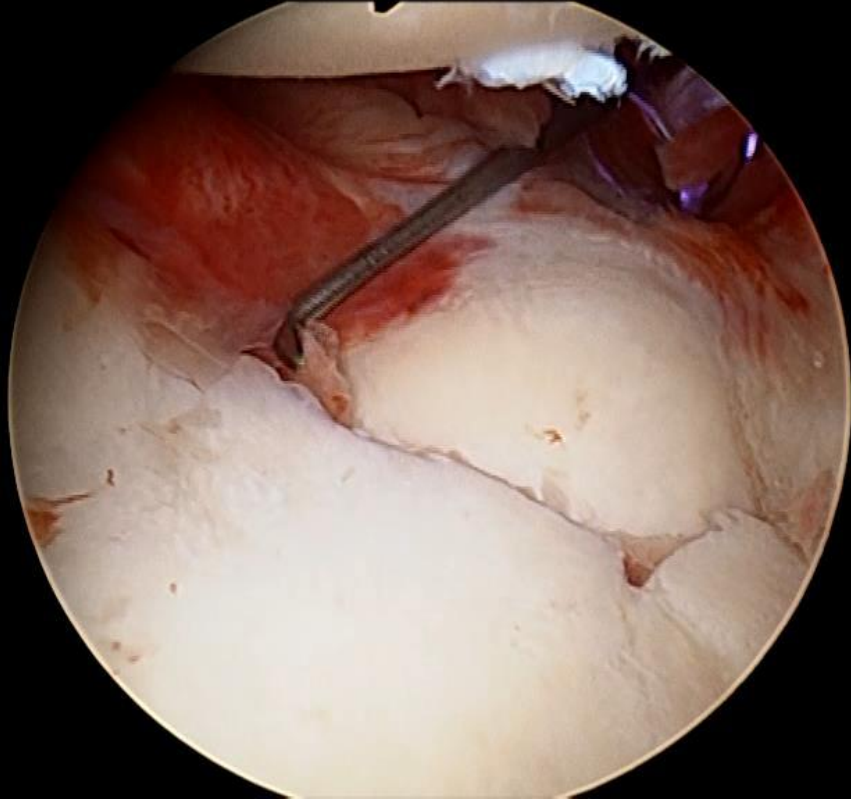
2 Years Follow-up
VAS =0,
back to work at 3 months

Example 4 Upper Glenoid #: 43 y old male Sooter High Energy Accident





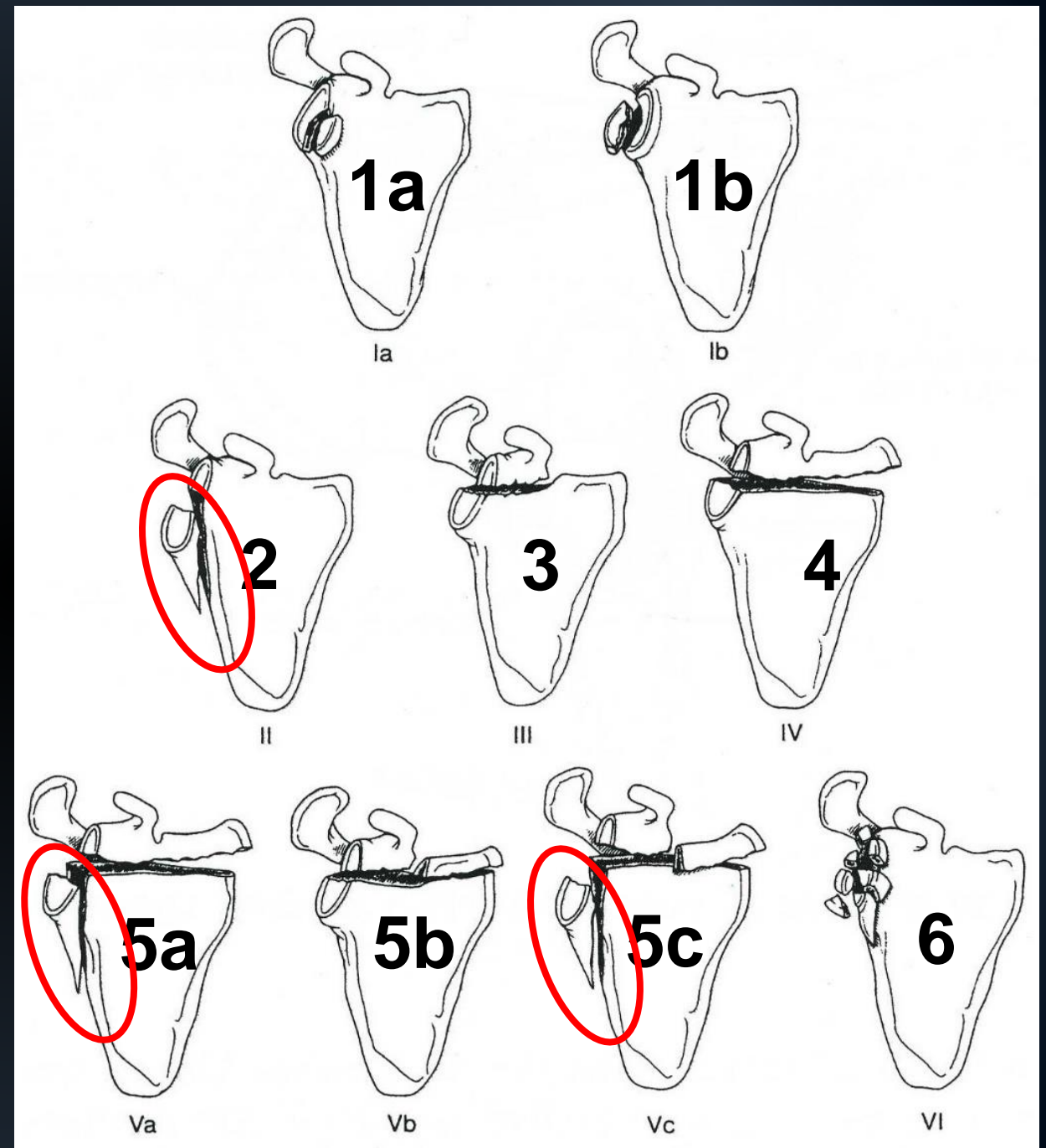
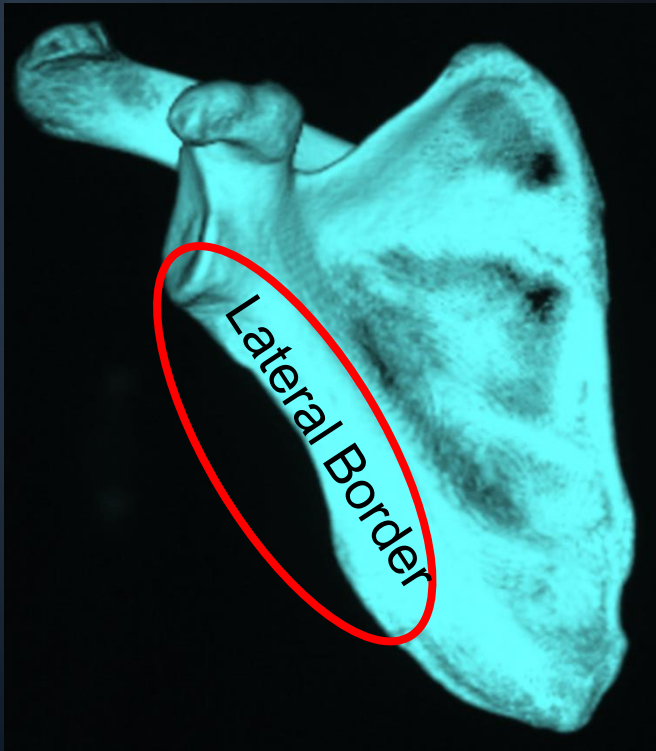
Good Clinical / XR Result at 1 year,
After Screws Removal






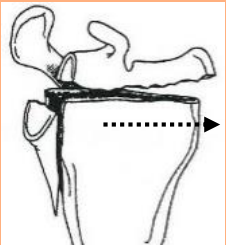
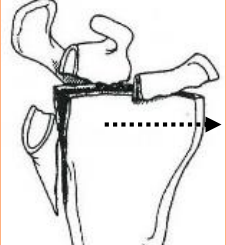
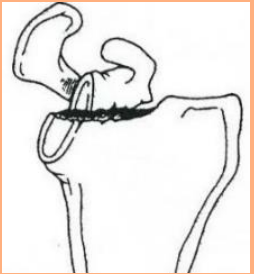
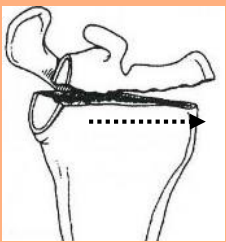
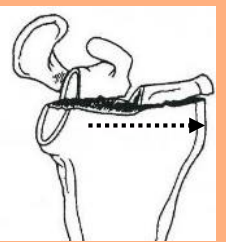
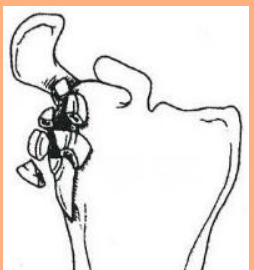
Discussion

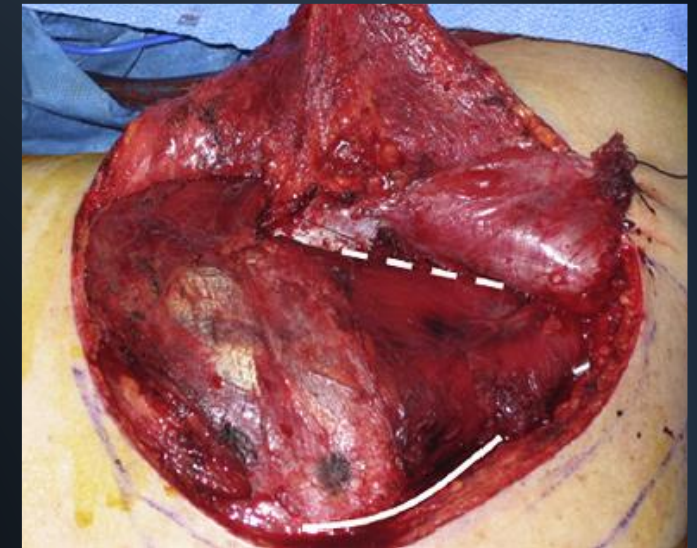
Goss Classification 1995: Gold Standard

However Inferior Glenoid & Lateral Border of Scapula are in Both « 2 » and « 5 » Types



We Propose a Modified Goss Classification

Type 1 Glenoid Rim	a 	b 	
Type 2 Lower Glenoid	a 	b 	c 
Type 3 Upper Glenoid	a 	b 	c 
Type 4 Comminuted			



And Highlight the Usefulness
Of Arthroscopic Treatment
Vs Classic Open Management
Even in Glenoid Fossa Fractures



Conclusions

Arthroscopic and Arthroscopic-Assisted Treatment
of Acute Displaced Glenoid Fractures (Rim and Fossa)

Using a Modified Goss Classification System

Is a Viable and Efficient Alternative to Classic Open Treatments