396. Aminoglycoside Acute Kidney Injury (AKI) Following the Implantation of Tobramycin Loaded Polyethylene Glycol (PMMA) Cement and Calcium Sulphate (CaSO4) Beads for the Treatment of Periprosthetic Joint Infection (PJI): Logistic, Pharmacodynamics and Toxicity in 80 Patients 

**Background.** Antibiotic loaded bone cement (ALBC) in PMMA, generally with tobramycin and vancomycin, is used for the treatment of PJI. The potential toxicity of tobramycin when used in carbonate cement has been a matter of concern. Aminoglycosides, including tobramycin, are non-renal excreted drugs that may cause significant nephrotoxicity.

**Methods.** A retrospective study was conducted from January 2011 to December 2017 of patients admitted to UPMC Children’s Hospital of Pittsburgh and diagnosed with Lyme arthritis. We recorded the clinical presentation, laboratory data, details of hospitalization and follow-up, costs and outcome after therapy to compare the impact of antibiotic therapy alone (non-operative group) vs. antibiotics plus operative debridement (operative group).

**Results.** We identified 164 patients admitted for management of arthritis with the eventual diagnosis of Lyme arthritis. Fifty-two patients underwent operative debridement in addition to antibiotic therapy. Operative debridement plus antibiotics was associated with increased duration of admission, increased the cost of hospitalization, and increased PICC line placement compared with antibiotics alone. In patients for whom follow-up information was available, resolution of symptoms was documented in 62 of 66 patients in the non-operative group and 46 of 47 patients in the operative group with a median duration to symptom resolution of 17 and 23 days, respectively.

**Conclusions.** Operative debridement for pediatric patients with Lyme arthritis was associated with increased cost and duration of hospitalization, and a greater number of procedures, while being similarly efficacious to non-operative management with antibiotic therapy alone.

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

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397. Operative Intervention in Pediatric Lyme Arthritis Increases Healthcare Resource Utilization Without Improved Outcomes 

**Background.** Lyme arthritis commonly presents as an acute inflammatory monarticular arthritis, frequently challenging to distinguish from septic arthritis. While management for Lyme arthritis focuses on antibiotic therapy, septic arthritis requires operative debridement plus antibiotic therapy. Delay in Lyme serology results may complicate decisions on surgical intervention in Lyme endemic areas. During the transition period of western Pennsylvania to a Lyme endemic region many children ultimately diagnosed with Lyme arthritis were managed by operative intervention due to diagnostic ambiguity. The impact of an operative intervention on outcomes of pediatric Lyme arthritis is unknown.

**Methods.** We conducted a retrospective chart review from 2008 to 2018 of patients admitted to UPMC Children’s Hospital of Pittsburgh and diagnosed with Lyme arthritis. We recorded the clinical presentation, laboratory data, details of hospitalization and follow-up, costs and outcome after therapy to compare the impact of antibiotic therapy alone (non-operative group) vs. antibiotics plus operative debridement (operative group).

**Results.** We identified 164 patients admitted for management of arthritis with the eventual diagnosis of Lyme arthritis. Fifty-two patients underwent operative debridement in addition to antibiotic therapy. Operative debridement plus antibiotics was associated with increased duration of admission, increased the cost of hospitalization, and increased PICC line placement compared with antibiotics alone. In patients for whom follow-up information was available, resolution of symptoms was documented in 62 of 66 patients in the non-operative group and 46 of 47 patients in the operative group with a median duration to symptom resolution of 17 and 23 days, respectively.

**Conclusions.** Operative debridement for pediatric patients with Lyme arthritis was associated with increased cost and duration of hospitalization, and a greater number of procedures, while being similarly efficacious to non-operative management with antibiotic therapy alone.

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

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398. Description of a Large Pediatric Lyme Arthritis Cohort in an Endemic Region 

**Background.** Lyme arthritis commonly presents as an acute inflammatory monarticular arthritis, frequently challenging to distinguish from septic arthritis. While management for Lyme arthritis focuses on antibiotic therapy, septic arthritis requires operative debridement plus antibiotic therapy. Delay in Lyme serology results may complicate decisions on surgical intervention in Lyme endemic areas. During the transition period of western Pennsylvania to a Lyme endemic region many children ultimately diagnosed with Lyme arthritis were managed by operative intervention due to diagnostic ambiguity. The impact of an operative intervention on outcomes of pediatric Lyme arthritis is unknown.

**Methods.** We conducted a retrospective chart review from 2008 to 2018 of patients admitted to UPMC Children’s Hospital of Pittsburgh and diagnosed with Lyme arthritis. We recorded the clinical presentation, laboratory data, details of hospitalization and follow-up, costs and outcome after therapy to compare the impact of antibiotic therapy alone (non-operative group) vs. antibiotics plus operative debridement (operative group).

**Results.** We identified 164 patients admitted for management of arthritis with the eventual diagnosis of Lyme arthritis. Fifty-two patients underwent operative debridement in addition to antibiotic therapy. Operative debridement plus antibiotics was associated with increased duration of admission, increased the cost of hospitalization, and increased PICC line placement compared with antibiotics alone. In patients for whom follow-up information was available, resolution of symptoms was documented in 62 of 66 patients in the non-operative group and 46 of 47 patients in the operative group with a median duration to symptom resolution of 17 and 23 days, respectively.

**Conclusions.** Operative debridement for pediatric patients with Lyme arthritis was associated with increased cost and duration of hospitalization, and a greater number of procedures, while being similarly efficacious to non-operative management with antibiotic therapy alone.

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