Figure 1: Identification and classification of a large Lyme arthritis cohort.

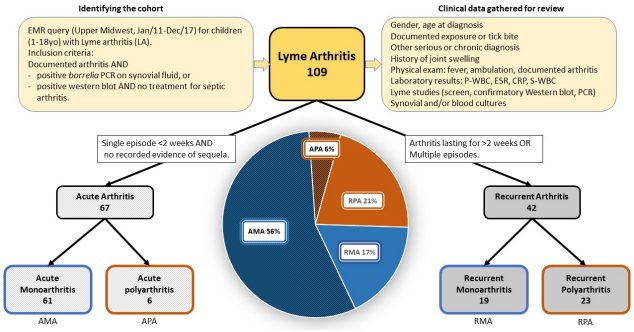
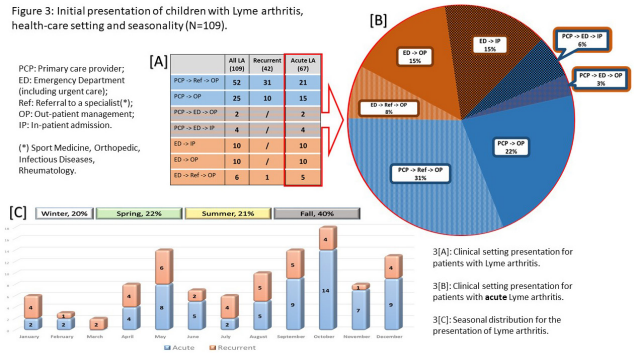


Figure 2: Demographics and clinical findings in children with Lyme arthritis (N=109).

		Lyme Arthritis (109)	Acute Monoarthritis (61)	Acute Polyarthritis (6)	Recurrent Monoarthritis (19)	Recurrent Polyarthritis (23)
Age	Range	3 - 18	3 - 18	6 - 12	3 - 18	4 - 15
Years	Mean	9	9	8	11	10
Gender	Female	36	17	4	5	10
	Male	73	44	2	14	13
Tick Bite / Exposure		56	34	6	7	9
P-WBC	#	94	57	3	13	21
k/µL	Range	4.9 - 16.1	5 - 16.1	6.7 - 10.9	5.3 - 11	4.9 - 13.3
	Mean	9.1	9.6	8.3	8	8.6
ESR	#	93	54	4	15	20
mm/hr	Range	1 - 97	7 - 89	30 - 78	1 - 62	7 - 97
	Mean	32	33	55	25	30
CRP	#	83	52	3	14	14
mg/L	Range	0 - 150	0 - 150	22 - 44	0 - 50	0 - 132
	Mean	26	31	32	17	18
S-WBC	#	41	26	2	7	6
k/µL	Range	8 - 115	8 - 115	54 - 85	15 - 56	10 - 41
	Mean	43	49	70	30	29
Ambulation	No wt bearing	12	9	1	0	2
	Percent	11%	13%	17%	0	9%
Fever	Febrile	15	13	1	0	2
	Percent	14%	22%	17%	0	9%
Admission	Number	14	12	2	0	0
	Percent	13%	20%	33%	0	0%

Figure 3: Initial presentation of children with Lyme arthritis, health-care setting and seasonality (N=109).

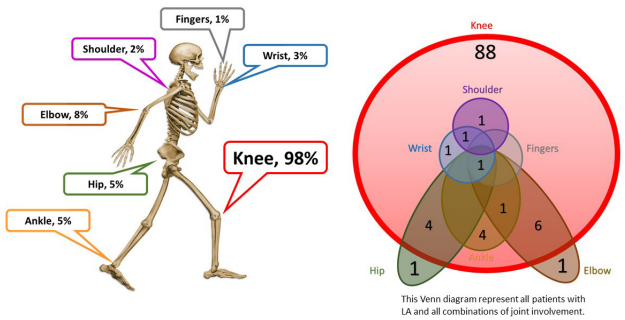


3[A]: Clinical setting presentation for patients with Lyme arthritis.

3[B]: Clinical setting presentation for patients with **acute** Lyme arthritis.

3[C]: Seasonal distribution for the presentation of Lyme arthritis.

Figure 4: Anatomical distribution of Lyme arthritis in children (N=109).



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

399. Treatment and Outcome of Prosthetic Joint Infection in Unicompartmental Knee Arthroplasty

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Session: 48. Infections of Joints

Thursday, October 3, 2019: 12:15 PM

Background. Unicompartmental knee arthroplasty (UKA) is an increasingly popular alternative to total knee replacement due to easier recovery and greater satisfaction. However, limited evidence guides the management of periprosthetic joint infection (PJI) in UKA specifically. We retrospectively reviewed the largest cohort of UKA PJI to date, providing our experience in a high volume tertiary institution.

Methods. An institutional PJI database was queried from 2008 to 2016 to identify all PJI cases with an index procedure of UKA. Treatment, diagnostic criteria, Charlson Comorbidity Index (CCI) and microbiology data were collected. Success was defined as no further surgical treatment for infection at 2 years. A chi-square test or Fisher's exact test was used for comparisons between treatment success and failure groups. Survival probability was calculated using the Kaplan–Meier method.

Results. A total of 24 UKA PJIs were identified with 22 meeting MSIS criteria. Median age at infection was 65.9 years (range, 50.8–87.4), median BMI was 26.7 kg/m^2 (range, 21.2–49.5), 75% male (18/24).The average follow-up time was 2.83 years. 9 patients presented with early (4 weeks of symptoms). 63% (15/24) of PJI cases were staphylococcal and 8.3% (2/24) were culture negative. Patients were either treated with 1 stage exchange (n = 3, 100% success), two-stage exchange (n = 5, 80% success) or implant retention (n = 16, 75% success). Overall survivorship was 79% at 2 years (95% confidence interval [CI], 63%–95%). Overall there was no significant association between success and CCI (P = 0.46), infection type (P = 0.29), surgical therapy (P = 0.62), and microorganism (P = 0.05).

Conclusion. In this series, UKA PJIs tended to present more often as early post-operative or hematogenous infections. We observed no significant benefit with revision surgery and therefore conclude that implant retention should be considered as first-line surgical treatment. Outcomes of UKA PJI appear comparable to those in TKA PJIs.

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

400. Comparison of Tolerance and Microbiological Efficacy of Cefepime and Piperacillin/Tazobactam in Combination with Vancomycin as Empirical Antimicrobial Therapy of Prosthetic Joint Infection: A Propensity-Matched Cohort Study

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Session: 48. Infections of Joints

Thursday, October 3, 2019: 12:15 PM

Background. The use of piperacillin/tazobactam with vancomycin as empirical antimicrobial therapy (EAT) for prosthetic joint infection (PJI) has been associated with an increased risk of acute kidney injury (AKI), leading to propose cefepime as an alternative since 2017 in our reference center. The present study compared microbiological efficacy and tolerance of these two EAT strategies.

Methods. All adult patients with PJI empirically treated by vancomycin-cefepime (n = 89) were enrolled in a prospective observational study, and matched with vancomycin-piperacillin/tazobactam-treated historical controls (n = 89) according to a propensity score including age, baseline renal function and concomitant use of other nephrotoxics. The two groups were compared using Kaplan–Meier curve analysis and non-parametric tests (Fisher exact test and Mann–Whitney U-test) regarding: (i) the proportion efficacious empirical regimen (i.e., at least one of the two molecules active against the identified organism(s) based on *in vitro* susceptibility testing); and (ii) the incidence of empirical therapy-related adverse events (AE), classified according to the Common terminology criteria for AE (CTCAE).

Results. Among the 146 (82.0%) documented infections, the EAT was considered as efficacious in 77 (98.7%) and 65 (98.5%) of the piperacillin–tazobactam and cefepim-treated patients, respectively (P = 1.000). The rate of AE, and in particular AKI, was significantly higher in the vancomycin–piperacillin/tazobactam (n = 27 [30.3%] and 23 [25.8%%]) compared with the vancomycin-cefepim (n = 13 [14.6%] and 6 [6.7%]) group (P = 0.019 and <0.001, respectively; figure), leading to a premature EAT discontinuation in 20 (22.5%) and 5 (5.6%) patients (P = 0.002). Of note, no significant differences were observed between the two groups regarding sex (91 males; 51.1%), median age (68-year-old; IQR, 59.3–75), main comorbidities including baseline renal function and proportion of patients receiving other nephrotoxics, and vancomycin plasmatic overload.

Conclusion. The empirical use of vancomycin-cefepim in PJI was as efficient as vancomycin–piperacillin/tazobactam, and was associated with a significantly lower incidence of AKI.

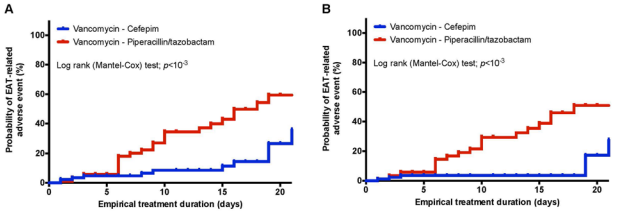

Figure - Probability of empirical antimicrobial therapy-related adverse events (A) and acute kidney injury (B) in patients receiving vancomycin in combination with cefepim (blue lines) or piperacillin/tazobactam (red lines) for prosthetic joint infection

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