

Appendix

TABLE E-1 Univariate Logistic Regression Analyses for All Tested Risk Factors in Patients with and without Deep Surgical Site Infection Following Proximal Tibial Fracture Plate Fixation

Characteristics	Patients with Deep Surgical Site Infection* (N = 34)	Control Patients* (N = 136)	OR†	P Value
Age ≥ 50 years	24 (71%)	64 (47%)	2.7 (1.2 to 6.1)	0.016
Female sex	12 (35%)	55 (40%)	1.2 (0.6 to 2.7)	0.6
American Society of Anesthesiologists grade 2 to 4	29 (85%)	87 (64%)	4.1 (1.4 to 12.3)	0.012
BMI ≥ 30 kg/m ²	14 (41%)	25 (18%)	3.2 (1.4 to 7.3)	0.005
Tobacco use	15 (44%)	33 (24%)	2.4 (1.1 to 5.3)	0.026
Alcohol abuse	15 (44%)	19 (14%)	4.9 (2.1 to 11.2)	<0.001
Diabetes	4 (12%)	13 (10%)	1.3 (0.4 to 4.1)	0.70
Peripheral vascular disease	3 (9%)	0 (0%)		0.99
Open fracture‡	6 (18%)	7 (5%)	3.9 (1.2 to 12.7)	0.021
OTA/AO-type fracture				
A	5	6		
B	9	83		
C	20	47		
C compared with B			3.9 (1.7 to 9.3)	0.002
A compared with B			7.7 (1.9 to 30.3)	0.004
C compared with A			2.0 (0.5 to 7.2)	0.31
High-energy injury	12 (35%)	66 (49%)	0.6 (0.3 to 1.3)	0.17
Compartment syndrome	13 (38%)	12 (9%)	6.4 (2.6 to 15.9)	<0.0001
Use of external fixator	21 (62%)	33 (24%)	5.0 (2.3 to 11.2)	<0.0001
Use of external fixator§ (bicondylar fractures only)	16 (80%)	24 (51%)	3.8 (1.1 to 13.2)	0.033
Mean duration of external fixation treatment# (days)	9	9.2	1.0 (0.9 to 1.1)	0.80
Mean time from injury to definitive surgical procedure# (days)	8.7	5.6	1.1 (1.0 to 1.2)	0.012
Mean operative time# (hr)	3.52	2.85	1.3 (1.0 to 1.6)	0.031
Use of a tourniquet	17 (50%)	108 (79%)	0.3 (0.1 to 0.6)	<0.001
Mean tourniquet time# (hr)	2.02	1.85	1.0 (1.0 to 1.1)	0.11
Use of a drain	8 (24%)	30 (22%)	1.1 (0.4 to 2.6)	0.85
Optimal timing of prophylactic antibiotic	15 (44%)	87 (64%)	0.5 (0.2 to 1.1)	0.08
Use of arthroscopy	2 (6%)	22 (16%)	0.3 (0.1 to 1.5)	0.14
Use of autograft bone	9 (26%)	51 (38%)	0.4 (0.2 to 1.1)	0.08
Use of allograft or synthetic bone graft	10 (29%)	45 (33%)	0.5 (0.2 to 1.3)	0.14
Dual-incision approach	18 (53%)	39 (29%)	2.8 (1.3 to 6.0)	0.009
Bicondylar plating	12 (35%)	22 (16%)	2.8 (1.2 to 6.5)	0.015

*The values are given as the number of patients, with or without the percentage in parentheses, or as the mean. †The values are given as the OR, with the 95% CI in parentheses. ‡All open fractures were classified as Gustilo grade III. §Twenty patients with a deep surgical site infection and 47 control patients had bicondylar fractures. #The OR is for a 1-unit increase in these continuous risk factors.