



APPARATO SCHELETRICO

Roberto Bruscoli

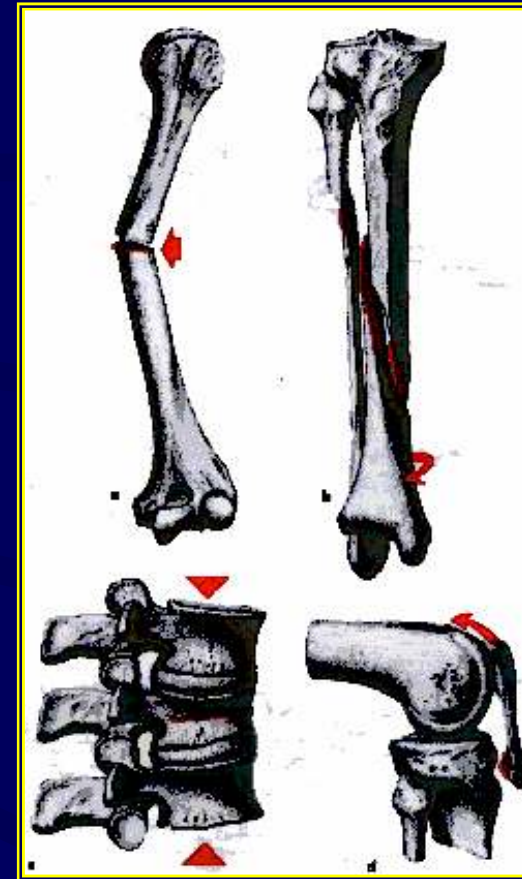
15/03/2010

FRATTURA

Interruzione della continuità dell'osso

Può essere di origine traumatica o patologica o provocata chirurgicamente (ad es. per correggere una deformità scheletrica)

- Trauma diretto
- Trauma indiretto
 - » Per flessione
 - » Per torsione
 - » Per compressione
 - » Per strappamento



- Fratture chiuse
- Fratture esposte

In rapporto all'integrità del mantello cutaneo



IN RAPPORTO AL N. DELLE INTERRUZIONI SCHELETRICHE

- Fratture unifocali
- Fratture bifocali
- Fratture trifocali ecc.



LIVELLO SCHELETRICO

- Fratture diafisarie
- Fratture metafisarie
- Fratture epifisarie



IRRADIAZIONE DELLA RIMA

- Fratture articolari
- Frattura extrarticolari



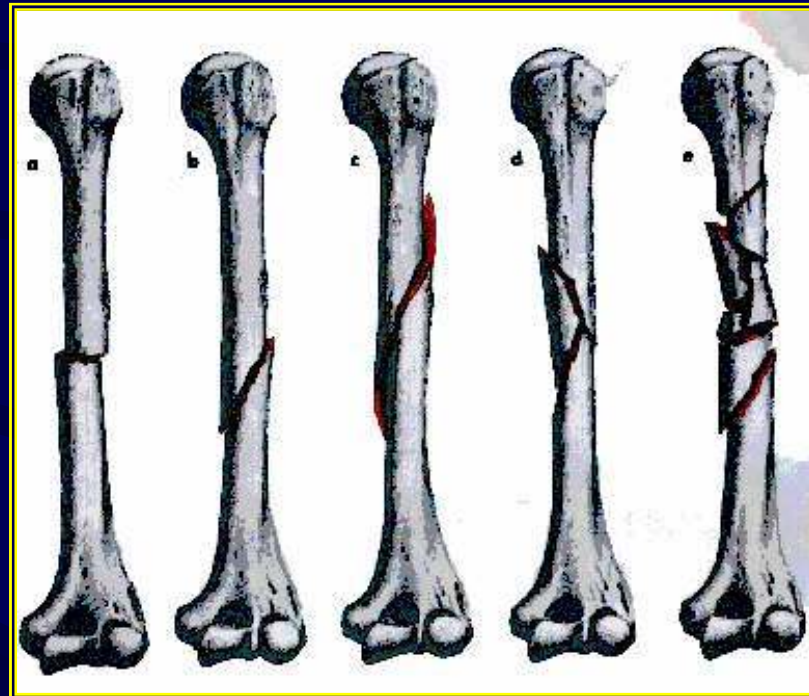
ENTITA' DEL DANNO

- Fratture complete
- Fratture incomplete



FRATTURE COMPLETE

- Trasversali
- Oblique
- Spiroidi
- Complete
- Comminute



FRATTURE INCOMPLETE

- A legno verde
- Infrazioni
- Infossamenti



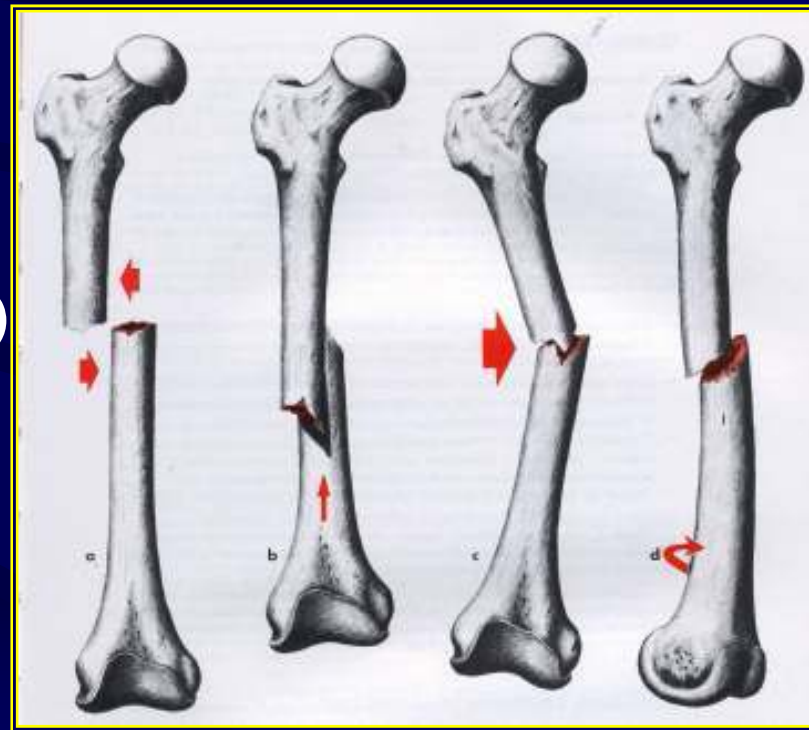
SPOSTAMENTO DEI FRAMMENTI

- Fratture non scomposte
- Fratture scomposte

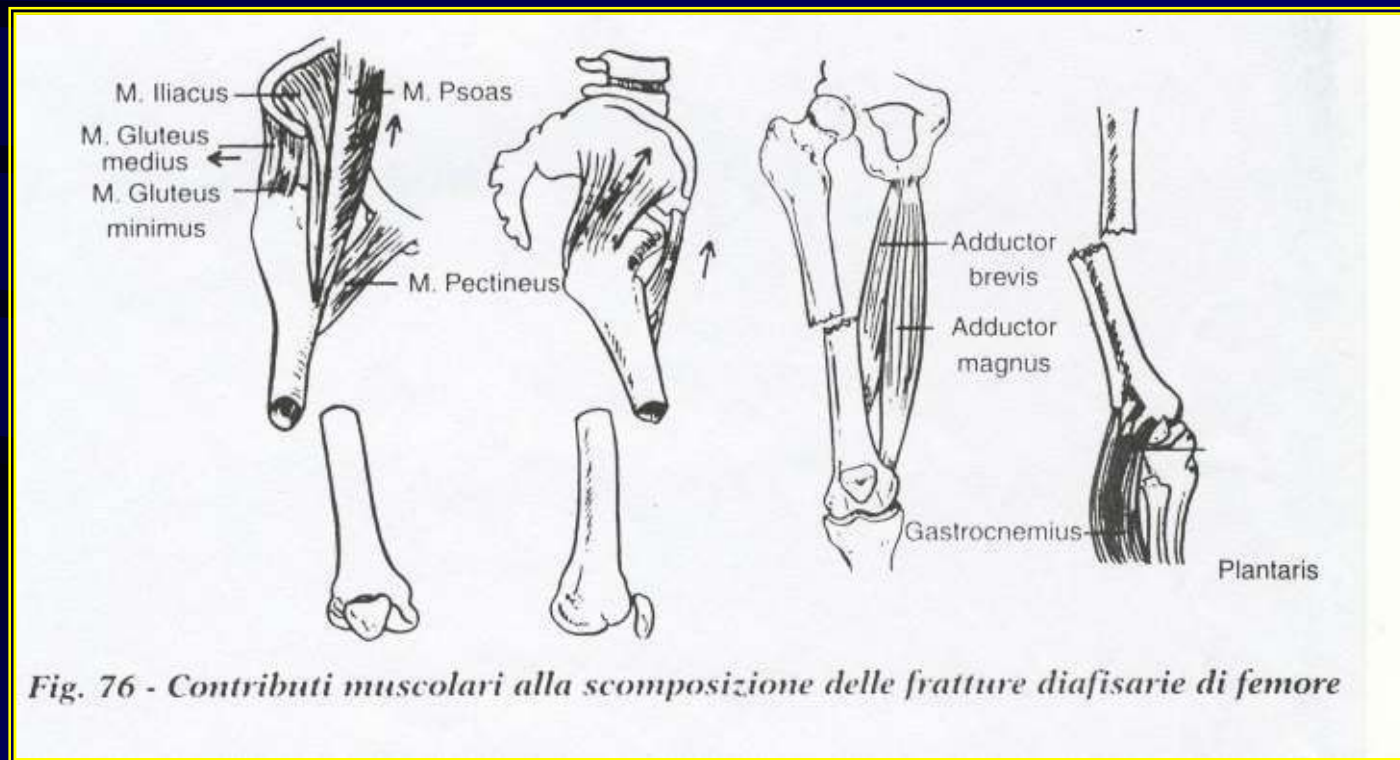


LO SPOSTAMENTO DETERMINATO DALL'AZIONE DELLE MASSE MUSCOLARI PUO' AVVENIRE IN 4 PIAN, VARIAMENTE COMBINATI TRA DI LORO

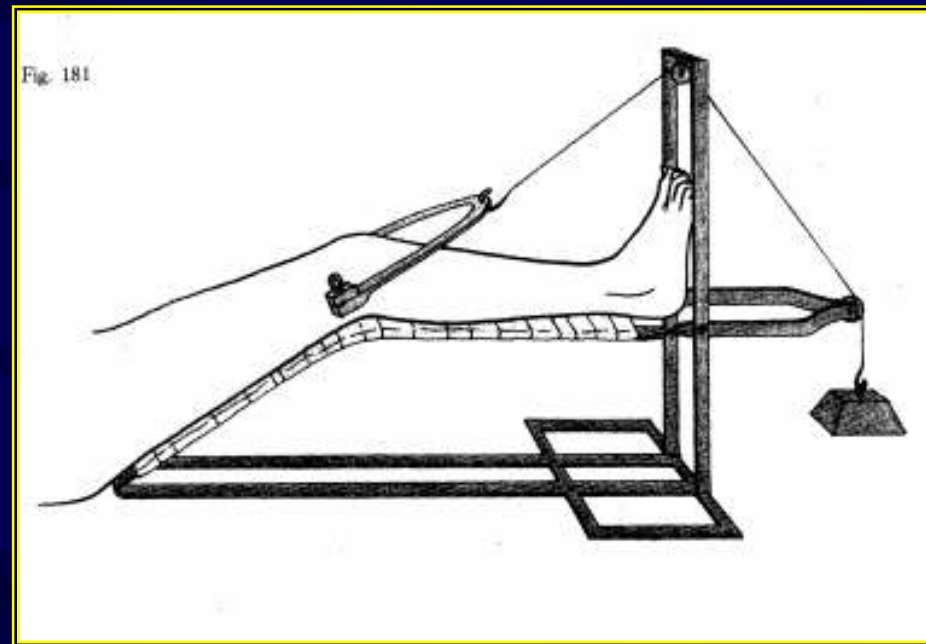
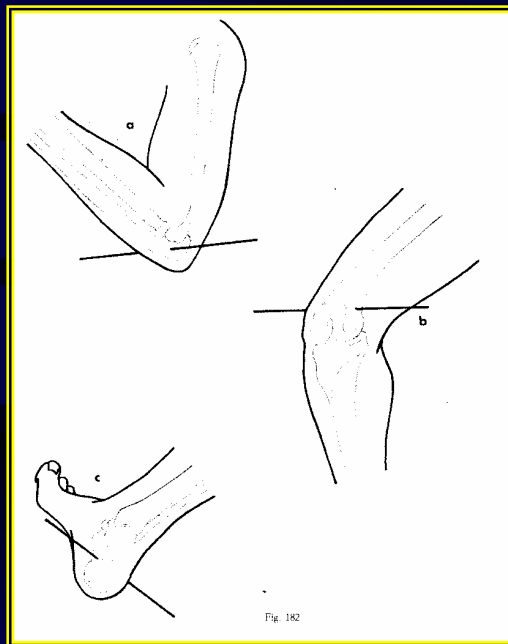
1. Trasversale (ad latus)
2. Longitudinale (ad longitudinem)
3. Angolare (ad axim)
4. Rotatoria (ad peripheriam)



CONTRIBUTI MUSCOLARI ALLA SCOMPOSIZIONE DELLE FRATTURE DIAFISARIE DI FEMORE



TRAZIONI TRANSCHELETRICHE



CLINICA

α Segni di probabilità

- atteggiamento
 - deformità
 - dolore spontaneo
 - ecchimosi
 - tumefazione
 - impotenza funzionale

β Segni di certezza

- crepitio
- motilità preternaturale

γ N.B. La diagnosi clinica esige sempre una conferma radiografica, in almeno 2 p.



EVOLUZIONE E PROGNOSE DELLE FRATTURE

La guarigione avviene entro un periodo di tempo variabile, dipendente da:

α Sede scheletrica

β Tipo di frattura

γ Età del pz.

δ In ogni caso, per la formazione del callo osseo deve essere assicurato:

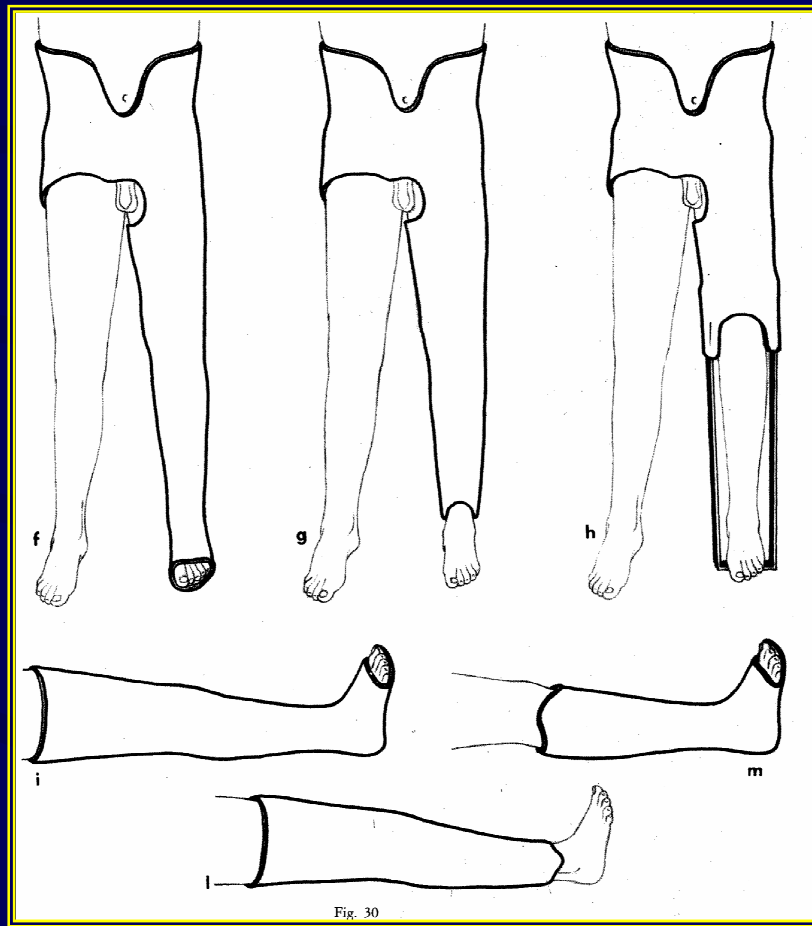
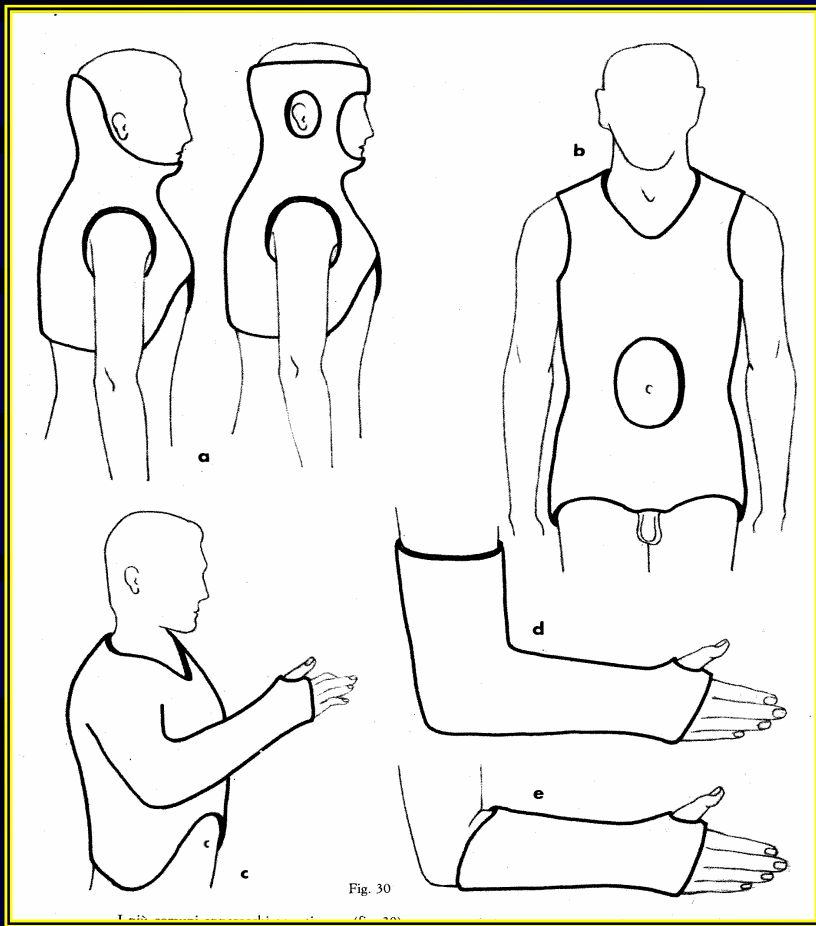
- Contatto reciproco delle superfici di frattura
- Immobilità dei frammenti ossei
- Adeguata vascolarizzazione degli stessi

OSTEOGENESI RIPARATIVA DELLE FRATTURE

I° Stadio – formazione e organizzazione dell'ematoma

II° Stadio – proliferazione e differenziazione tissutale (in senso osteocinetico)

III° Stadio – maturazione e strutturazione del callo (callo provvisorio → definitivo poi → rimodellamento osseo)



COMPLICAZIONI

- Immediate – Precoci – Tardive -

- Generali
- Locali



COMPLICAZIONI GENERALI

- Morte
- Shock
- Embolia adiposa
- Tromboembolia

Tardive

- Cistopieliti
- Broncopolmoniti
- Piaghe da decubito

COMPLICAZIONI LOCALI IMMEDIATE

- Esposizione
- Associazione a lussazione
- Lesioni viscerali
- Lesioni vascolari
- Lesioni nervose



COMPLICAZIONI LOCALI PRECOCI

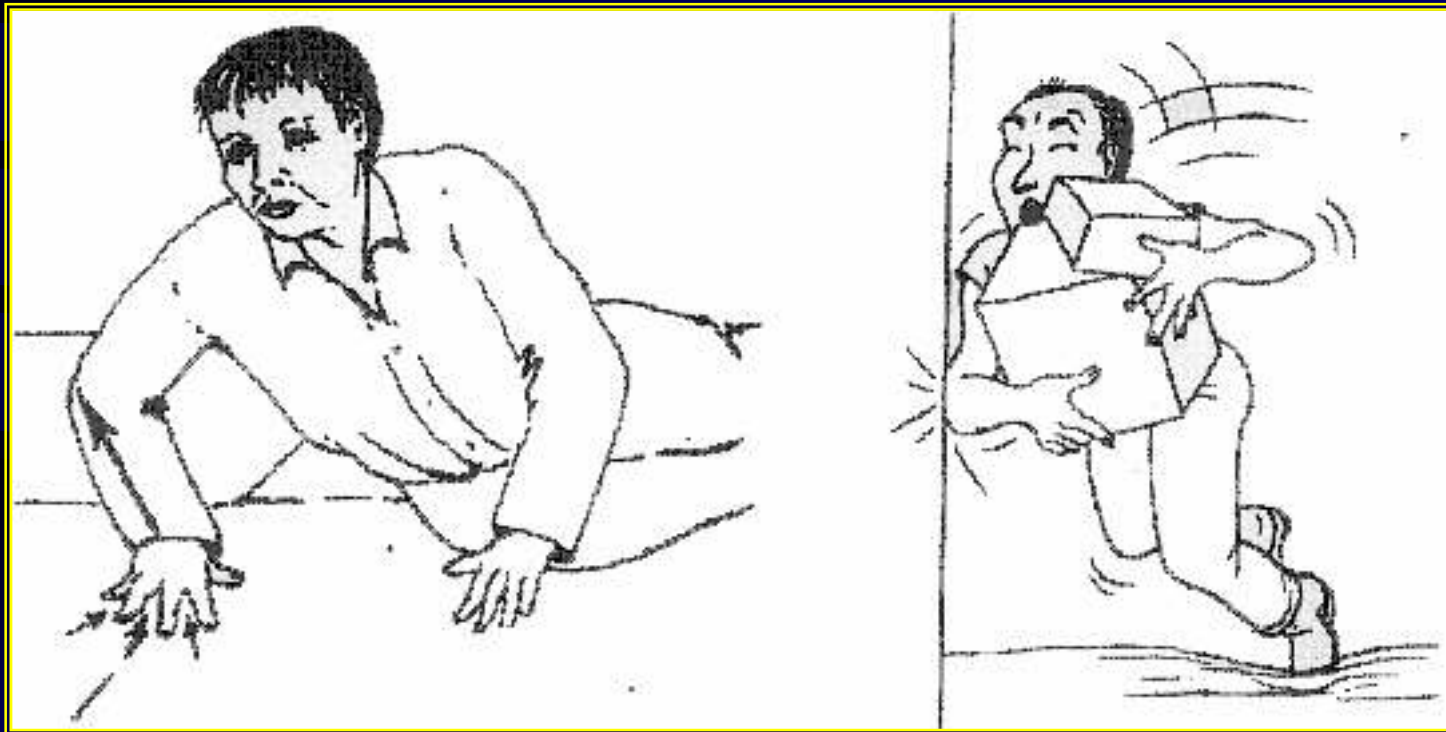
- S. di Volkmann
- Infezione



COMPLICANZE LOCALI TARDIVE

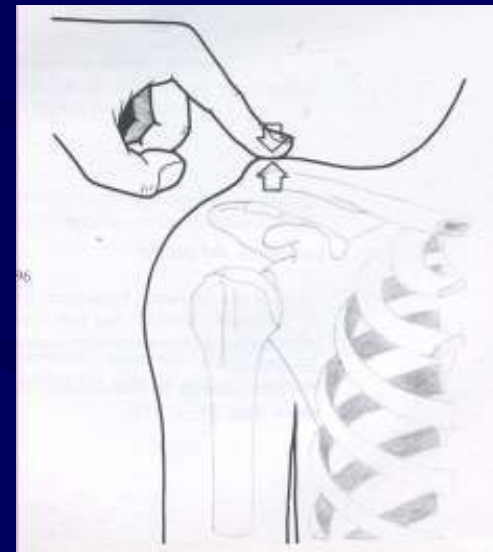
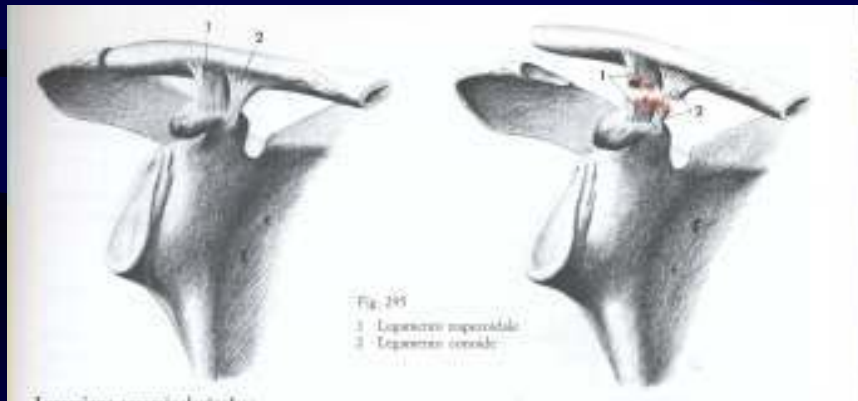
- Disturbi di consolidazione (ritardo – pseudoartrosi)
- Necrosi asettica
- Vizi di consolidazione
- Artrosi post-traumatica
- Rigidità articolari

TRAUMA INDIRECTO (A SINISTRA) E DIRETTO (A DESTRA) NELLA GENESI DELLE FRATTURE D'OMERO



ACROMION - CLAVEARE

Per caduta sul moncone della spalla, con rottura dei leg. conoide e trapezoide



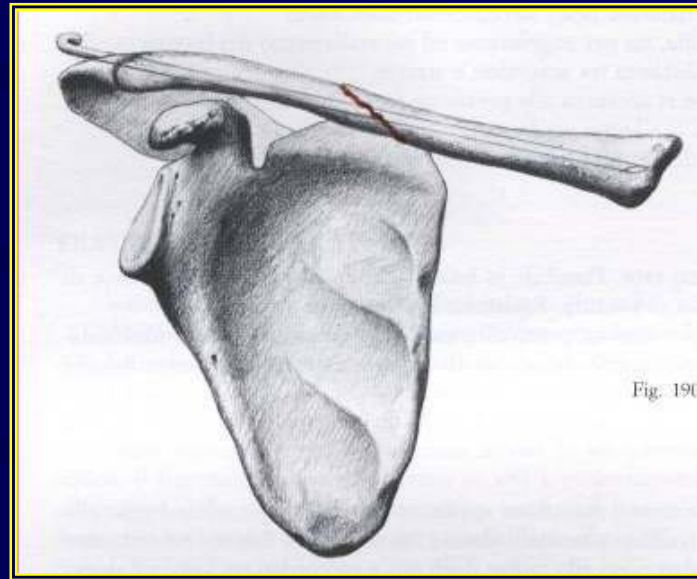
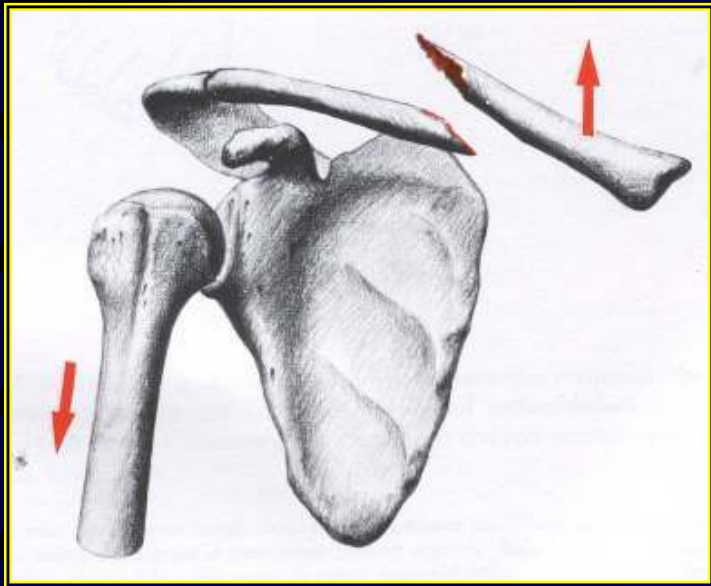


Fig. 190

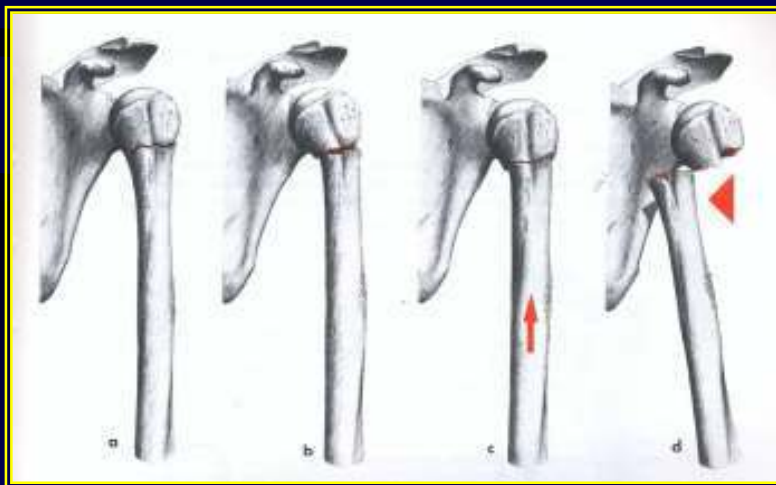
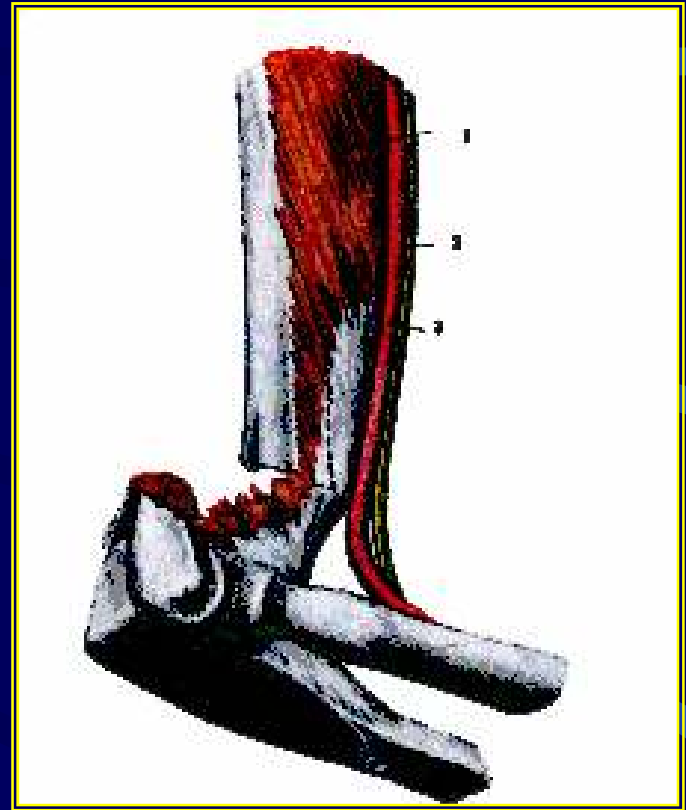
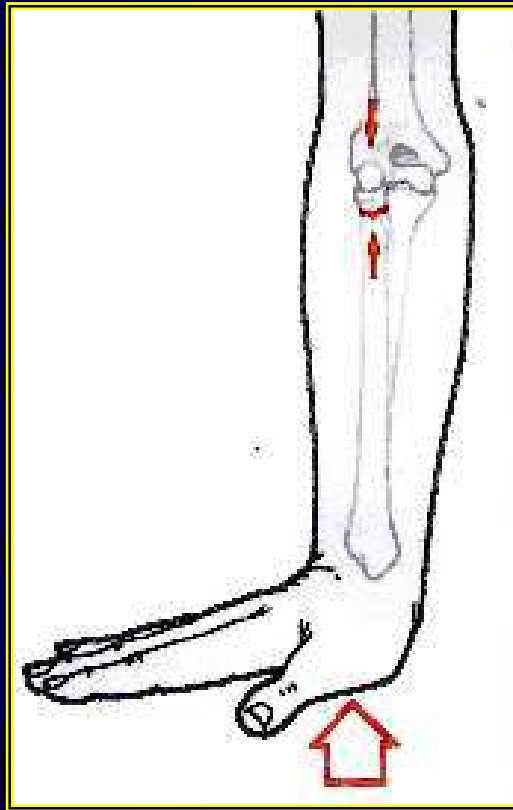


Fig. 195



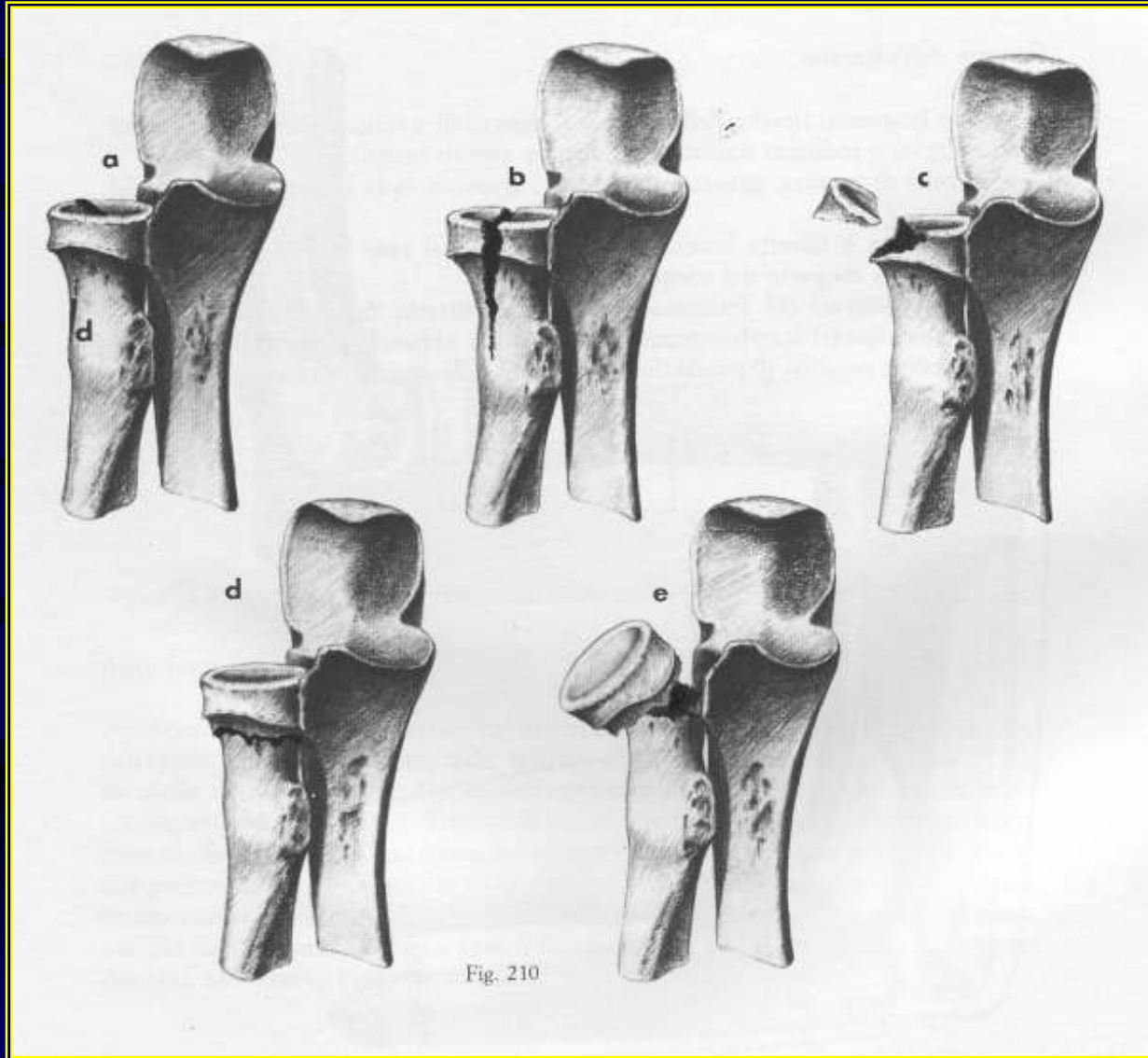
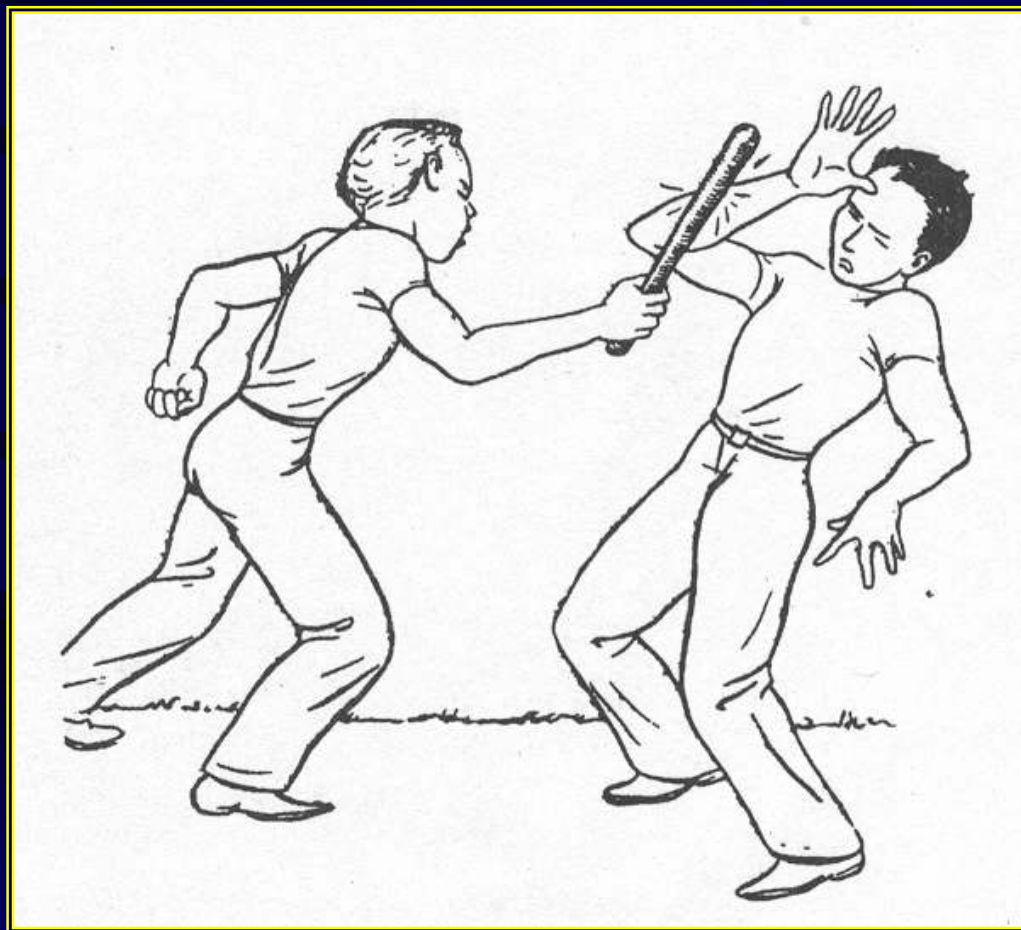
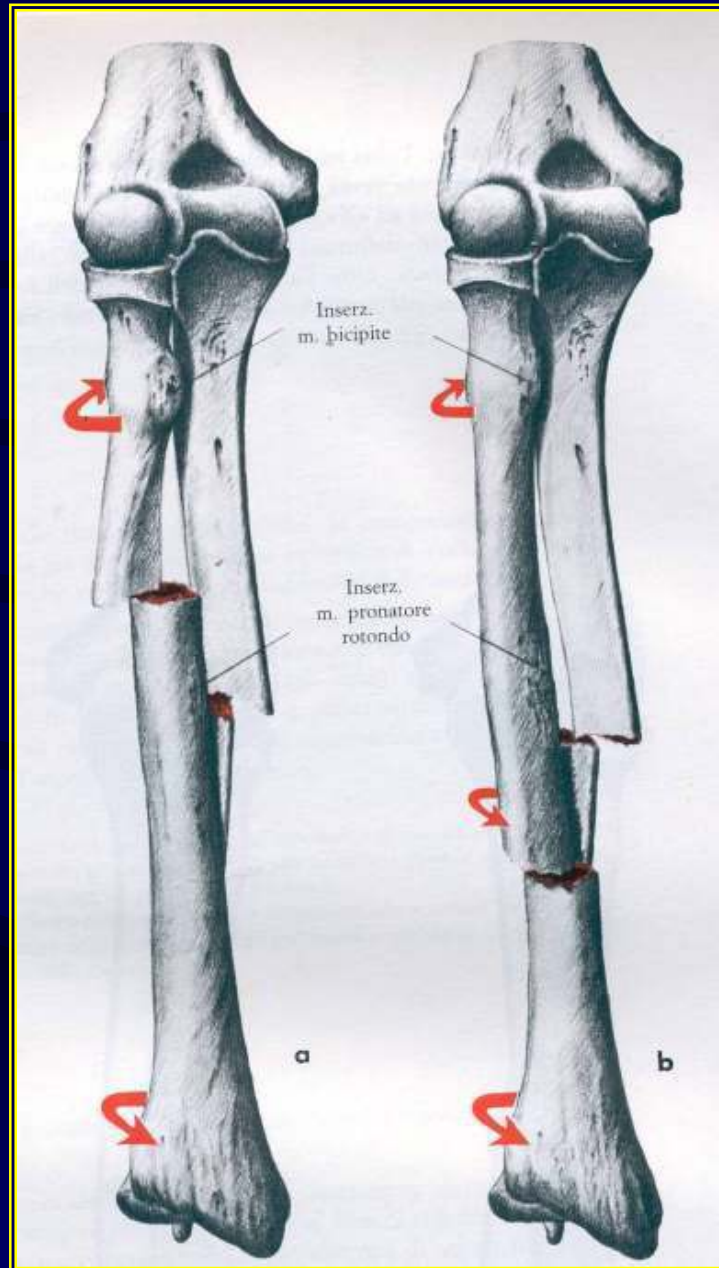


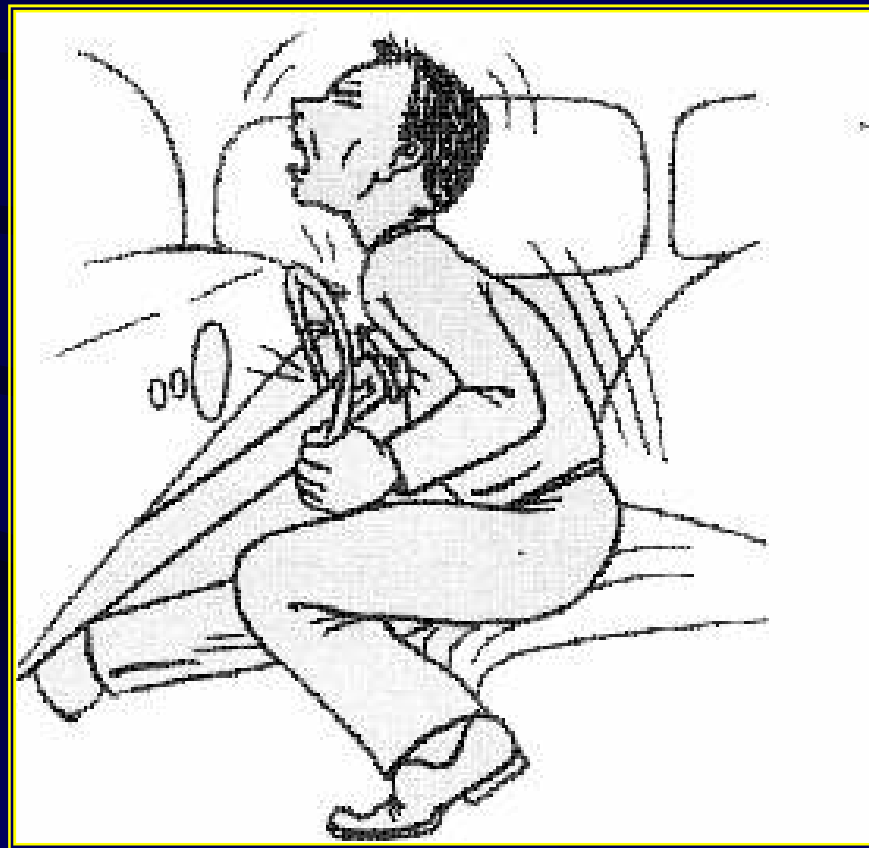
Fig. 210

FRATTURE AVAMBRACCIO

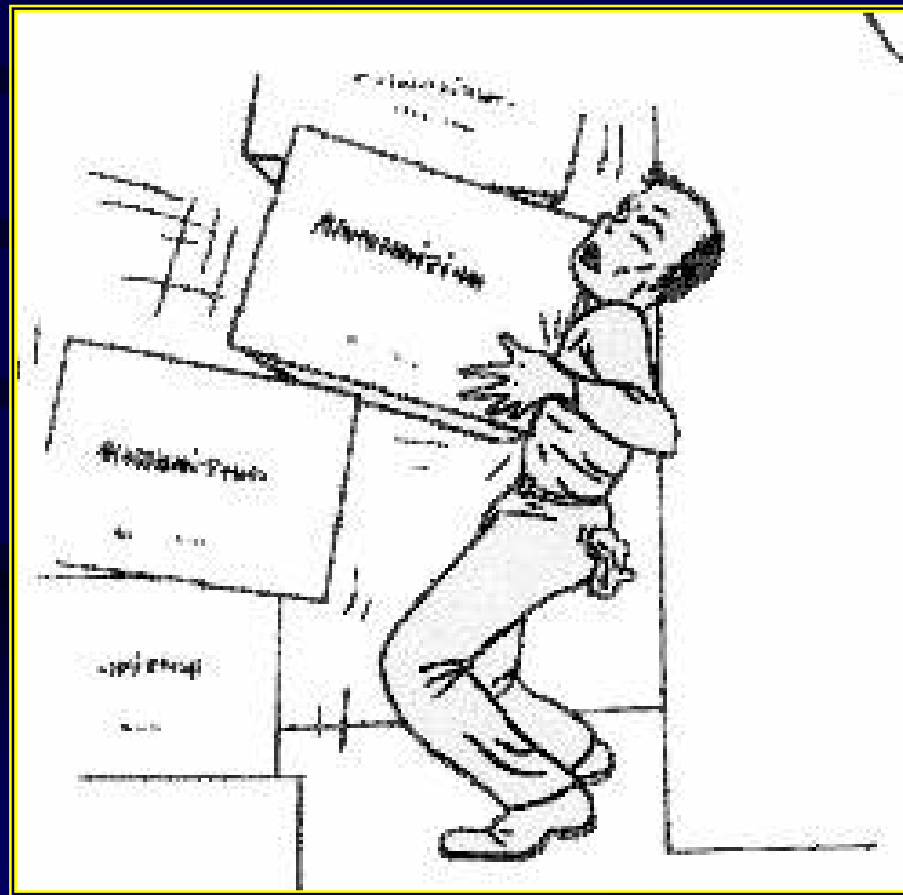




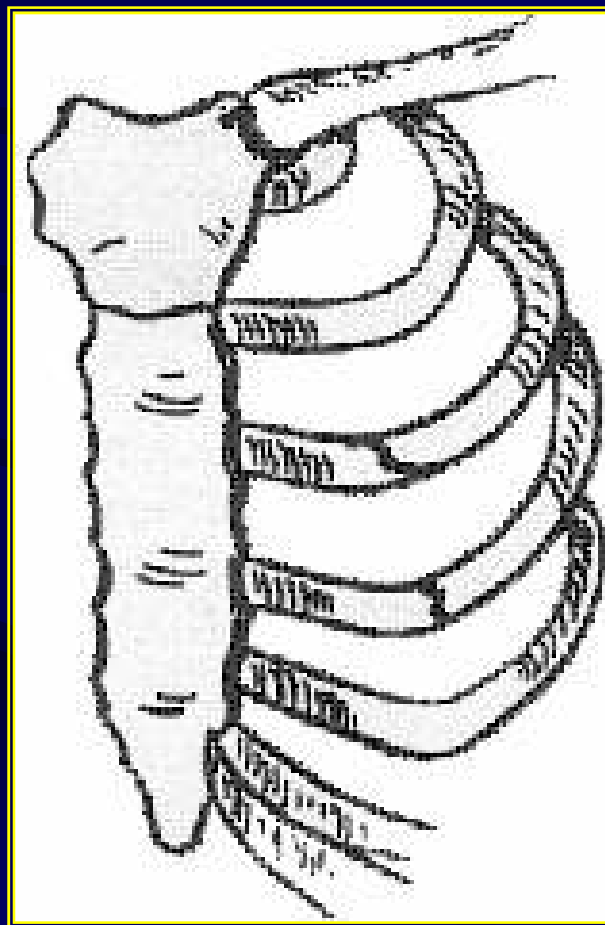
TRAUMA DIRETTO DELLA CASSA TORACICA



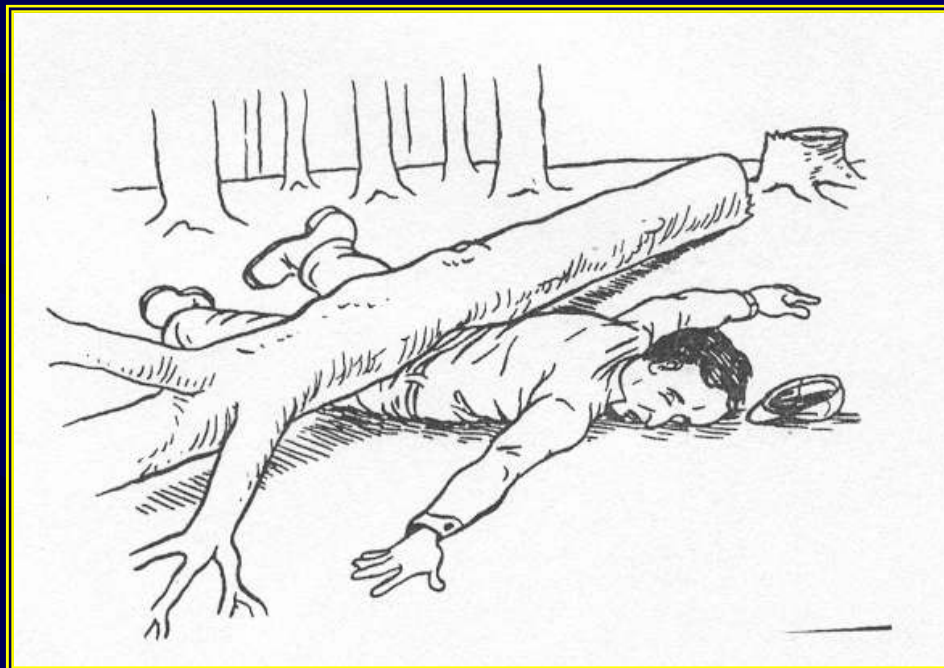
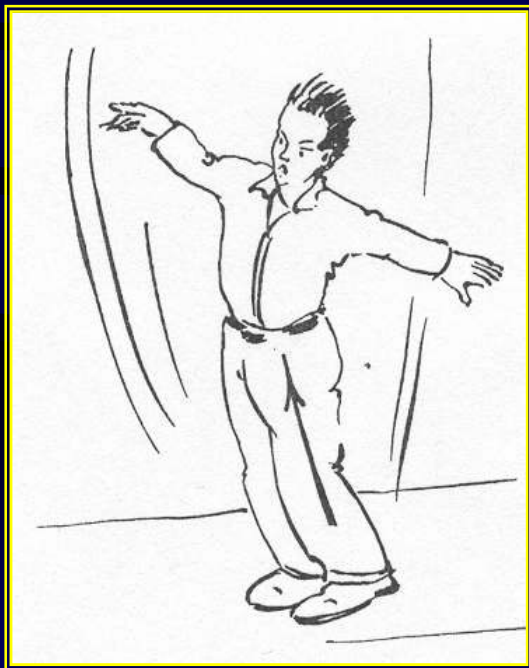
TRAUMA DIRETTO CASSA TORACICA



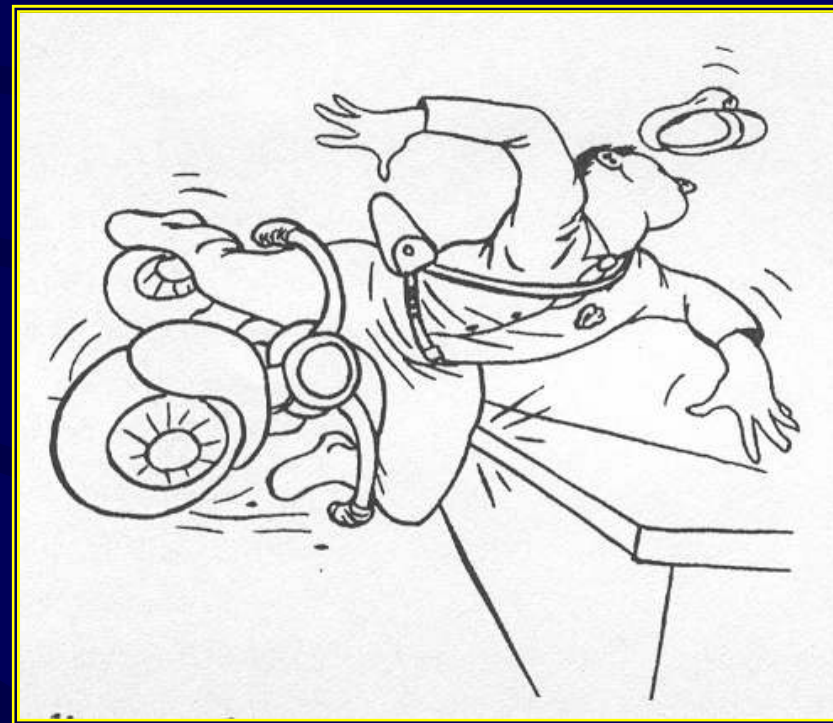
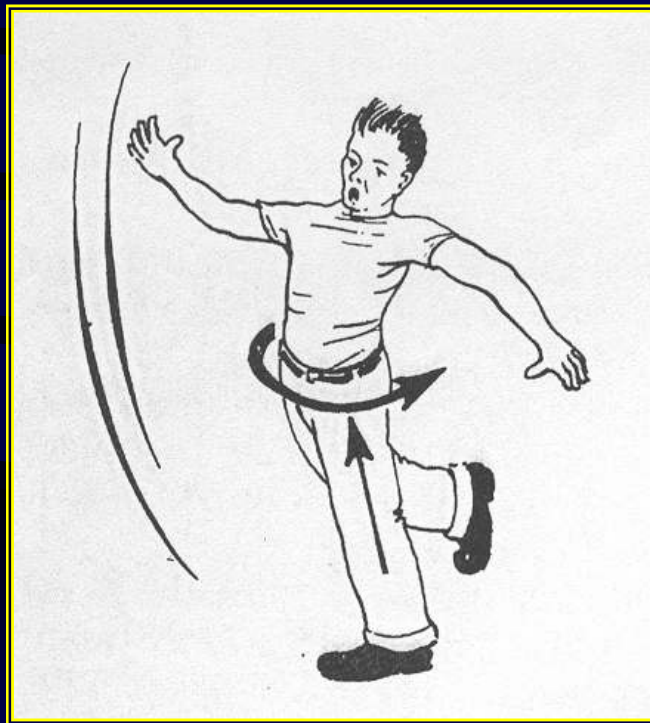
FRATTURA COSTALI



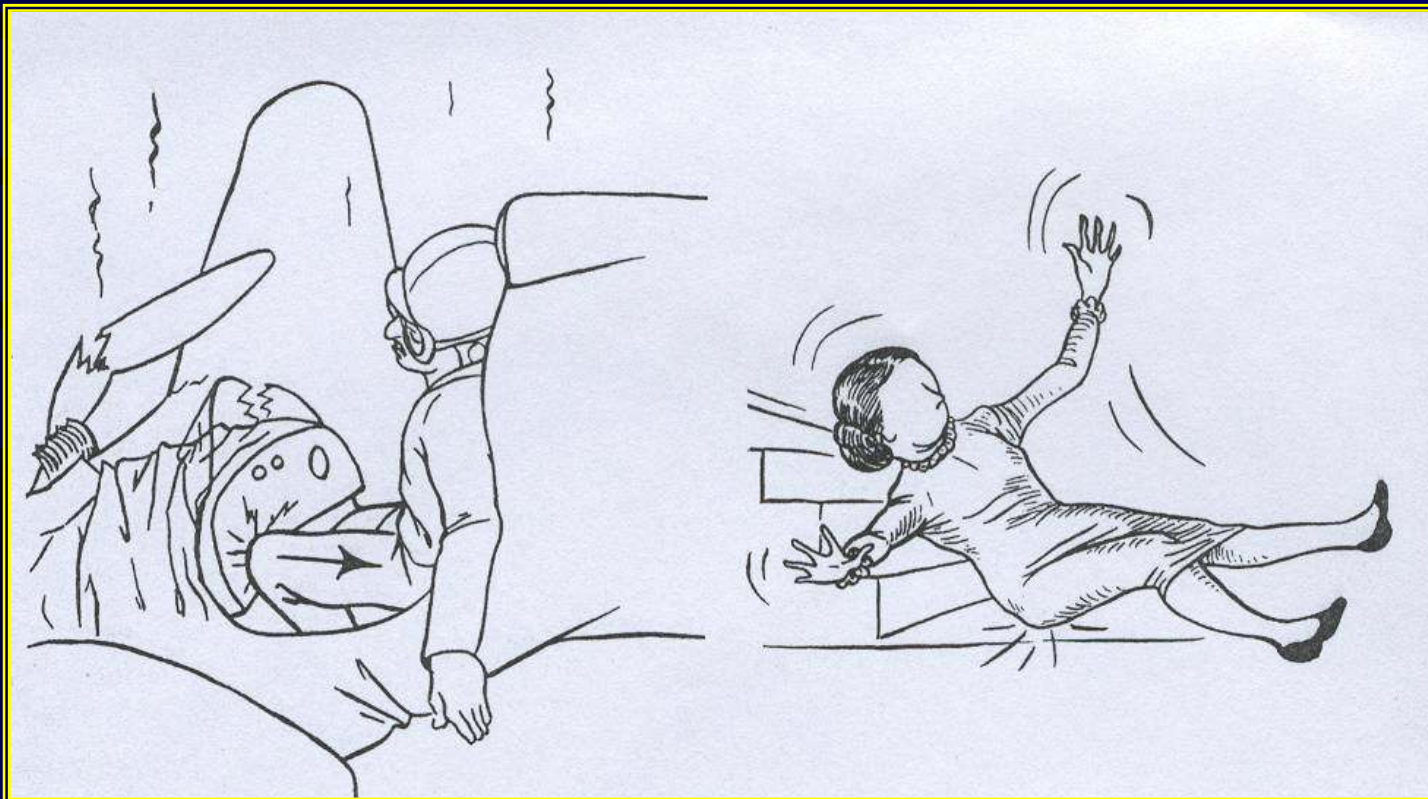
MECCANISMO TRAUMATICO INDIRETTO E DIRETTO NEL DETERMINISMO DELLE FRATTURE DI BACINO

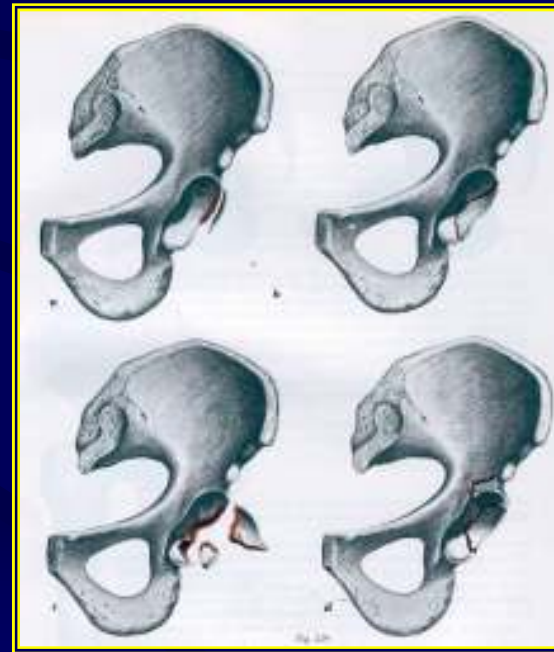
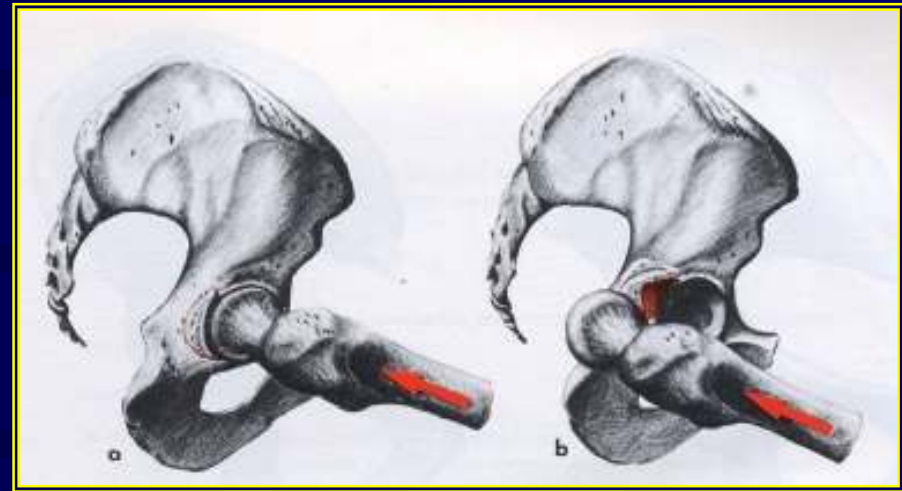
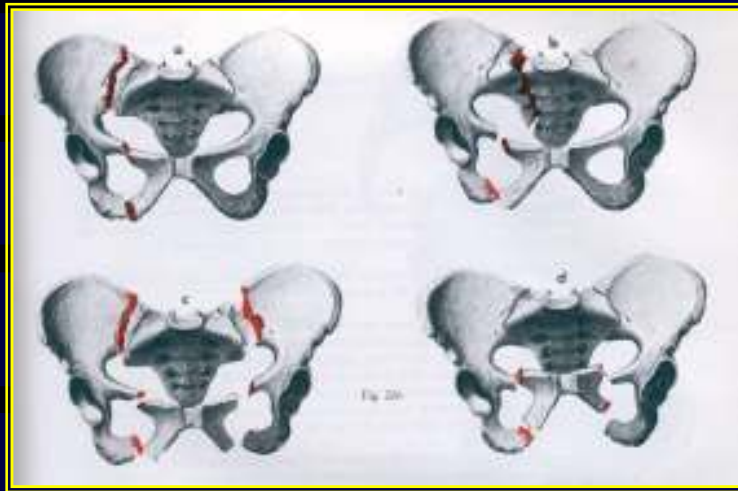


TRAUMA DIRETTO E INDIRETTO

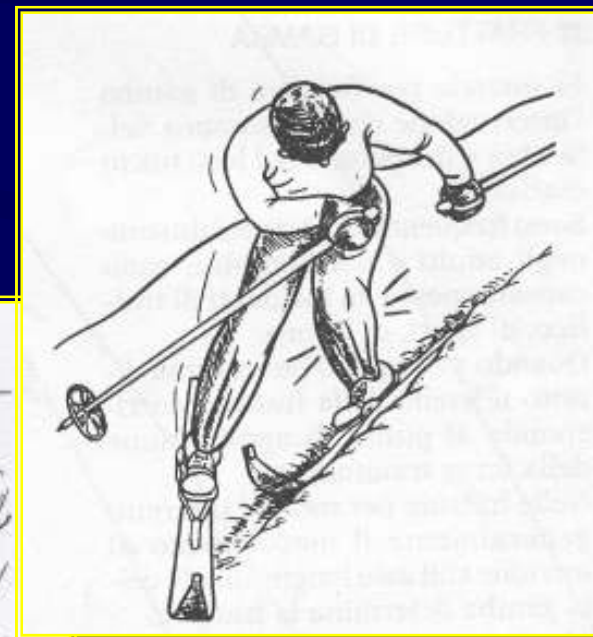
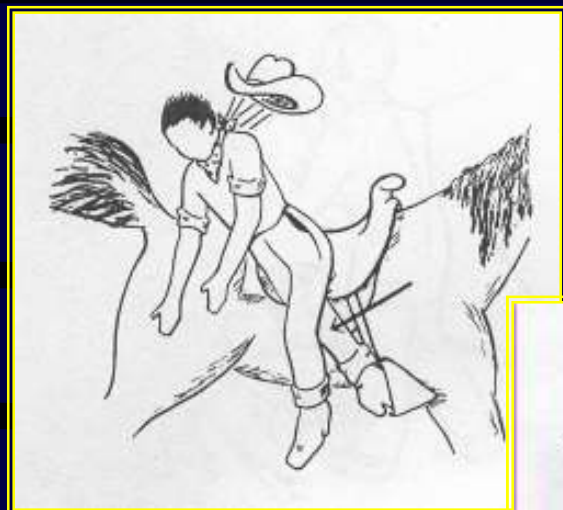


MECCANISMI TRAUMATICI CONNESSI ALLE FRATTURE DELLA COXOFEMORALE





FRATTURA DI GAMBIA



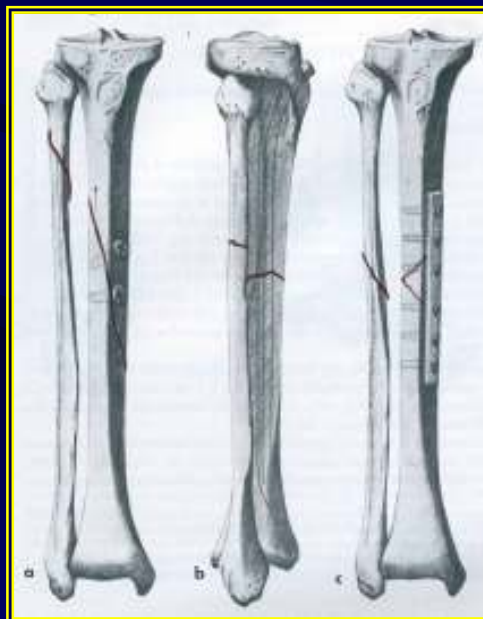
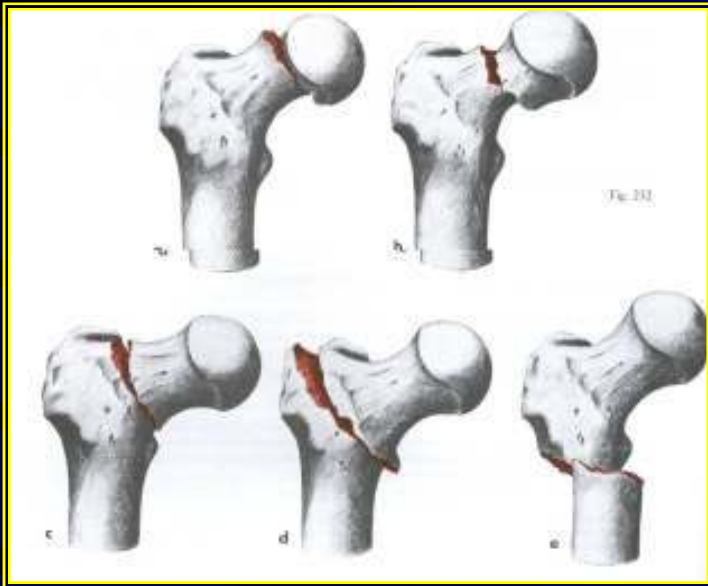




Fig. 246

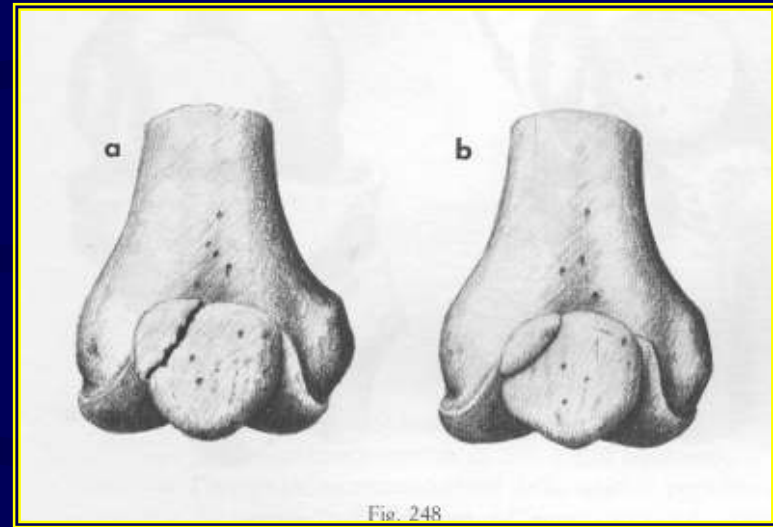


Fig. 248



Fig. 249

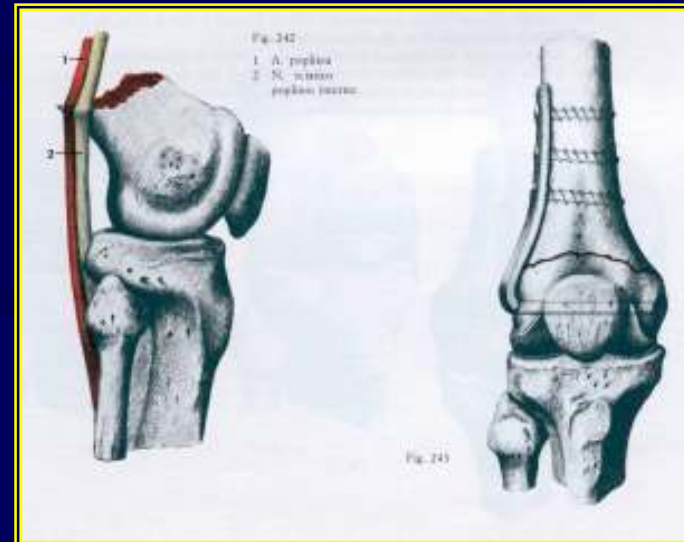
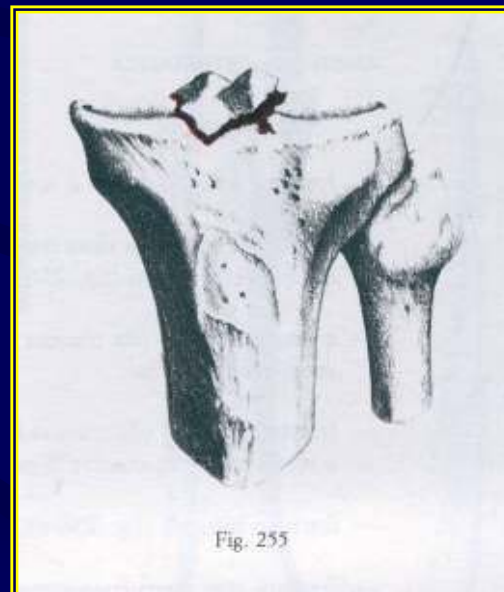
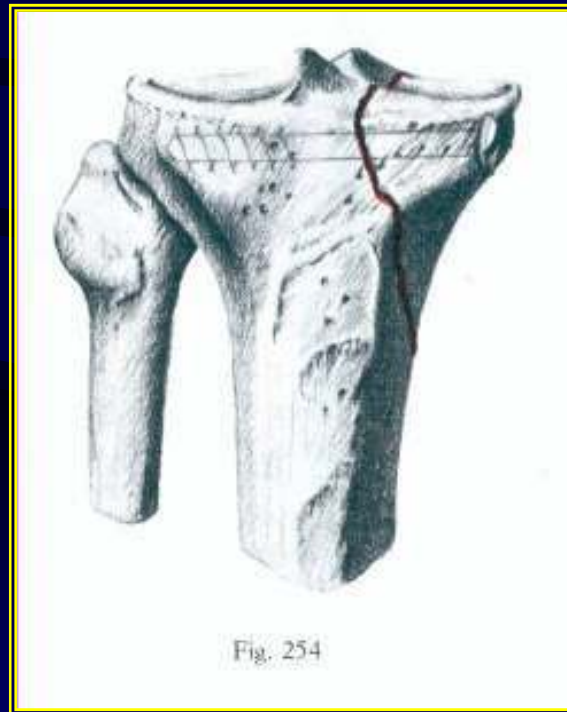
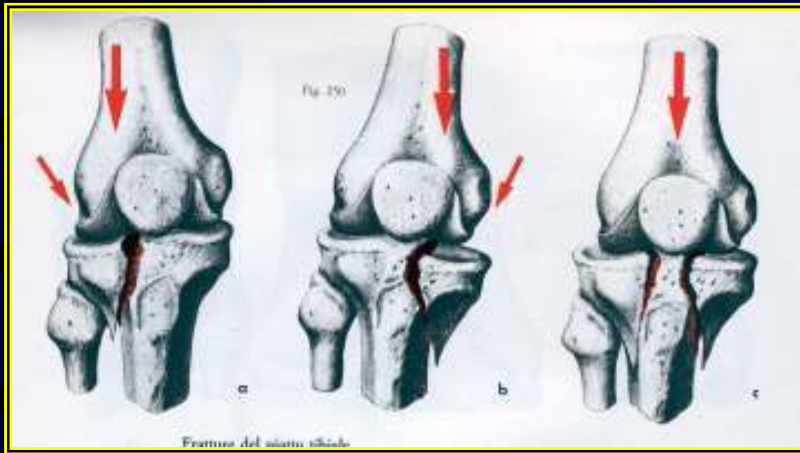
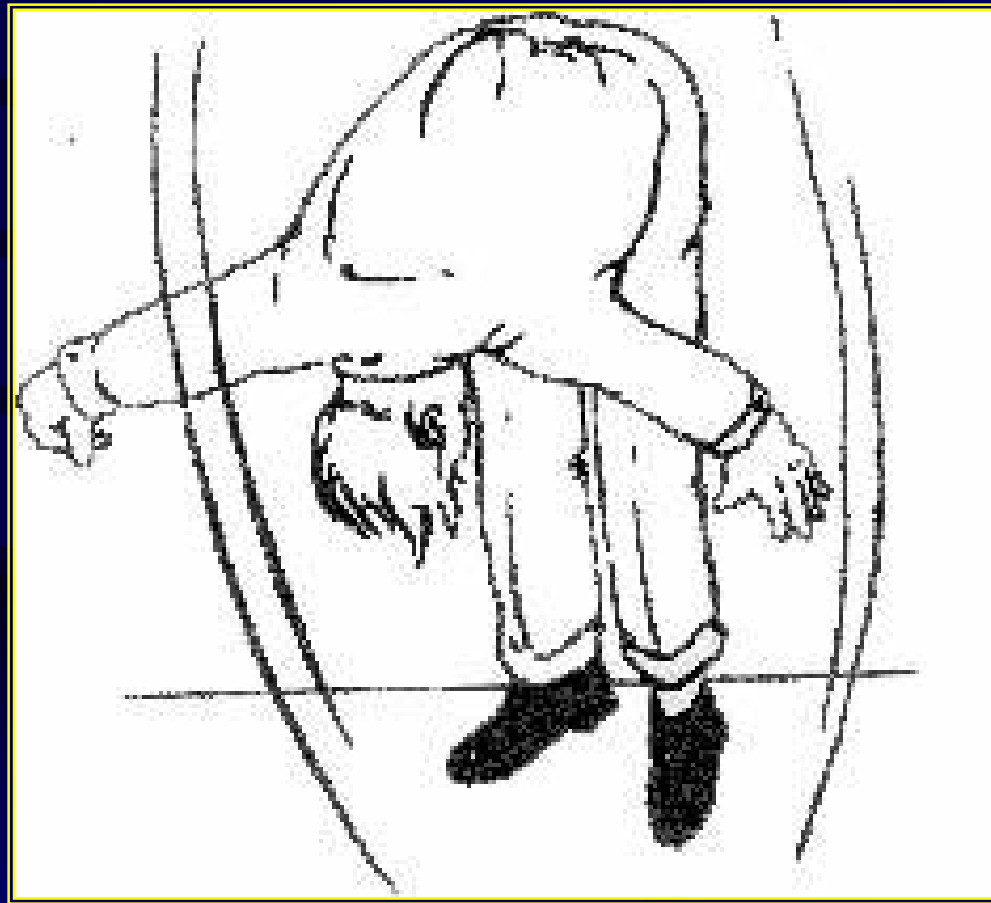


Fig. 247



MECCANISMO TRAUMATICO IN FLESSIONE



FRATTURE VERTEBRALI

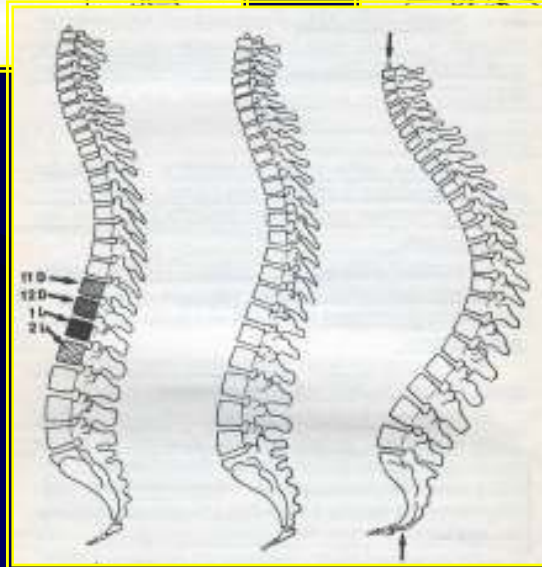
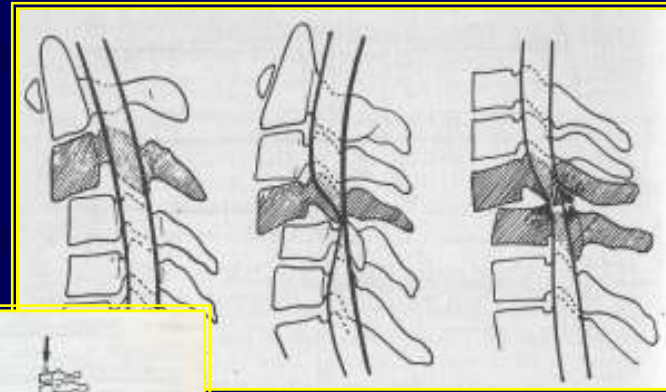
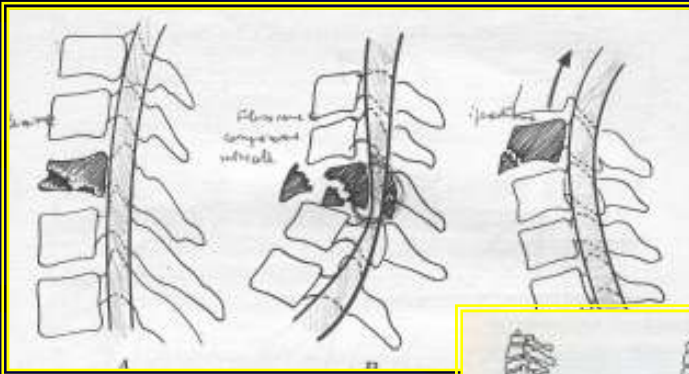
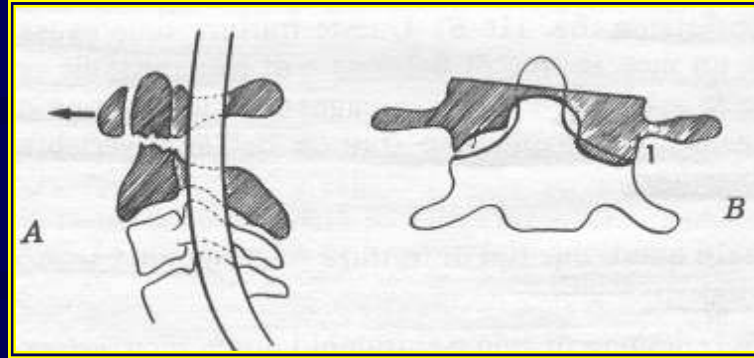
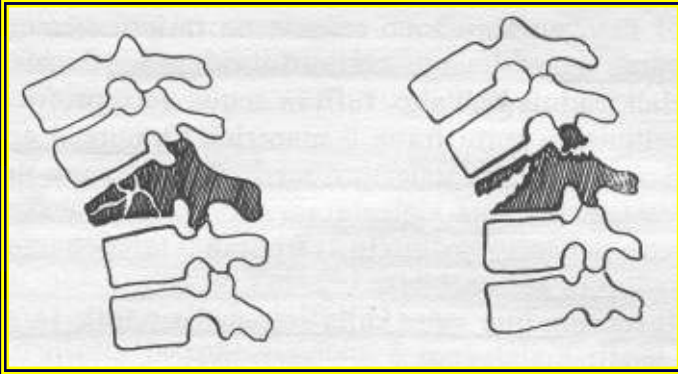
- Cervicali
- Dorsali
- Lombari
- Sacro-coccigee



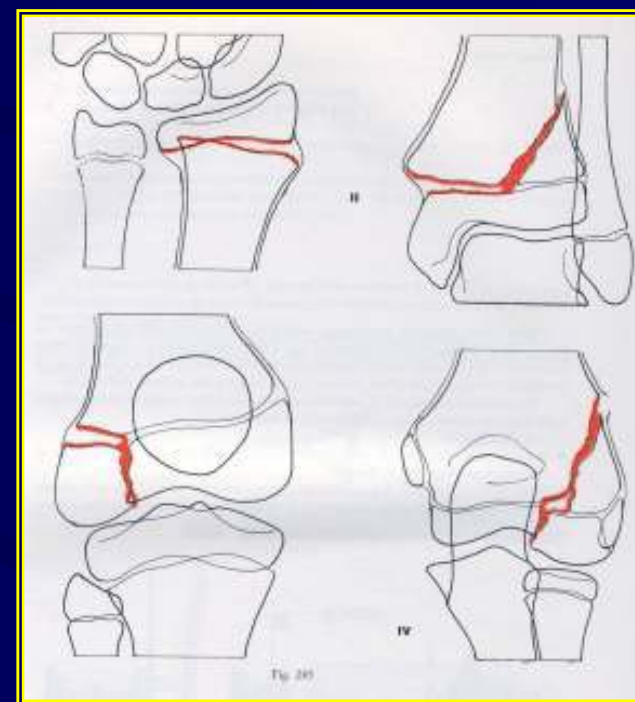
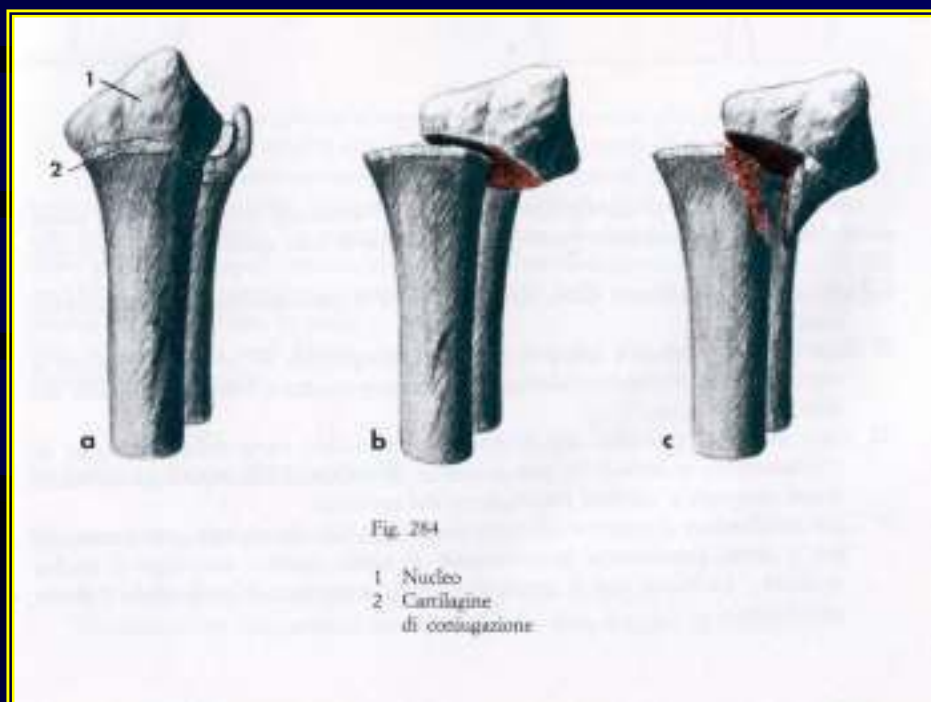
FRATTURE VERTEBRALI

- Stabili
- Instabili
- Mieliche
- Amieliche





DISTACCHI EPIFISARI



LUSSAZIONE

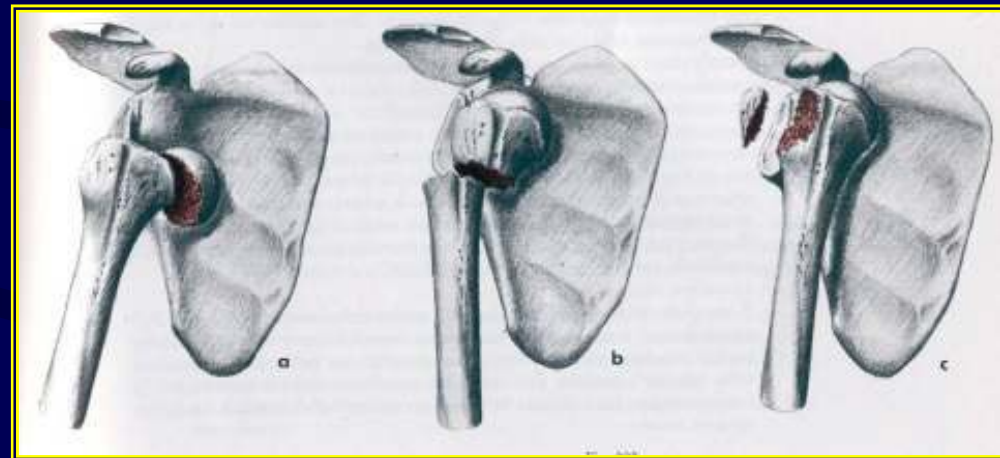
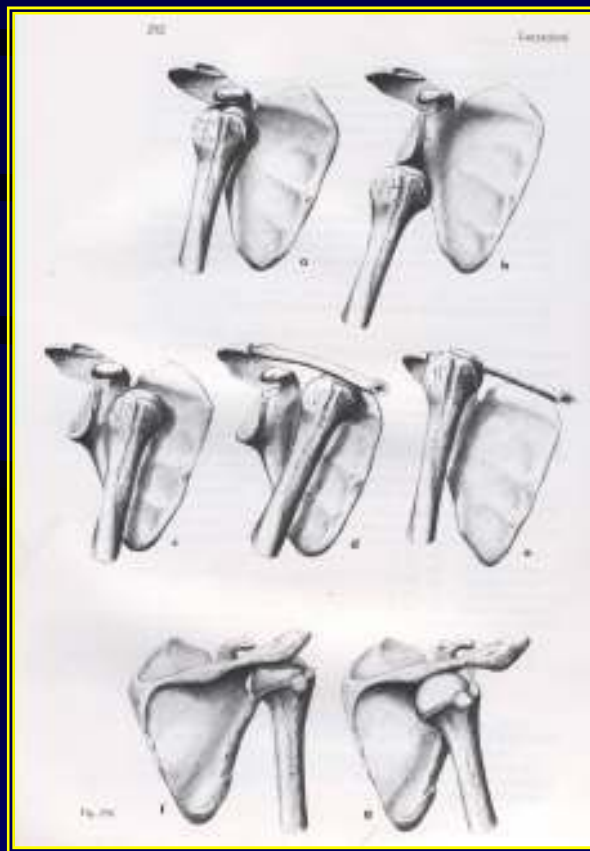


PERDITA DEI RAPPORTI TRA CAPI ARTICOLARI DI UN' ARTICOLAZIONE

- Complete
- Sublussazione
- Recenti
- Inveterate
- Recidivanti
- Abituali
- Volontarie

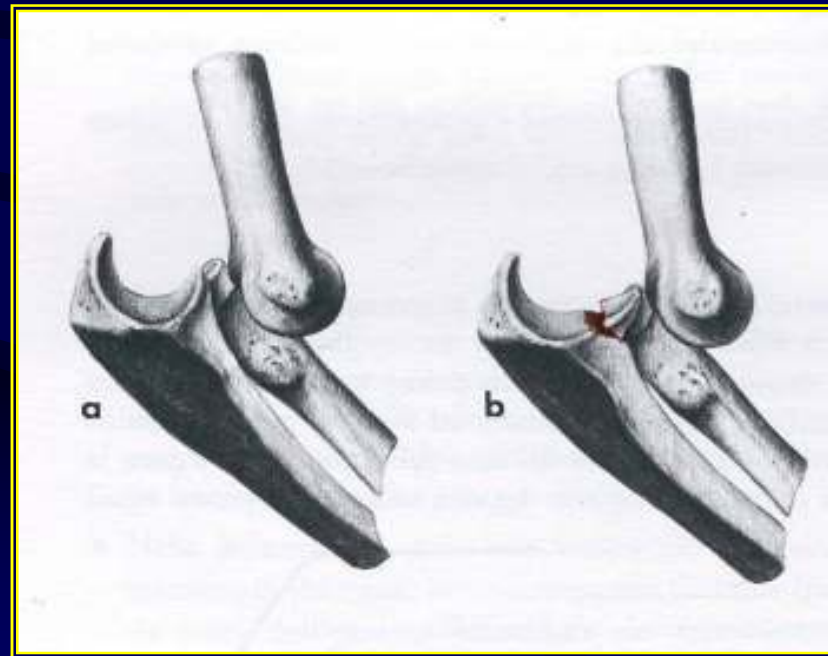


**SPALLA → + FREQUENTE E' LA VARIETA'
SOTTO CORACOIDEA (Q), PER CADUTA
SULLA MANO O SUL GOMITO, AD ARTO
LIEVEMENTE ABDOTTO**



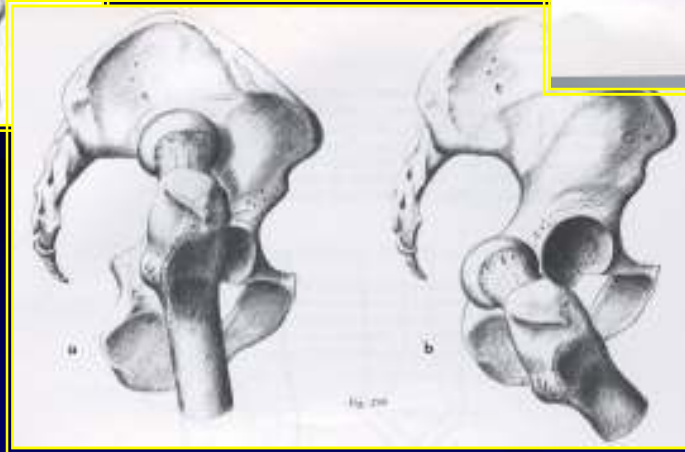
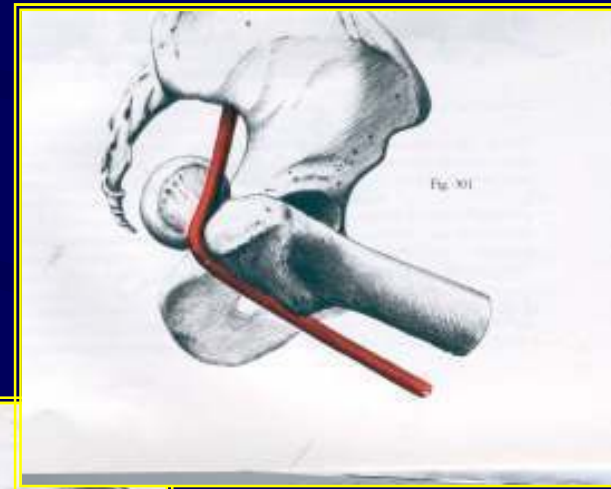
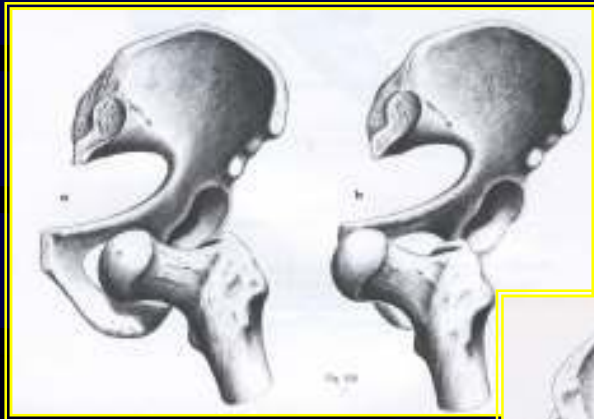
GOMITO

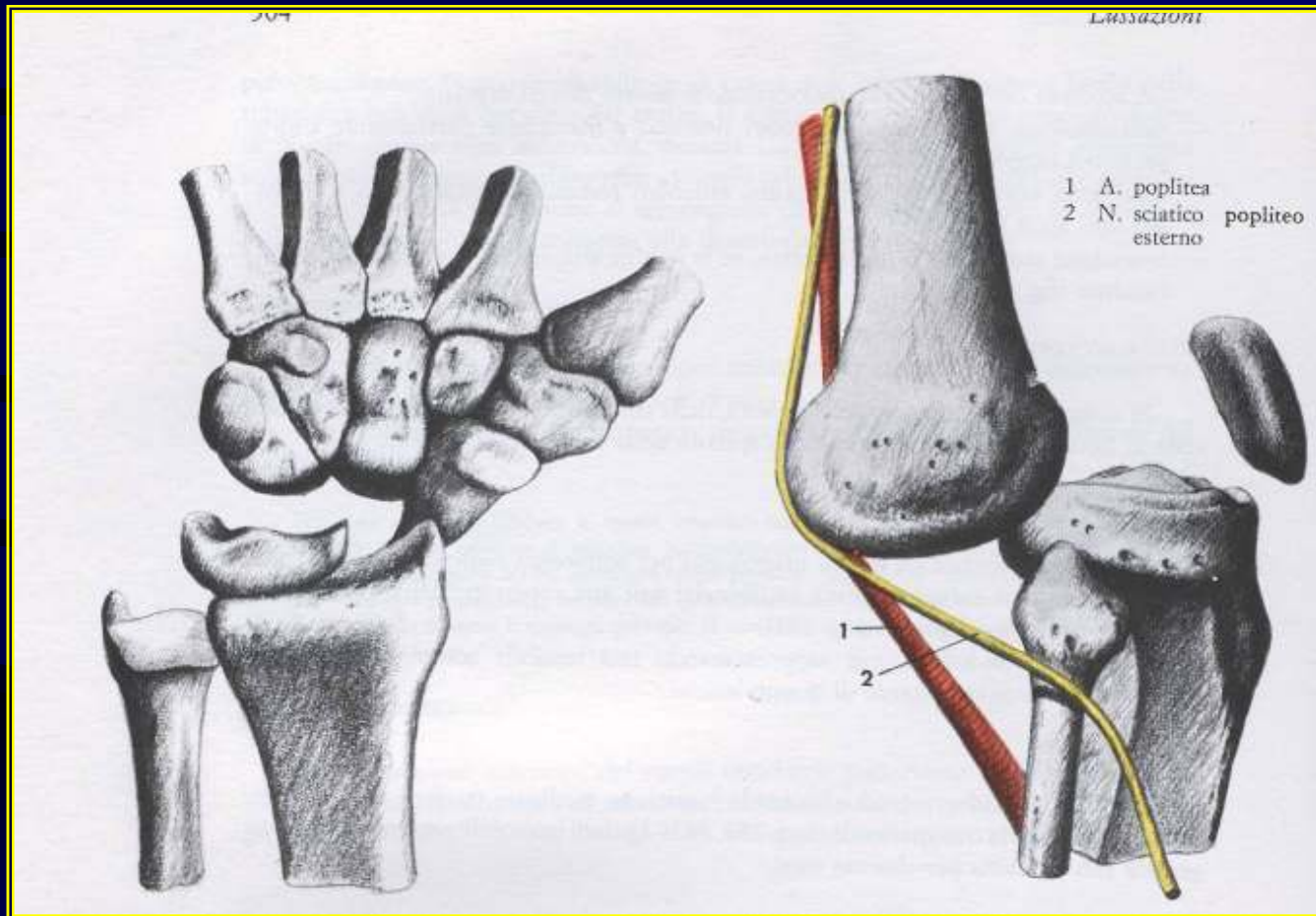
Più frequente posteriore, per caduta sulla mano,
con gomito in estensione



ANCA

Per trauma da cruscotto per gambe
accavallate





GRAZIE

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