

High Tibial Osteotomy using mini External Fixation Device Salamehfix 3

Ghassan Salameh , MD, Ph.D.

Tartous Syria

Salamehfix Limb Lengthening &
Reconstruction Center.

Michael Schmidt MD

Frankfurt Germany

Disclosure

- ▶ The authors declare no conflict of interest

Introduction

Increasing medial articular cartilage stress may develop arthritis and HTO is effective way and traditional procedures using opening wedge osteotomy may cause:

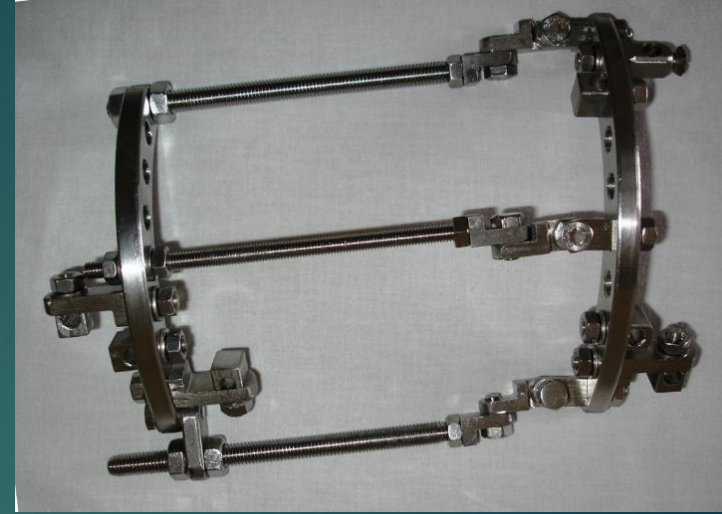
nonunion ,lengthen leg , need longer healing time , loose of correction due to unstable fixation and increase posterior tibial slope.

Lateral closing wedge; require proximal tibiofibular joint release ; may cause neurovascular complications and shortening makes knee replacement unaffordable .

These procedures change patellar height .

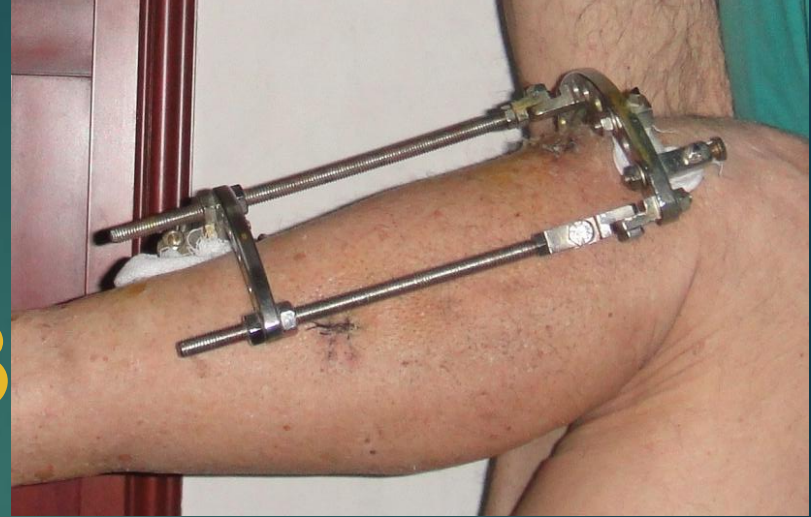
For these reasons I modified Mini External fixation device Salamehfix 3, which avoid previous complications .

Advantages Ex. Fix. Salamehfix 3



- ▶ 1- It's a three dimension external fixation system with two arcs and hinged rods allows angular deformity correction .
- ▶ 2- possibility of lateral angulation translation of proximal tibia achieving 3- 5 degrees valgus over correction during surgery and after.
- ▶ 4- It works as Minimal invasive surgery

Advantages of Hinged Ex. Fix; Salamehfix 3

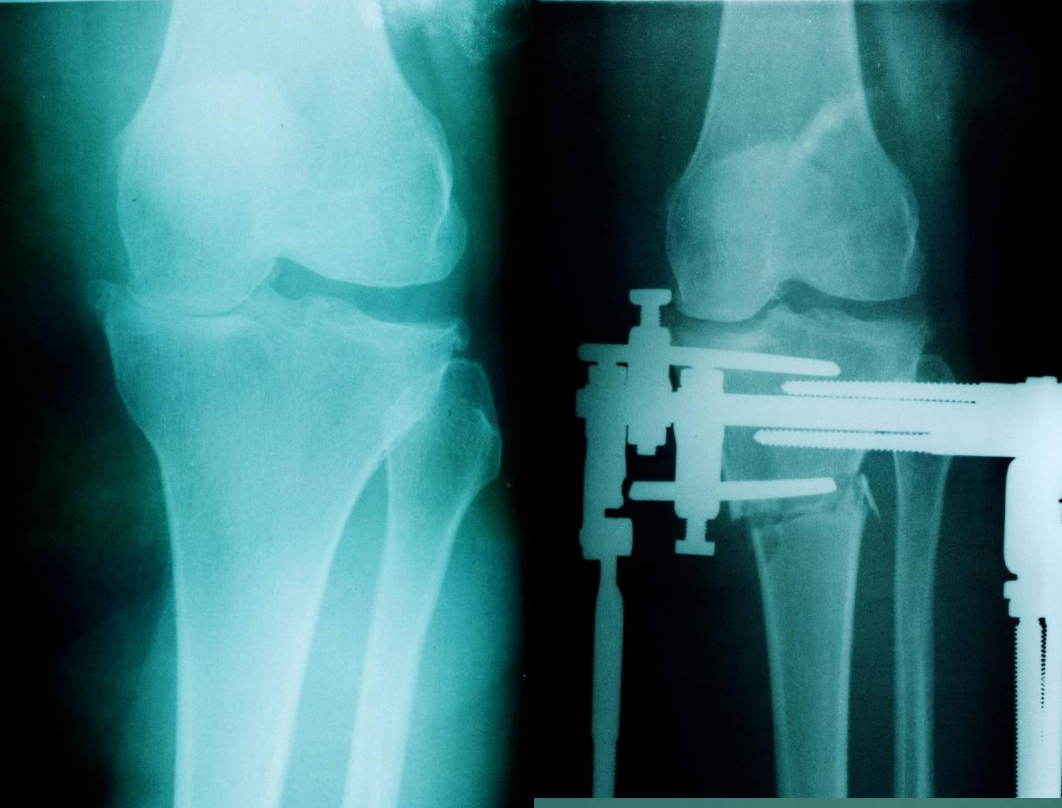


- ▶ 5- allows early weight bearing and exercising after surgery .
- ▶ 6- Possibility of correction even severe bowing with Gon arthroses.
- ▶ 7 – It dose not affect patella infera or alta since the osteotomy distal tibial tuberosity.

Materials Methods

FROM 2001 TO 2022, 67 PATIENTS ,94 KNEES
WHERE OPERATED WITH MEDIAL GON
ARTHROSES ,

FOLLOW UP TO 9 YEARS,. FLEXION
CONTRACTURE $\leq 10^\circ$,57 WOMEN AND 10 MEN ,
MEAN AGE 58 YRS. (39 TO 76) UNDERWENT
DOME SHAPED OSTEOTOMY AND MINI
EXTERNAL FIXATION . THE MEAN FOLLOW UP
34.2 MONTHS (12.0 TO 120.0)

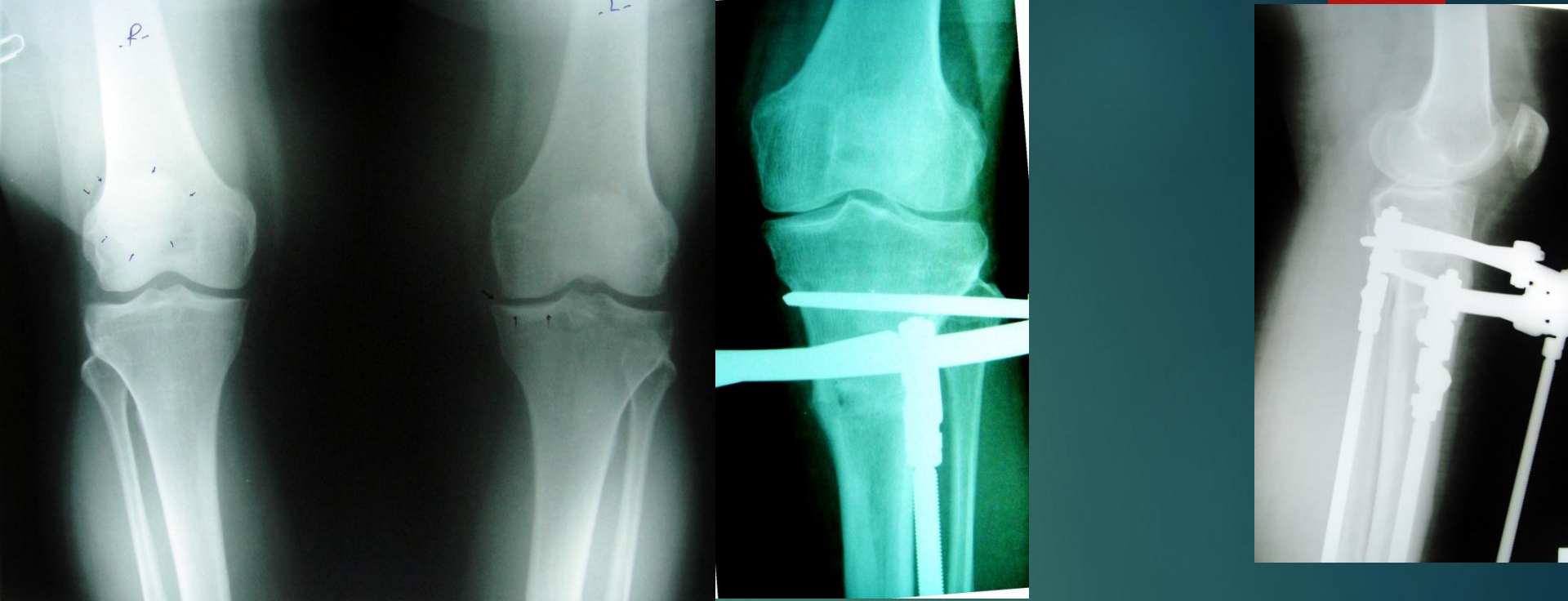


Fifty-five-Year-old Woman with Gonarthrosis and Genuvarum

Ghassan Salameh MD PhD, www.len.sdf.com

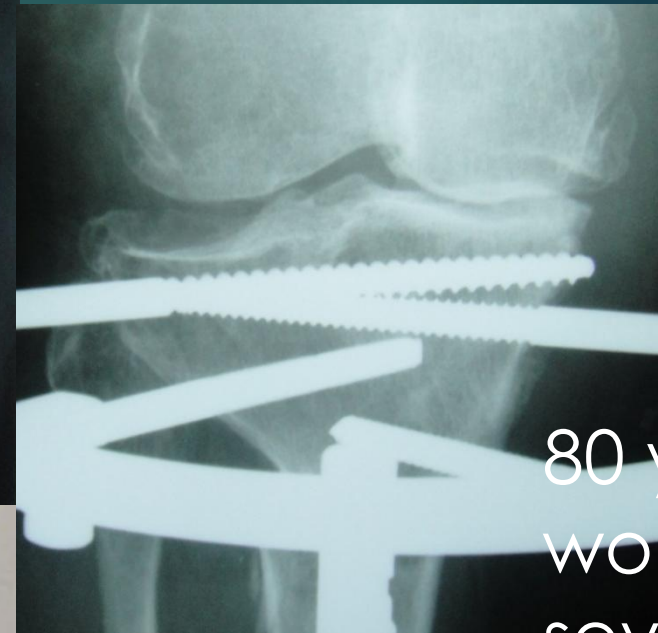
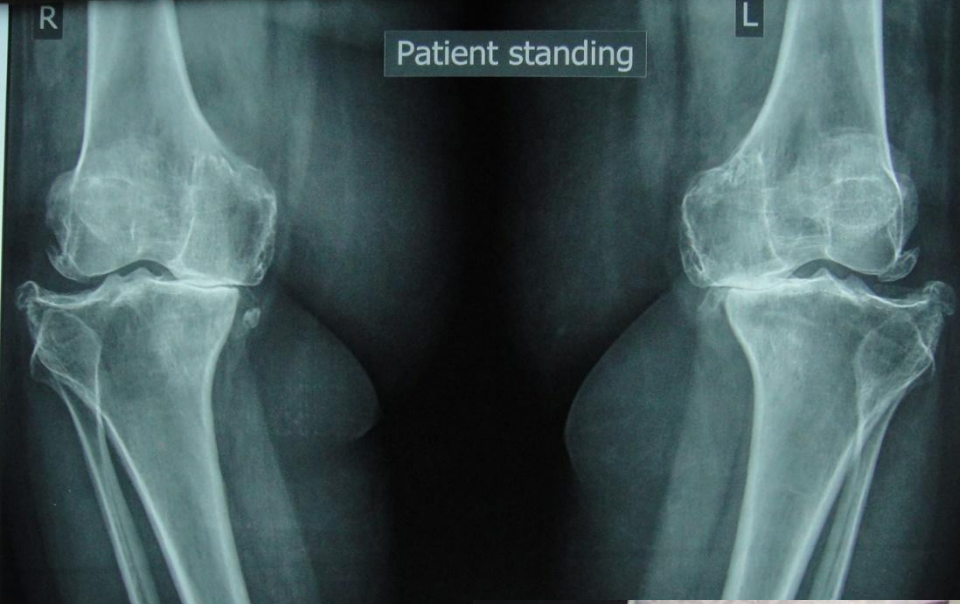
Performing lateral Angulation Translation with over correction
Medial space is widen leading to decrease pressure on medial joint side, decrease pain and improve motion



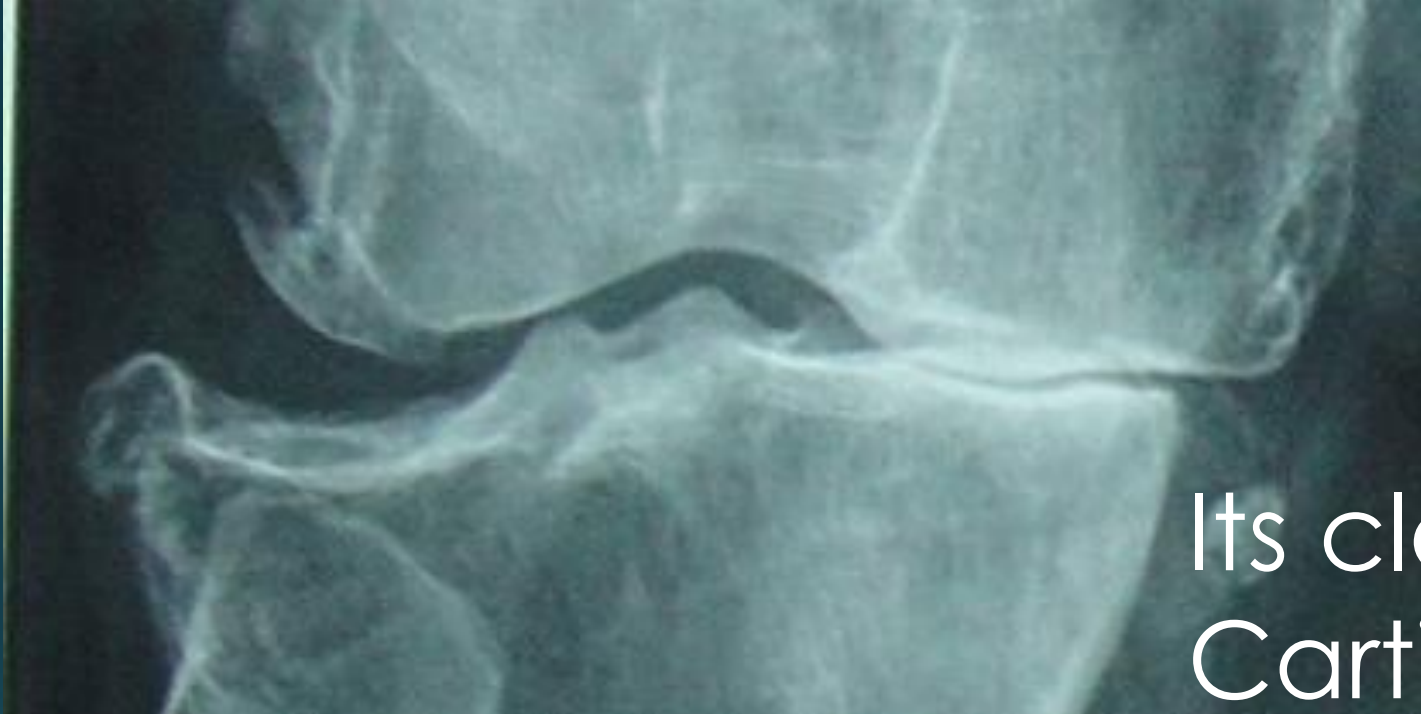


Woman 62 yrs. old , medial
Gon arthroses , performing
angulation translation with
over correction 3 degrees
improving joint medial space



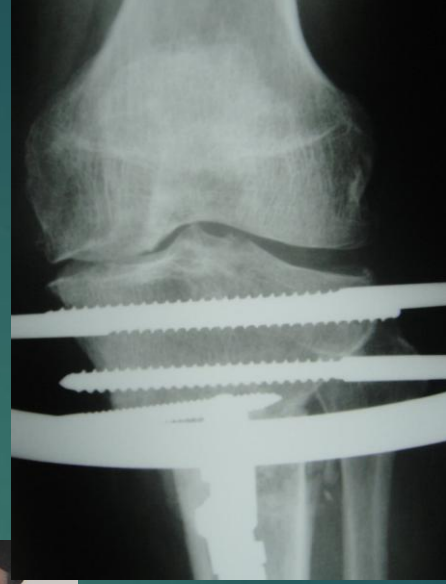


80 yrs. old
woman
severe
Gon
arthroses.
Lateral
angulation
translation
and over
correction



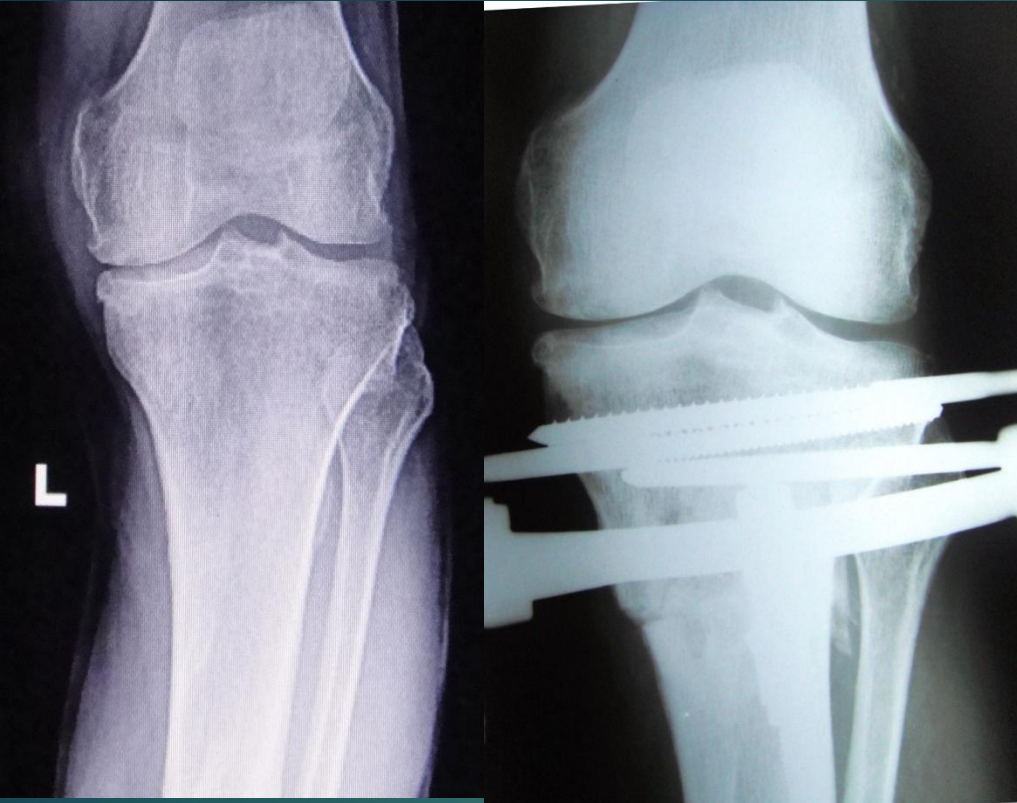
Its clear
Cartilage
regeneration
improvement



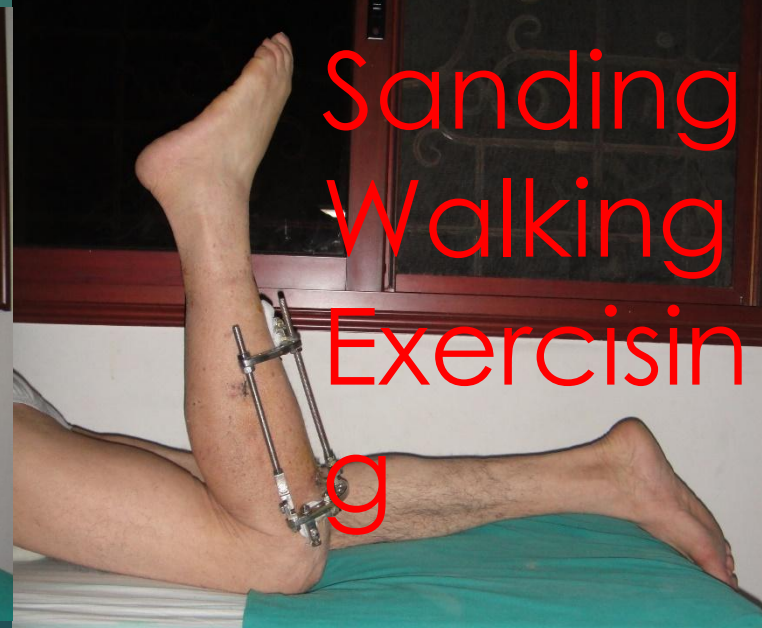


76
yrs.
old
man





73 yrs. Old
man, medial
Gon arthroses
angulation
translation



Sanding
Walking
Exercisin
g

Clinical outcomes

- ▶ Improved knee function , reduced pain and improving mobility, patients could make exercising and partial weight bearing second day after surgery .at two months partial screws removal , full weight bearing and at three months complete fixator removal
- ▶ Satisfying results , more than 10 yrs. survival rates In 63 %
- ▶ Complications where mostly superficial infection treated locally , 2 patients required arthroplasty after 5 yrs.
Some patients after 10 yrs.

Conclusions

- ▶ HTO is a procedure is effective using Mini Ex, Fix. /Salamehfix /, improving knee function ,decreasing pain and increasing cartilage regeneration .
- ▶ successful outcome of HTO can be maintained for more than 8 to 10 years delaying the need for conversion to TKA. HTO should be recommended treatment of medial knee degenerative arthritis.

► Thank You

