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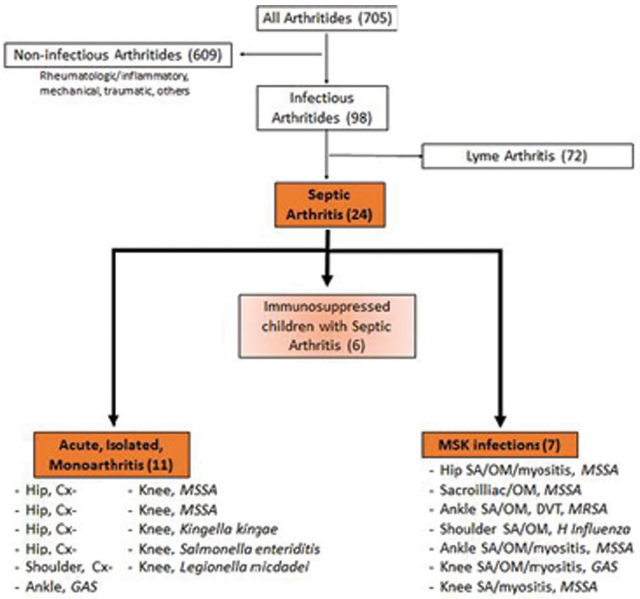
Background. Children with acute arthritis are commonly admitted to the hospital in part due to concern for septic arthritis (SA) and its complications. Many noninfectious, non-urgent conditions are more common than SA and present similarly. The epidemiology and clinical presentation of SA influences management of patients with acute arthritis.

Methods. Utilizing the electronic medical record, we reviewed the charts of children (1–18 years old) with joint complaints who presented to the hospitals and clinics of one large academic health organization in the Upper Midwest from January 2011 to July 2016. Query criteria included the presenting symptom ("arthritis", "joint swelling", or "joint pain"), diagnosis ("arthritis", "septic arthritis", or "Lyme arthritis"), and/or positive synovial fluid culture. SA was confirmed when synovial bacterial culture or PCR were positive. SA was suspected in cases with a positive blood culture or when the patient was treated empirically with 4 weeks of antibiotic with no alternate diagnosis. All other children were excluded from the study cohort.

Results. Of the 705 children whose charts were reviewed, 609 were excluded with a noninfectious diagnosis and 72 with Lyme arthritis (Figure 1). We identified 24 children with SA. Six children diagnosed with SA were immunosuppressed. Among healthy children with SA, seven were diagnosed with contiguous musculoskeletal (MSK) infection and 11 were diagnosed with acute, isolated, monoarticular arthritis. SA was more common in boys. The most common pathogen isolated was *S aureus* (13). The knee (7) and hip (6) accounted for the majority of joints involved in healthy children.

Conclusion. SA is a rare cause of acute arthritis in children. In healthy children, SA may present with contiguous MSK infection or in an isolated joint. SA is more likely in boys and in the knee or hip joint. *S. aureus* is the most common cause of SA. Clear understanding of the epidemiology and clinical history of SA should shape clinical decision making in children with acute arthritis.

Figure 1. MSK – musculoskeletal, SA – septic arthritis, OM – osteomyelitis, DVT – deep venous thrombosis, Cx – culture negative.



Disclosures. **All authors:** No reported disclosures.

228. The Use of Rifampin Therapy to Treat Diabetic Patients with Osteomyelitis of the Foot in the Veterans Health Administration: Patient Characteristics and Clinical Outcomes

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Background. Nearly 25% of Veterans Health Administration (VHA) patients are diagnosed with diabetes mellitus (DM). Among DM patients, the lifetime incidence of foot ulcers is 15%. Infection is a common complication of foot ulcers and 20–60% of infections result in diabetic foot osteomyelitis (DFO). Current treatment guidelines do not endorse any specific antibiotic agent for DFO, but small clinical trials suggest the addition of rifampin to antimicrobial regimens results in improved cure rates for osteomyelitis.

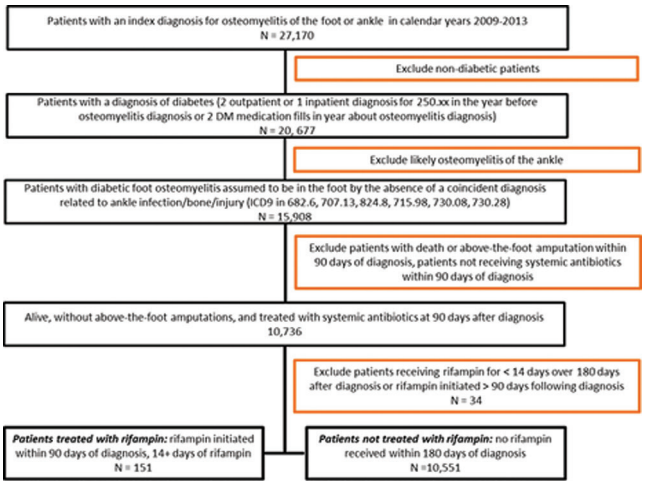
Methods. Using VHA databases, we identified index DFO cases from 2009 to 2013 and extracted patient and infection characteristics including demographics, comorbidities, chronic medications, antibiotic regimens, and microbiology data when present. We analyzed the subset of patients alive, without high-level amputation, and treated with antibiotics at 90 days after diagnosis. We summarized patient characteristics and compared a composite endpoint of amputation or death within 2 years of DFO diagnosis among those treated with rifampin to those not treated with rifampin.

Results. In total, 10,736 DFO cases met our criteria (Figure). Of these, 151 were considered treated with rifampin, based on 14 or more days of rifampin initiated within 90 days of diagnosis; 10,551 were unexposed to rifampin; and 34 were excluded for late or short treatment with rifampin. We observed significant differences between patients treated with and without rifampin (Table) and 44% of rifampin-treated patients were seen in 14 facilities.

Amputation or death at 2 years was observed in 44 (29%) of patients treated with rifampin and 4,007 (38%) of patients not treated with rifampin ($P = 0.03$).

Conclusion. Rifampin was rarely used in the treatment of DFO in the VHA and a few facilities accounted for a large proportion of rifampin-treated cases. We observed higher rates of amputation-free survival in patients treated with rifampin, but in the presence of notable confounders including age, comorbidities, and organism.

	Not treated with rifampin $N = 10,551$	Treated with rifampin $N = 151$	P-value
Age (mean)	65	62	<0.01
Charlson comorbidity (mean)	4.0	3.5	<0.01
Warfarin (prior 6 months) (%)	9.7	6.6	0.25
S. aureus identified (%)	33.9	45.7	<0.01
Complex VA Medical Center (%)	39.4	45.0	0.19



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229. Recent Respiratory Tract Infection and Additional Surgeries Increase Risk for Surgical Site Infection in Total Joint Arthroplasty: A Retrospective Analysis of 2255 Patients

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