

Sunday, June 1 2008	Auditorium nr.	Clio	Time	12.00 - 13.30
Category	Free Papers	Trauma lower extremity	Moderators	
	Trauma		Antonio Pace (Italy) , Massin Philippe (France)	
Time	Number of Abstract	Title	Presenting Author	Authors

12.40	F437	Factors affecting rates of infection and prolonged bone healing in 821 operative treated isolated tibial shaft fractures	Peter Reynders	Peter Reynders,
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Purpose

We reviewed all isolated tibial shaft fractures treated by operative means, with focus on prolonged healing and infection.
Design; Retrospective Case Control Study; level of evidence; Prognostic level III.

Methods

Patients: 821 isolated tibial shaft fractures, with a drop-out of 5.6%
Open fractures: 400 (grade I & II 280, grade IIIa,b,c 120)
Type A,B fractures : 597
Type C fractures : 224
Skeletal Fixation Modes: Ex;Fix (unilateral-one plane): 192, UTN(Synthes): 337, Plate(LCDDCP): 129 , RTN(Synthes): 163
Outcome measurements: Union time, requirement for secondary treatment, and development of deep infection.

Results

Infections: 94 (11,4 %), Closed # which became infected : 21 (5 %)
Open # which became infected : 73 (18 %)
Ex.Fix : 56 (29 %)
Plate : 15 (12 %)
UTN : 16 (5 %)
RTN : 7 (5 %)

In a multiple logistic regression analysis, only Soft tissue damage had a statistical significant interference with the outcome infection (point estimate 0.117, 95% CI 0.053-0.262)

Prolonged healing: 285 (34 %)? Delayed union 191

? Non-union 94

Closed fractures which develop a delayed healing: 56 (13 %)

Open fractures which develop a delayed healing : 135 (34%)

Closed fractures which develop a non-union : 20 (5 %)

Open fractures which develop a non-union : 74 (19%)

In a multiple logistic regression analysis, infection & fracture type had a statistical significant interference with the outcome prolonged healing.

Conclusions

The use of an unilateral external fixator as a definitive treatment for tibial fractures is obsolete.

For a contaminated tibial fracture the use of the UTN diminish the risk of infection.

Looking for the healing time, UTN & Ex.Fix. are associated with a significant prolonged bone healing time.