

||
||

*

:

()

experimental

:

AO

:

%

%

mm

III

mm

(P < /)

:

:

(AO)

Malgaigne

"

mm

"(exact reduction)"

Lambotte

(.)

(.)

()

%

()

experimental

Odd's Ratio

()

%	%	(%)	(%)	/ ± /		
				%	%	%
(%)		III A	% II	% I		%
mm	(%)			%	III B %	
			%			
mm		%	%		%	
()						

O.R	(n=) mm	(%)	(n=)	(%)	
P< /		(/)	(/)		I
		(/)	(/)		II
		(/)	()		IIIA
		(/)	(/)		IIIB
P< /		(/)	()		
		(/)	()		
P< /		(/)	(/)		
P< /		(/)	(/)		
		(/)	(/)		
P< /			(/)		
			(/)		
			(/)		

% /

()

(P< /) ()

III

(P< /) (Pin tract infection)

(P< /)

()

	(n=)	(n=)
--	-------	-------

P< /	(/)	II I
	(/)	IIIB IIIA

mm)

(

P< /	(/)
	(/)

(%) mm

%

(P< /)

mm

P< /

> mm

(Odd's Ratio=)

III

(B A)

/

.()

Henley

III B III A II Lawyer (). Lubbers

/

(Primary bone healing)

Kenwright (). ().

Rorabeck Schmidt

Egger ().

.()

mm

Helland (). mm

mm

.()

() III () II I

III

mm

(

%

(%) .(P< /)

Helland

III II I

REFERENCES

1. Green SA. Complications of External Skeletal Fixation Causes Prevention, and Treatment. USA: Charles C Thomas Pub. 1981.
2. Lambotte A. The operative treatment of fractures: report of fractures committee. Br Med J 1912; 2: 1530.
3. Karlstrom G, Olerud S. External fixation of severe open tibial fractures with the Hoffmann frame. Clin Orthop 1983; 180: 68-77.

-
4. Melendez EM, Colon C. Treatment of open tibial fractures with the Orthofix fixator. *Clin Orthop* 1989; 241: 224-30.
 5. Lawyer RB, Lubbers LM. Use of the Hoffmann apparatus in the treatment of unstable tibial fractures. *J Bone Joint Surg* 1980; 62A: 1264-73.
 6. Schmidt A, Rorabeck CH. Fractures of the tibia treated by flexible external fixation. *Clin Orthop* 1983; 178: 162-72.
 7. Egger EL, Gottsauner –Wolf F, Palmar J, Aro HT, Chao EYS. Effects of axial dynamization on bone healing. *J Orthop Trauma* 1993; 34: 185-92.
 8. Helland P, Boe A, Molster AO. Open tibial fractures treated with the Ex-fi-re external fixation system. *Clin Orthop* 1996; 326: 209-20.
 9. Henley MB, Chapman JR, Agel J, Harvey EJ, Whorton AM, Swiontkowski MF. Treatment of the type II, IIIa and IIIb open fractures of the tibial shaft: a prospective comparison of unreamed interlocking intramedullary nails and half-pin external fixators. *J Orthop Trauma* 1998; 12: 1-7.
 10. Kenwright J, Richardson JB, Cunningham JL, White SH, Goodship AE, Adams MA, et al. Axial movement in tibial fractures. A controlled randomised trial of treatment. *J Bone Joint Surg Br* 1995; 77B: 645-8.