Treatment of noninfected nonunions by parafocal osteotomy according to Paltrinieri

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Osteotomies performed in the management of nonunions

(Pilnacek et al, 1997)

Intrafocal osteotomy

Transfocal osteotomy

Parafocal osteotomy
LA CHIRURGIA DEGLI ORGANI DI MOVIMENTO

Fondata da V. Putti
nel 1917
Direttore: R. Zanoli

Clinica Ortopedica dell’Università di Pisa
Direttore: Prof. M. Paltrinieri

L’OSTEOTOMIA PARAFOCALE NEL TRATTAMENTO DEI RITARDI DI CONSOLIDAZIONE E DELLE PSEUDOARTROSI DELLE OSSA LUNGHE DELL’ARTO INFERIORE

M. Paltrinieri
**Parafoveal osteotomy**

**Definition:** single or double osteotomy performed some cm away from the nonunion level

**Role:** remove all negative mechanical stimulations and reestablish the axis to normal

**Indications:** noninfected hypertrophic or normotrophic nonunions, nonunions with simple or complex deformities; nonunions with skin lesions at the affected site
Parafoocal osteotomy
(Paltrinieri, 1960)

Surgical technique:

osteotomy performed 3-6 cm away from the nonunion site, correction of deformities, immobilization by means of a cast (according to the original Paltrinieri’s technique) or by means of a compression-distraction device (as suggested by Umiarov, 1986)
Patients and methods - I

Patients treated between 1996 and 2009: 23
(follow-up: 2-15 years)

Sex: 16 men, 7 women

Mean age: 31 years (range: 25-50 years)

Time elapsed from fracture: 8-18 months

Previous treatment: osteosynthesis 19 cases, cast 4 cases

Type of noninfected nonunion: normotrophic 14, hypertrophic 9

Simple or complex bone deformity: all cases
Corticotomy: single 22 cases, double 1 case

Stabilization with an Ilizarov device: all cases

Post-op plan: immediate rehabilitation and early weight bearing, gradual correction of the deformities
45 year-old man
Proximal metaphyseal tibial nonunion with axial and translational deformity
26 year-old man
Proximal and distal tibial nonunion with axial and torsional deformity
Parafoveal osteotomy

Results

Superficial infection: 7 cases
Wires breaking: 5 cases
No vascular or nervous complications
No worsening of the knee or ankle range of motion

Nonunion healing, corticotomy consolidation and deformity correction obtained in all cases in an average of 120 days (range: 90-140 days)
Parafoocal osteotomy

Conclusion

Paltrinieri’s parafoocal osteotomy is a simple and effective technique

Stabilization with circular external fixation is a “natural” complement of the Paltrinieri’s osteotomy

Advantages: stability, assembly modularity, multiplanar control, possibility of gradually correcting the deformities
Parafocal osteotomy

References


