

**Mini external fixator  
for**

**Bone lengthening  
IN  
correction of hand and forearm deformities  
to  
improve the Hand-function**

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**Alrazi hospital  
Kuwait**

Mini fixateur externe  
pour

**Allongement osseux en correction des déformations  
de la main et de l'avant-bras  
pour  
améliorer la fonction de la main**

**Dr. fouad Asal  
Hôpital d'Alrazi  
Koweit**

We present the results of Different causes of  
post-traumatic and congenital deformities  
after bone lengthening

Nous présentons les résultats de  
Différentes causes de déformations  
post-traumatiques et congénitales  
après allongement osseux

Using a simple mini external fixator

Designed by hand surgeon's -Alrazi hospital Kuwait  
And  
manufactured by KISR

Utilisation d'un simple mini fixateur externe



Using a simple mini external fixator

Conçu par le chirurgien de la main - Hôpital Alrazi Koweït

Et

fabriqué Pa

**KISR**



Lt.




Rt.

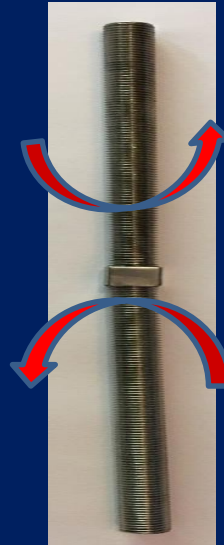
*The device consists of right hand and left hand threaded coupler screw.*





*On each sides there are pins carriers when rotating the coupler screw with clockwise or against.*

# Rotation de la vis autour de son axe conduira à

  
*compression*  

  
*distraction*  


Rotation of the screw around its axis  
*will lead to*



**distraction pour allongement  
(avec double effet de distraction)**



*distraction for lengthening*  
**(with double distraction effect)**

**compression pour accélérer  
la cicatrisation osseuse  
(avec double effet de compression)**



***compression to accelerate the bone  
healing***

**(with double *compression* effect)**

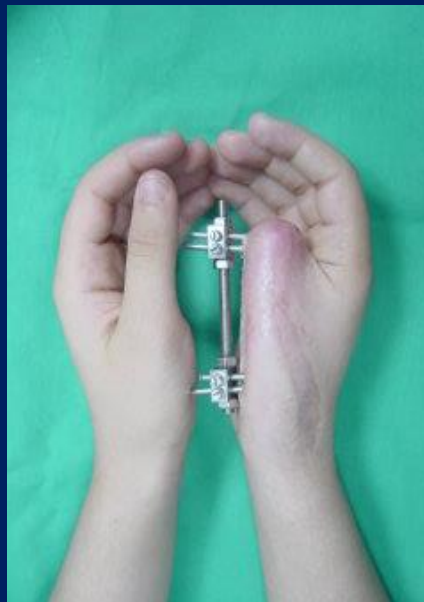
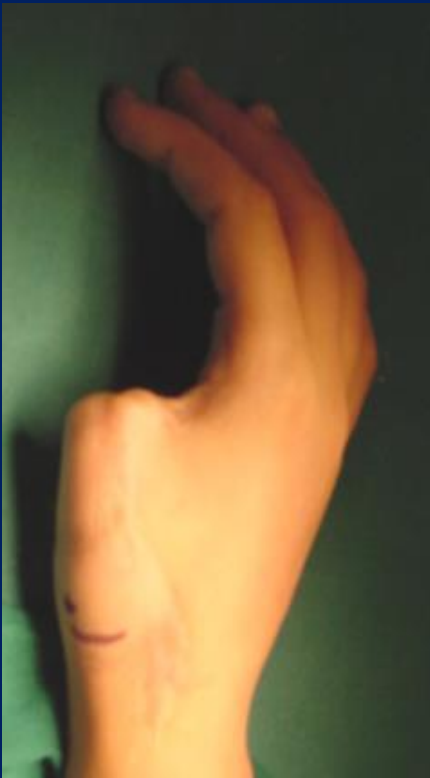
# 1 - post traumatic Cases

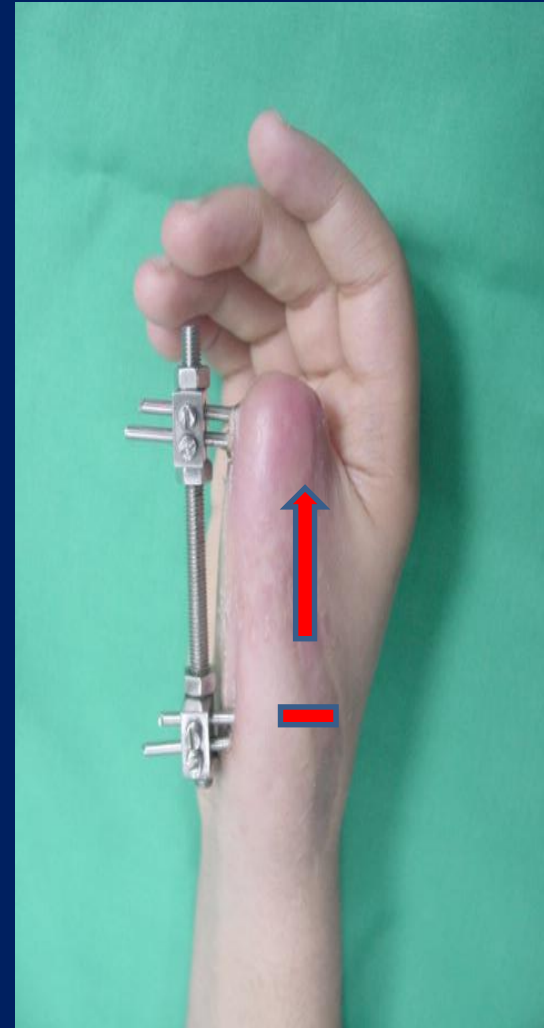
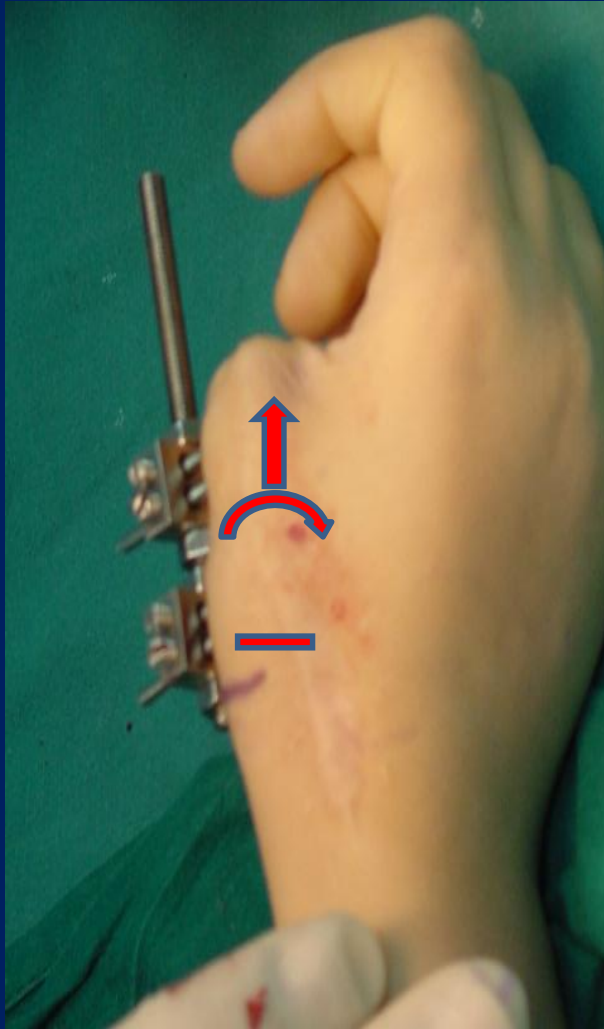
(case N01)

## 1<sup>st</sup> metacarpal lengthening

after post traumatic

thumb amputation.

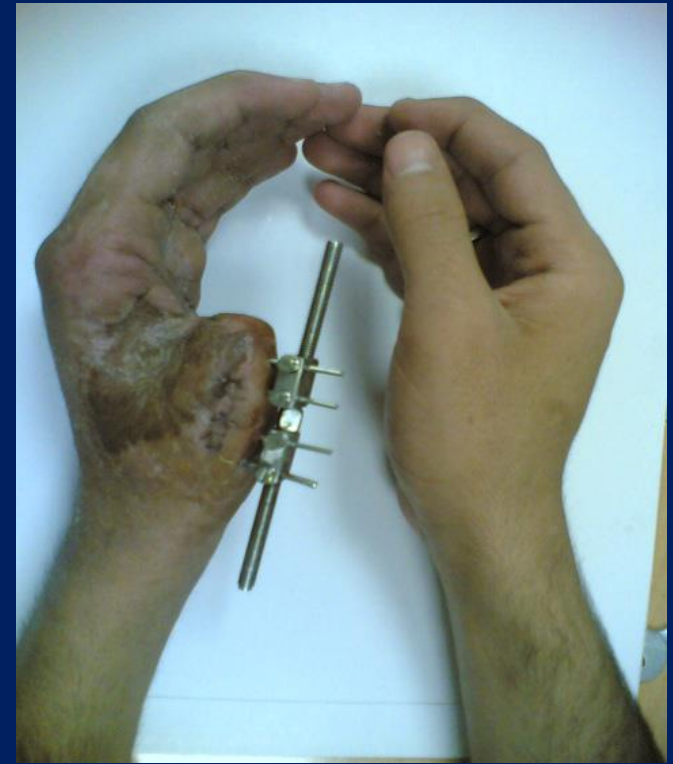
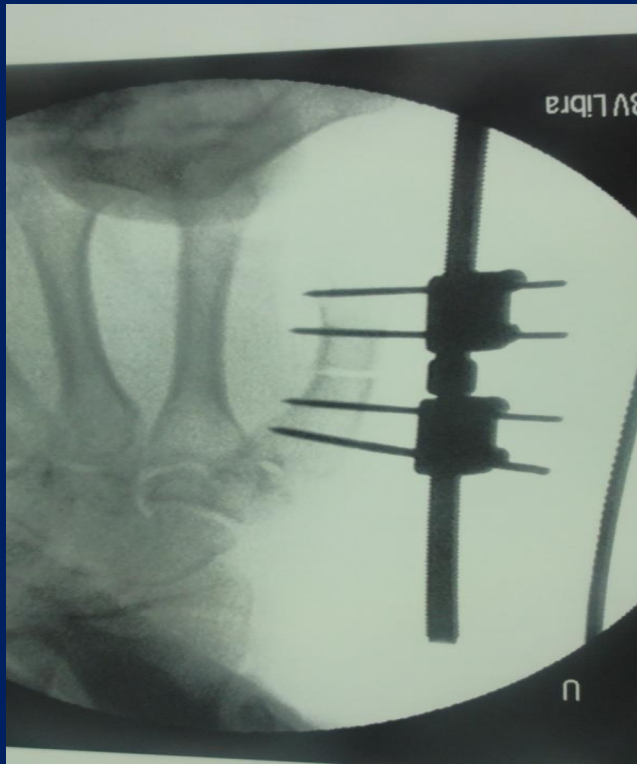




(case1)

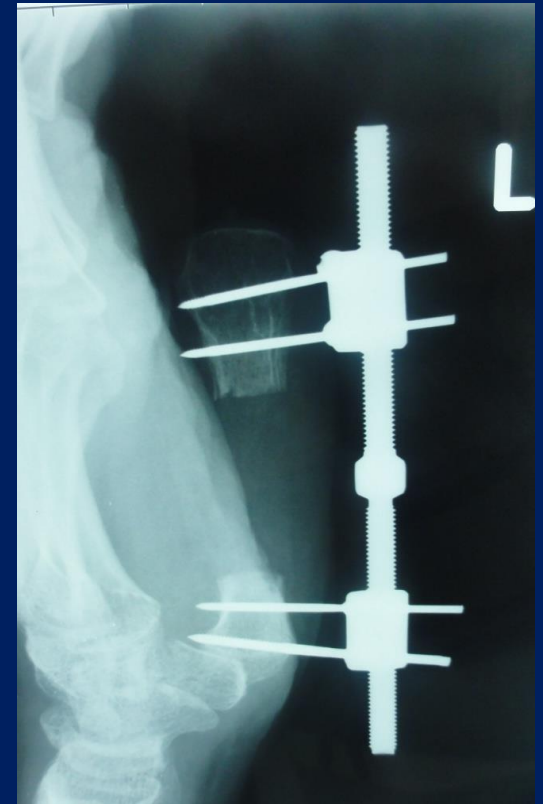


(case2)



**After osteotomy  
and applying the fixator**

(case2)



**double distraction effect**



. (case2)



- Consolidation

Fixator off



(case2)



Traction of the soft tissue for opening the 1<sup>st</sup> web space

(case3)

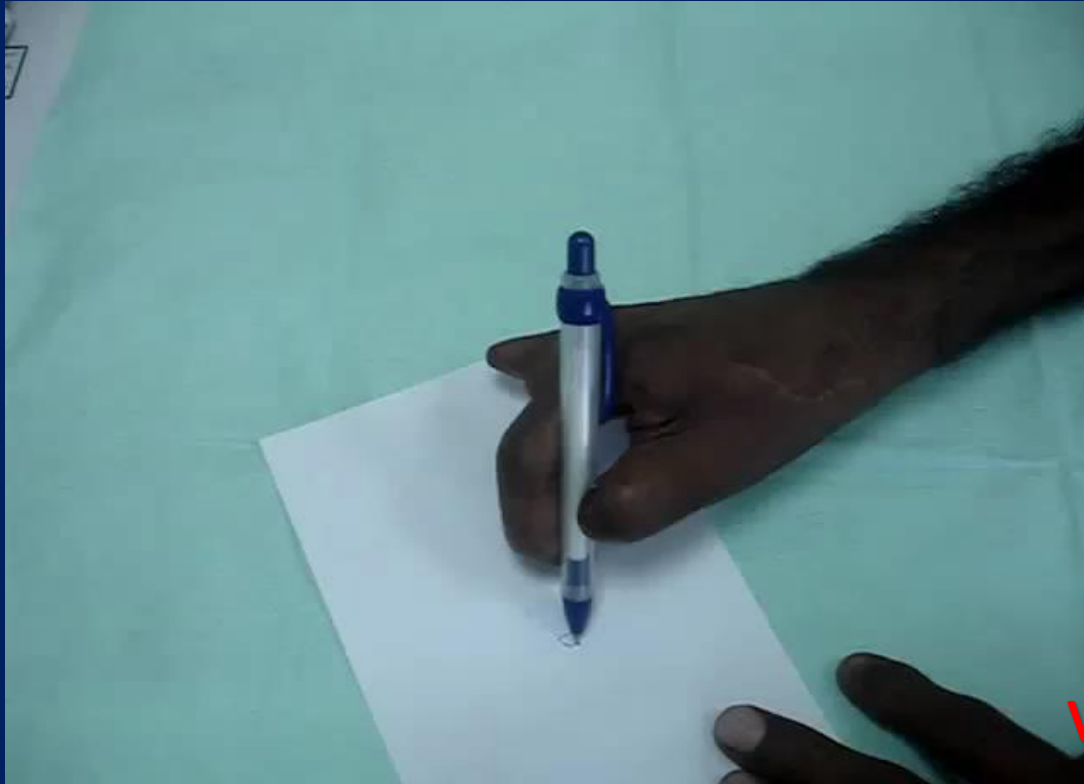
post traumatic amputation  
All fingers except meddle finger



(case3)



(case3)

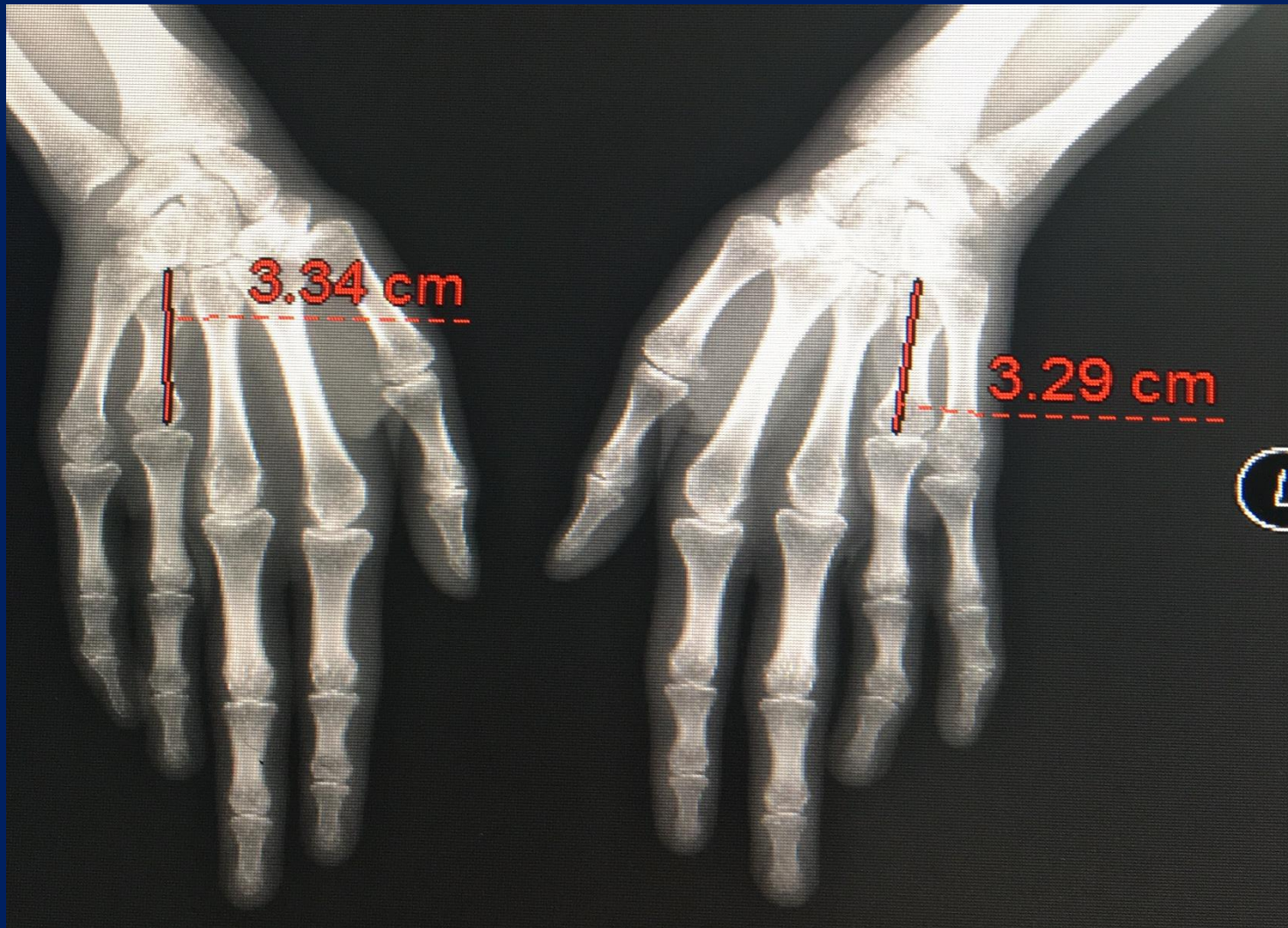


video



(case4)

Bone lengthening for *4<sup>th</sup> metacarpal bone shortening*



(case4)

2 Set lengthening for right and left





(Case4)

Better cosmetic and good function

Rt hand post op.



(Case4)

After 4<sup>th</sup> metacarpal bone elongation in both hands



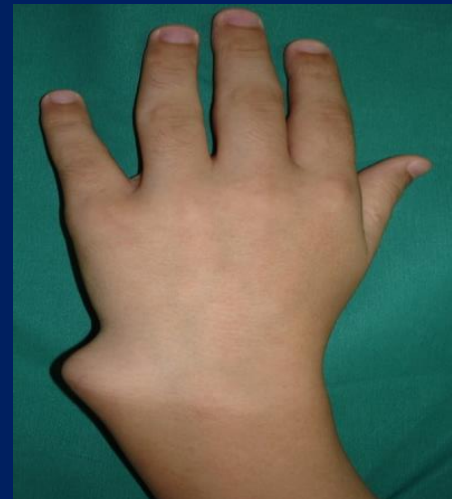


case5

Post traumatic radial shortening  
Radial growth arrest with wrist deviation



PT.14  
years  
old



## case5



Post op.2007



Before removal ex.fix

case5

Correction of wrist deviation



before



After



case5

good function



2 years ago

## case5



2 weeks ago





## case7

A 4 year-old child suffers from upper and lower limbs deformities

### Upper limb



case7

For RT club hand









*Thank You*