**Periprosthetic fracture of the knee to fix or to replace?**

***1ry replacement:***

+Early FWB

+Less hospitalization

-more cost

***ORIF***

-major surgery when a less complex can be done

\*ongoing study : KFORT ( knee fixation or replacement trial)

<https://www.hra.nhs.uk/planning-and-improving-research/application-summaries/research-summaries/kfort-knee-fix-or-replacement-trial/>

**Clavicle fracture : fix or conserve?**

***Fixation :*** ( Canadian orthopedic trauma society – multi center RCT – 132 patient )

<https://www.ncbi.nlm.nih.gov/pubmed/17200303>

Less union time

Lower malunion rate

Better functional outcome

***Conserve:*** ( potter et al, same outcome)

Avoid surgical complications

Fracture will unite regardless time

Lower cost

***Cochrane review:*** suggest individualization of decision ( risk, benefit, patient profession)

**Proximal femoral fractures: IMHS or DHS**

RCT : no difference in outcome or rehab

Another RCT :

IMHS better outcome in unstable #

(reversed obliquity, comminuted posterior buttress, #extending to neck or shaft)

***MECHANICAL ADVANTAGES OF IMHS***

Allow compression in the axis of fracture

Resist medialisation

Load sharing

Less stress as it is nearer to the center of rotation

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4779359/>

<https://journals.lww.com/jorthotrauma/Abstract/2002/07000/Pertrochanteric_Fractures__Is_There_an_Advantage.4.aspx>

<https://europepmc.org/abstract/med/9553538>

**Acute primary shoulder dislocation (wait or operate?)**

***Cochrane review, Handoll et al,:***

Limited evidence support primary surgical intervention

<http://tees.openrepository.com/tees/handle/10149/92042>

**Distal radial fracture: (plate or kwire)**

***Multi-center RCT : DRAFFT***

12month = equal functional outcome + equal complication rate

k-wire advantage : easier removal, less soft tissue dissection

<https://bmcmusculoskeletdisord.biomedcentral.com/articles/10.1186/1471-2474-15-90>

<https://journals.lww.com/jbjsjournal/subjects/trauma/Abstract/2011/12070/A_Prospective_Randomized_Trial_Comparing.2.aspx>

**proximal humerus # : operate or conserve**

***meta-analysis comparing 3part and 4part fracture operate or non ( Jia et al 2014 )***

<https://www.healio.com/orthopedics/journals/ortho/2014-6-37-6/%7B1bf131af-b3f7-41a6-9152-76169f7a7220%7D/operative-versus-nonoperative-treatment-for-complex-proximal-humeral-fractures-a-meta-analysis-of-randomized-controlled-trials>

no difference functional outcome

increase in re-operation rate in operative technique in 24 month

***PROFHER: (RANGON ET AL 2014) Multicenter RCT***

<https://jamanetwork.com/journals/jama/fullarticle/2190987>

Surgical versus non surgical options in displaced fracture humerus

No difference in ( outcome, complication, reoperation rate)

**Humerus shaft fracture with radial nerve injury**

***Shao et al, systemic review 2005:***

<https://online.boneandjoint.org.uk/doi/abs/10.1302/0301-620X.87B12.16132>

no significant difference in recovery between 1ry (88%) and 2ry (93%) exploration

**Humerus fracture : (nail or plate)**

***Gosler et al, Cochrane review 2012:***

<https://europepmc.org/abstract/med/22258990>

No difference in (outcome, infection, non-union)

Nail – shoulder pain

Plate-gold standard

Holestien lewis : ( absolute or relative indication for radial nerve injury)

Exploration is the gold standard

**Pilon fracture :**

Span and plan (7-14 days)

***Vancouver group, White et al, 2010:***

<https://journals.lww.com/jorthotrauma/Abstract/2010/12000/The_Results_of_Early_Primary_Open_Reduction_and.7.aspx>

Fixed pilon fracture acutely in 48 hour ( excellent results, low complications)provided it is done by highly experienced surgeon

But in this study surgery was done by highly experienced surgeons, so results cannot be generalized to all surgeons

**Syndesmotic screw: remove or keep?**

<https://online.boneandjoint.org.uk/doi/abs/10.1302/0301-620X.96B12.34258>

General rule: don’t remove early or before mobilization as this will cause displacement

Loose or broken screw better than intact ones

**Fracture calcaneum: (open or closed)**

***RCT:***

<https://link.springer.com/chapter/10.1007/978-1-4471-5451-8_56>

<https://www.bmj.com/content/349/bmj.g4483>

Surgical treatment had no advantage in outcome or complication rate after 2 years

Surgical treatment best for open, gross deformity

**Scaphoid #: (non-displaced)**

<https://journals.lww.com/jbjsjournal/Abstract/2005/10000/Should_Acute_Scaphoid_Fractures_Be_Fixed___A.2.aspx>

No evidence to support :

Above or below elbow cast

Including or excluding thumb

Percutaneous fixation over cast

**Scaphoid #: (graft)**

***Systemic review:***

Nonvascular without fixation 80%

Nonvascular with internal fixation 84%

Vascular 91%

***Meta-analysis: (AVN cases treated with grafting)***

Vascular 88% union rate

Nonvascular 47% union rate

<https://journals.lww.com/jaaos/Abstract/2013/09020/Management_of_Nonunion_Following_Surgical.6.aspx>

<https://online.boneandjoint.org.uk/doi/abs/10.1302/0301-620X.95B6.31259>

**Tendon repair rehabilitation protocols:**

***Trumble et al, 2010:***

<https://journals.lww.com/jbjsjournal/subjects/Trauma/Abstract/2010/06000/Zone_II_Flexor_Tendon_Repair__A_Randomized.6.aspx>

Active protocols has better outcome and less contracture rate

**SCUFE :**

1. ***TYPE III : early or late***

Late realignment with neck osteotomy

Acute open relocation and fixation (e.g DUNN)

1. ***Timing of pinning:***

**Peterson et al,: AVN rate**

Within 24 hours = 7%

After 24 hours = 20%

**Kalogranilis et al,:**

Sever slip : fix less than 24 hour if not available then wait 1 week