

TABLE E-1 Definition of a Periprosthetic Hip Infection

Isolation of the same organism from two or more specimens of preoperative joint fluid and/or intraoperative tissue specimens plus one or more of the following criteria:

1. A sinus tract communicating with the prosthesis
2. Synovial leukocyte count of $>1700/\text{mm}^3$ with a differential of $>65\%$ neutrophils
3. Clinical (i.e., local inflammatory signs including swelling, warmth, erythema), laboratory (C-reactive protein of $>5 \text{ mg/L}$), or radiographic signs (i.e., periosteal bone formation, subchondral osteolysis) of infection

TABLE E-2 Outcomes Measured During the Course of Follow-up of 157 Periprosthetic Hip Infections Treated by One-Stage Exchange Arthroplasty

Reinfection	Outcomes
Relapse	Preoperative joint fluid and/or intraoperative specimens grew the same bacterial organism on culture as in the inclusion periprosthetic hip infection
New infection	Preoperative joint fluid and/or intraoperative specimens grew a different bacterial organism on culture as in the inclusion periprosthetic hip infection
Early	New infection occurring within the twelve-week postoperative period, while on an effective antibiotic regimen
Late	New infection occurring after the completion of a twelve-week effective antibiotic regimen
Mechanical revision	Revision arthroplasty in a patient with no clinical, biological, or radiographical signs of a periprosthetic hip infection <u>and</u> negative joint fluid culture specimens
Death	
Related	Death secondary to periprosthetic hip infection-associated sepsis, surgery, or postoperative or antibiotic-related complication
Unrelated	Death due to a cause unrelated to the periprosthetic hip infection

TABLE E-3 Description of Mechanical Revisions (Aseptic Failures) Occurring During Follow-up of 157 Periprosthetic Hip Infections Treated by One-Stage Arthroplasty

Age (yr)	Sex	Comorbidities	Time to Revision Arthroplasty (mo)	Cause of Revision	Cemented Acetabular Component	Cemented Femoral Component	Type of Revision Arthroplasty	Intraoperative Culture Specimen
58	Female	Type-II diabetes mellitus, body mass index of 52 kg/m ²	2	Femoral fracture	No	No	Osteosynthesis	Sterile
45	Male	Ankylosing spondylitis, body mass index of 30 kg/m ²	18	Acetabular loosening	Yes	Yes	Acetabular exchange	Sterile
57	Male	Mechanical valve heart replacement	22	Femoral loosening	No	Yes	Femoral exchange	Sterile
42	Female	Buschke-Ollendorff syndrome	36	Femoral fracture	Yes	No	Cerclage wires	Sterile
60	Male	None	48	Bipolar loosening	Yes	Yes	One-stage exchange	Methicillin-resistant <i>S. warneri</i> *
54	Male	Body mass index of 31 kg/m ² , chronic epididymitis	60	Instability	Yes	No	Acetabular, femoral head exchange	Sterile
78	Male	Cardiac arrhythmia (pacemaker)	66	Femoral fracture	Yes	Yes	Femoral exchange	Sterile
55	Female	Body mass index of 34 kg/m ²	72	Bipolar loosening	No	Yes	One-stage exchange	Sterile
53	Male	Severe osteoporosis	90	Bipolar loosening	No	No	One-stage exchange	Methicillin-resistant <i>S. epidermidis</i>

*The bacterium isolated during revision for aseptic loosening was different from the one found at inclusion. The patients received three months of antibiotic treatment.

TABLE E-4 Description of Related and Unrelated Deaths Occurring During Follow-up of 157 Periprosthetic Hip Infections Treated by One-Stage Arthroplasty

Event	Age (yr)	Sex	Comorbidities	Time to Death	Cause of Death
Related deaths (n = 2)	82	Male	None	2 days	Postoperative septic shock due to toxic shock syndrome toxin-secreting methicillin-resistant <i>Staphylococcus aureus</i>
	80	Female	Anti-phospholipid syndrome, recurrent thrombosis	14 days	Postoperative complications with multiple organ dysfunction syndrome
Unrelated deaths (n = 19)	71	Male	None	2 months	Malignancy
	77	Female	None	5 months	Pulmonary embolism
	80	Female	Type-II diabetes mellitus, myelodysplasia, renal insufficiency	8 months	Septic shock
	89	Male	Paget disease	11 months	Intestinal occlusion
	79	Male	Chronic occlusive arterial disease, body mass index of 30 kg/m ²	16 months	Cardiovascular disease
	69	Male	Malignancy	16 months	Malignancy
	67	Female	Non-Hodgkin lymphoma	16 months	Malignancy
	71	Male	Malignancy	20 months	Malignancy
	61	Female	Malignancy	20 months	Malignancy
	65	Male	Alcoholism	26 months	Cardiovascular disease
	80	Male	None	31 months	Cardiovascular disease
	62	Female	Malignancy	34 months	Malignancy
	83	Female	Cardiac arrhythmia, pacemaker	38 months	Cardiovascular disease
	90	Female	Type-II diabetes mellitus, arrhythmia	40 months	Cardiovascular disease
	76	Female	Ischemic heart disease	41 months	Cardiovascular disease
	77	Male	None	41 months	Cardiovascular disease
	82	Male	None	47 months	Cardiovascular disease
	84	Female	Chronic occlusive arterial disease	48 months	Intestinal bleeding
	56	Male	Body mass index of 31 kg/m ²	55 months	Cardiovascular disease