

Results

Demographics

Total

- 52 cases (12 females, 40 males)
- Average age: 46.2 years (range, 16–86 years)
- Cierny-Mader Host Status⁶: 38B, 14A
- Average length of follow-up: 15.6 months (range, 1–60 months)

Method 1: Mold

- 32 cases (23 males, 9 females)
- Average age: 46.5 years (range, 16–86 years)
- Cierny-Mader Host Status⁶: 24B, 8A
- Average length of follow-up: 22.5 months (range, 2–60 months)

Method 2: Silicone Tubing

- 20 cases (17 males, 3 females)
- Average age: 45.7 years (range, 19–80 years)
- Cierny-Mader Host Status⁶: 14B, 6A
- Average length of follow-up: 4.5 months (range, 1–12 months)

Diagnosis

Total

- 17 segmental bone defects after débridement
- 34 infected nonunions or arthrodeses
- 1 acute fracture after external fixation

Method 1: Mold

- 17 infected nonunions
- 15 segmental defects (average size of defect, 8.63 cm; range, 1–30 cm)

Method 2: Silicone Tubing

- 17 infected nonunions
- 2 segmental defects (6 cm and 1.5 cm)
- 1 acute fracture

Cultured Organisms

	M1: Mold	M2: Silicone Tubing
Multiple organisms	11	4
MRSA	17	13
<i>Pseudomonas</i>	1	2
<i>Enterobacter</i>	4	1
<i>E. coli</i>	3	0
<i>Serratia marcescens</i>	3	0
<i>Acinetobacter</i>	1	2
Group B Streptococcus	3	0
enterococcus	2	0
Coagulase-negative <i>Staphylococcus</i>	2	3
<i>Staphylococcus aureus</i>	3	0
<i>Streptococcus viridans</i>	1	0
<i>Morganella</i>	1	0
<i>Corynebacterium</i>	2	0
<i>Micrococcus</i>	1	0
<i>Proteus</i>	0	2
<i>Citrobacter</i>	1	0
<i>Klebsiella</i>	0	1

MRSA, Methicillin-resistant *Staphylococcus aureus*. The most common outlined organism in both methods was MRSA.

Type of Rod	M1: Mold	M2: Silicone Tubing	Total
Hindfoot fusion	7	9	16
Tibial	7	4	11
Femoral antegrade	7	3	10
Knee arthrodesis	9	3	12
Femoral retrograde	2	1	3

Additional Procedures for Infection

	M1: Mold	M2: Silicone Tubing	Total
Rod removal	3	0	3
Débridement	2	1	3
Femoral antegrade	5	2	7
AKA	2	0	2
Total	12	3	15

AKA, Above-knee amputation.

Additional Procedures for Union: Bone Graft with or without Additional Fixation

	Total	M1: Mold	M2: Silicone Tubing
Total	10	10/49	20.4%
M1: Mold	6	6/29	20.7%
M2: Silicone Tubing	4	4/20	20.0%