

TABLE E-1 Characteristics and Management of Pathologic Fractures Following Acute Hematogenous *Staphylococcus aureus* Osteomyelitis in Seventeen Children

Patient No.	Age (yr)	Sex	Days to Fracture	Fracture Site*	Initial Treatment	Bone-Healing	Delayed Surgery	Duration of Follow-up (mo)
1	10	M	40	Fibula, distal MD	Cast	Union	None	6.5
2	3	M	20	Femur, distal MD	Spica cast	Union with substantial deformity	Osteotomy for realignment + internal fixation	18
3	2	M	60	Femur, distal MD	Spica cast	Union with some deformity	None as yet (awaiting remodeling of deformity)	32
4	7	M	30	Fibula, distal MD	Cast	Nonunion	Open reduction and internal fixation + iliac crest bone graft	21
5	7	F	46	Femur, distal MD	Spica cast	Union with some deformity	None as yet (awaiting remodeling of deformity)	41.5
6	12	F	84	Humerus, proximal MD	Shoulder immobilizer	Union with some deformity	None as yet (awaiting remodeling of deformity)	10
7	2	F	116	Femur, distal MD	Spica cast	Union with some deformity	None as yet (awaiting remodeling of deformity)	38
8	8	M	120	Femur, distal MD	Spica cast	Union with some deformity	None as yet (awaiting remodeling of deformity)	31
9	13	M	150	Femur, distal MD	Spica cast	Union + sequestrum	Saucerization + sequestrectomy	31
10	12	F	34	Fibula, distal MD	Cast	Union	None	15
11	6	F	62	Tibia, proximal MD	Cast	Nonunion + extensive sequestrum	Resection + bone transport with external fixator	20
12	5	M	52	Femur, segmental: distal MD	Spica cast	Union + distal femoral	None as yet (may need surgery later)	15

				and distal physeal		growth arrest	for limb-length discrepancy)	
13	13	M	102	Femur, distal MD	Bilateral internal fixation (antibiotic nail) + bone substitutes	Union	None	18
14	9	F	56	Femur, distal MD	Spica cast	Union with some deformity	None as yet (awaiting remodeling of deformity)	15
15	17	M	120	Femur, distal MD	Intramedullary nail fixation	Union	None	14
16	7	F	36	Humerus, proximal MD	Shoulder immobilizer	Union	None	27
17	16.3	M	98	Fibula, distal MD	Cast	Union + sequestrum	Saucerization + sequestrectomy	27

*MD = metaphyseal-diaphyseal.

TABLE E-2 Characteristics of the Groups with and without a Pathologic Fracture

	Fracture Group	Non-Fracture Group	P Value
No. of patients	17	49	
Age* (yr)	8.8 (2-17)	8 (1.2-16.3)	0.543
Male sex (%)	10/17 (59%)	29/49 (59%)	0.980
Body mass index* (kg/m^2)	19.4 (12.6-29.8)	20.3 (13.4-45.1)	0.853
Organism, MRSA:MSSA† (%)	15:2 (88%:12%)	43:6 (88%:12%)	1.000
Location of osteomyelitis, femur:tibia:fibula:humerus	10:1:4:2	26:17:4:2	0.055

*The values are given as the mean, with the range in parentheses. †MRSA = methicillin-resistant *Staphylococcus aureus*, and MSSA = methicillin-sensitive *Staphylococcus aureus*.

TABLE E-3 Complications in the Children with a Pathologic Fracture

Patient No.	No. of Complications	Complications*
1	3	Pyomyositis, chronic OM, pathologic fracture
2	3	Chronic OM, pathologic fracture, malunion
3	4	Pyomyositis, chronic OM, pathologic fracture, malunion
4	5	Septicemia, pneumonia, chronic OM, pathologic fracture, nonunion
5	8	Septic PE, pericarditis and pericardial effusion, septic shock, bilateral pleural effusion, septic arthritis (ankle, knee, elbow), multiple joint contractures, chronic OM, pathologic fracture, malunion
6	10	Septic shock, septic arthritis (shoulders, knee, ankle, elbow), pericarditis, pyelonephritis, anemia, hypertension, pyomyositis, chronic OM, pathologic fracture, malunion
7	5	Septic arthritis, DVT, chronic OM, pathologic fracture, malunion
8	3	Chronic OM, pathologic fracture, malunion
9	4	Septic shock, chronic OM, pathologic fracture, sequestrum
10	2	Chronic OM, pathologic fracture
11	4	Pyomyositis, chronic OM with sequestrum, pathologic fracture, nonunion
12	14	Segmental pathologic fracture, septic shock, pleural effusion, bilateral pericarditis, DIC, acute tubular necrosis, DVT, septic PE, anemia, pyomyositis, hypertension, septic arthritis (knee, ankle, elbow), chronic OM, growth arrest
13	5	Acute renal failure, pyomyositis, bone marrow suppression, chronic OM, pathologic fracture
14	4	Pyomyositis, chronic OM, pathologic fracture, malunion
15	12	Septic shock, bone marrow suppression, anemia, thrombocytopenia, pneumonia, DVT, PE, septic arthritis (knee), hepatitis, pseudoaneurysm (superior geniculate artery), chronic OM, pathologic fracture
16	3	Pyomyositis, chronic OM, pathologic fracture
17	4	Pyomyositis, chronic osteomyelitis, pathologic fracture, sequestrum

*OM = osteomyelitis, DVT = deep vein thrombosis, DIC = disseminated intravascular coagulation, and PE = pulmonary embolism.