228. Clinical and Radiologic Manifestations of Cat-Scratch Osteomyelitis in Children

Guzl Erdem, MD;1 Loujain Shorbatli, PharmD;2 Joshua Watson, MD;3 W. Garrett Hunt, MD, DTMI&H;1 Cody Young, MD,1 Milap Nahata, PharmD;2 Cristina Tomatis Sourbierille, MD;2 and Katalin Koranyi, MD;2 1Pediatrics, Nationwide Children's Hospital and the Ohio State University School of Medicine, Columbus, Ohio; 2Pharmacy, OSU, Columbus, Ohio; 3Department of Pediatrics, Nationwide Children's Hospital and the Ohio State University School of Medicine, Columbus, Ohio, 4Nationwide Children's Hospital and Ohio State University College of Medicine, Columbus, Ohio, 5OSU, Columbus, Ohio, 6Infectious Diseases, Nationwide Children's Hospital, Columbus, Ohio

**Session:** 250. Pediatric Bacterial Infections: From A to Z  
**Saturday, October 7, 2017: 12:30 PM**

**Background.** Osteomyelitis (OM) is a rare sequel of cat scratch disease (CSD), often with atypical bone involvement. Clinical presentation of CSD OM is not well described. We sought to determine the clinical and radiologic manifestations of CSD OM patients admitted to Nationwide Children's Hospital.

**Methods.** EMR of inpatients was reviewed between January 2010 and March 2017. Clinical, radiological, and histopathological findings were collected.

**Results.** Nine patients with positive cat scratch serology and/or tissue PCR were identified. Mean age was 6 years and 8 months (range 3–12 years). Patients had a prolonged course of illness before diagnosis was made (mean 9.7 days). All patients had fever and affected bone area pain. Patients had normal WBC (mean 11,800/mm3) and modest ESR (mean 33.2 mm/hours) and CRP (mean 5.2 mg/dl) elevations on admission. Six patients had osteomyelitis at ≥ 2 sites (multifocal) with no contiguous lymphadenopathy (LAD). The vertebral and pelvic girdle were the most common sites. Two patients had contiguous paraspinal abscesses, and 1 patient had a concomitant lymph node (LN) abscess. No osteolytic lesions were identified. Serology in all (9 of 9 IgG, 7 of 9 IgM) and PCR of bone in 2 of 2 patients were positive. All patients received antimicrobial therapy with median duration of 28 days (IQR 15–50).

**Conclusion.** CSD OM has an indolent course of illness with moderate elevation of inflammatory markers. Unlike previous reports of CSD and other bacterial OM, multifocal osteomyelitis without contiguous LN involvement was common. Despite significant variations in treatment duration and antimicrobial therapy choices, all patients had clinical resolution of their CSD-associated disease.

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

2286. Risk Factors for Community-Associated Clostridium difficile Infection in Adults

Mark Weng, MD, MS;2 FAAP;1 Susan H. Adkins, MD;1 Monica Farley, MD, FIDSA;1 Catherine C. Espinosa, MPH1;2 Claire Reisenuer, DVM, MPH;2 Tony Whitten, MPH;2 Emily B. Hancock, MS;1; Ghinwa Dumyati, MD, FSHEA;1 Corinne M. Davis, MPH, MS1; Lacy Wilson, MD, MS1; Zintars G. Beldavs, MD, MPH;1

2285. The Impact of Routine Chlamydia trachomatis (CT) Screening during Pregnancy on the Seroepidemiology of Chlamydial Infection in Children, 1991–2015

Natalie Bannettis, MD;2 Kimberly Wisecup, DO;1 Leah Byland, RA;1 Izumi Watanabe, MS1; Sheneise Clement, HS1; Margaret Hammerschlag, MD1 and Stephan Kohlhoff, MD1;2 Pediatrics, State University of New York Downstate Medical Center, Brooklyn, New York, 1Pediatrics, Coney Island Hospital, Brooklyn, New York, 2Medgar Evers College, Brooklyn, New York

**Session:** 250. Pediatric Bacterial Infections: From A to Z  
**Saturday, October 7, 2017: 12:30 PM**

**Background.** CT remains the most prevalent STI in developed and developing countries. Prenatal screening and treatment of pregnant women has resulted in a dramatic decrease of perinatal CT infection. There have been limited seroepidemiologic studies in unselected children and adolescents following the implementation of routine CT screening as first recommended by the CDC in 1993.

**Methods.** Anonymized banked sera (~80°C) and prospectively collected sera from children and adolescents in Brooklyn, NY, were tested for anti-CT IgG via a validated enzyme immunoassay. Serum samples were divided by collection years: Group 1 (1991–1995, prescreening) and Group 2 (2012–2015, post-screening). Infants <1 year of age were excluded due to interference of maternal antibody. Maternal screening and CT infection rates during pregnancy were determined via a retrospective review of 200 random charts (2016–2017). Statistical analysis by Fisher's exact test.

**Results.** 297 serum samples were identified (age range 1–20 years). 18.5% (50/267) of subjects ≤10 years of age in Group 1 tested positive for anti-CT IgG, while none tested positive in Group 2 (0/55), P = .0006. Children >10 years had a prevalence of 10.3% (3/29) in Group 1 and 7.5% (12/159) in Group 2, P = .7. Maternal screening rate was estimated at 93.5%, with 100% screened if <25 years of age. The rate of maternal screening and CT infection rates during pregnancy were determined via a retrospective review of 200 random charts (2016–2017). Statistical analysis by Fisher's exact test.

**Results.** 297 serum samples were identified (age range 1–20 years). 18.5% (50/267) of subjects ≤10 years of age in Group 1 tested positive for anti-CT IgG, while none tested positive in Group 2 (0/55), P = .0006. Children >10 years had a prevalence of 10.3% (3/29) in Group 1 and 7.5% (12/159) in Group 2, P = .7. Maternal screening rate was estimated at 93.5%, with 100% screened if <25 years of age. The rate of maternal screening and CT infection rates during pregnancy were determined via a retrospective review of 200 random charts (2016–2017). Statistical analysis by Fisher's exact test.

**Conclusion.** CT screening during pregnancy has resulted in a dramatic decrease of perinatal CT infection. There have been limited seroepidemiologic studies in unselected children and adolescents following the implementation of routine CT screening as first recommended by the CDC in 1993.

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

2287. The Impact of Routine Chlamydia trachomatis (CT) Screening during Pregnancy on the Seroepidemiology of Chlamydial Infection in Children, 1991–2015

Natalie Bannettis, MD;2 Kimberly Wisecup, DO;1 Leah Byland, RA;1 Izumi Watanabe, MS1; Sheneise Clement, HS1; Margaret Hammerschlag, MD1 and Stephan Kohlhoff, MD1;2 Pediatrics, State University of New York Downstate Medical Center, Brooklyn, New York, 1Pediatrics, Coney Island Hospital, Brooklyn, New York

**Session:** 250. Pediatric Bacterial Infections: From A to Z  
**Saturday, October 7, 2017: 12:30 PM**

**Background.** CT remains the most prevalent STI in developed and developing countries. Prenatal screening and treatment of pregnant women has resulted in a dramatic decrease of perinatal CT infection. There have been limited seroepidemiologic studies in unselected children and adolescents following the implementation of routine CT screening as first recommended by the CDC in 1993.

**Methods.** Anonymized banked sera (~80°C) and prospectively collected sera from children and adolescents in Brooklyn, NY, were tested for anti-CT IgG via a validated enzyme immunoassay. Serum samples were divided by collection years: Group 1 (1991–1995, prescreening) and Group 2 (2012–2015, post-screening). Infants <1 year of age were excluded due to interference of maternal antibody. Maternal screening and CT infection rates during pregnancy were determined via a retrospective review of 200 random charts (2016–2017). Statistical analysis by Fisher's exact test.

**Results.** 297 serum samples were identified (age range 1–20 years). 18.5% (50/267) of subjects ≤10 years of age in Group 1 tested positive for anti-CT IgG, while none tested positive in Group 2 (0/55), P = .0006. Children >10 years had a prevalence of 10.3% (3/29) in Group 1 and 7.5% (12/159) in Group 2, P = .7. Maternal screening rate was estimated at 93.5%, with 100% screened if <25 years of age. The rate of maternal screening and CT infection rates during pregnancy were determined via a retrospective review of 200 random charts (2016–2017). Statistical analysis by Fisher's exact test.

**Conclusion.** CT screening during pregnancy has resulted in a dramatic decrease of perinatal CT infection. There have been limited seroepidemiologic studies in unselected children and adolescents following the implementation of routine CT screening as first recommended by the CDC in 1993.

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

2286. Risk Factors for Community-Associated Clostridium difficile Infection in Adults

Mark Weng, MD, MS;2 FAAP;1 Susan H. Adkins, MD;1 Monica Farley, MD, FIDSA;1 Catherine C. Espinosa, MPH1;2 Claire Reisenuer, DVM, MPH;2 Tony Whitten, MPH;2 Emily B. Hancock, MS;1; Ghinwa Dumyati, MD, FSHEA;1 Corinne M. Davis, MPH, MS1; Lacy Wilson, MD, MS1; Zintars G. Beldavs, MD, MPH;1
Results. Of 138 children, 43.5% were female; 69.6% were 12–23 months old. A significantly higher proportion of cases than controls had: an underlying chronic medical condition (33.3% vs 11.9%; P = 0.02); a neonatal intensive care unit (NICU) stay at birth (26.9% vs 13.2%; P = 0.04); or recent antibiotic exposure (55.6% vs 20.6%; P = 0.0001). More cases than controls had recent higher-risk outpatient healthcare exposures (emergency department, outpatient procedure and surgical centers, hospital-based outpatient settings, or urgent care) (34.9% vs 19.1%; P = 0.06) or a household member with diarrhea (36.2% vs 26.6%; P = 0.05). No difference was found in the proportion of cases and controls who had a feeding tube (2.9% vs 0%; P = 0.50) or a recent exposure to gastric acid suppressants (6.1% vs 2.9%; P = 0.63).

Conclusion. Young children with underlying disease, NICU stay, or recent antibiotic use might be at higher risk for CA-CDI. Improving outpatient antibiotic use, particularly among children with comorbidities, might reduce CA-CDI in this population. Further investigation of other risk factors, including outpatient healthcare and household exposures, is needed.

Disclosures. All authors: No reported disclosures.

Table: Demographics and comorbidities in rCDI

| Age (years) | Total Primary (%) | Total Recurrence <8wk (%) | p-value |
|------------|------------------|--------------------------|----------|
| 1          | 131 (25.8)       | 6 (4.6)                  | 0.09     |
| 2–5        | 131 (25.8)       | 22 (16.8)                |          |
| 6–11       | 87 (17.2)        | 6 (6.9)                  |          |
| 12–17      | 198 (31.2)       | 20 (12.7)                | 0.99     |
| Sex        |                  |                          |          |
| Female     | 247 (48.7)       | 21 (8.5)                 |          |
| Male       | 260 (51.3)       | 22 (8.5)                 |          |
| Race       |                  |                          |          |
| Caucasian  | 244 (48.1)       | 21 (8.6)                 |          |
| Hispanic   | 133 (26.2)       | 8 (6.0)                  |          |
| Asian      | 67 (13.2)        | 4 (6.0)                  |          |
| African    | 31 (6.1)         | 2 (6.5)                  |          |
| American   | 23 (4.5)         | 6 (26.1)                 |          |
| Other/Unknown | 9 (1.8)   | 2 (22.2)                 |          |

Conclusion. High suspicion for recurrence must be maintained in multi-racial or non-Caucasian, Hispanic, Asian, or African American children and those with underlying rCDI in children.

Disclosures. All authors: No reported disclosures.

2288. Clostridium difficile Molecular Epidemiology in a Prospective Cohort of Canadian Children Compared with Cases of C. difficile Infection

Colin Lloyd, B.Sc;1 Breandon Parsons, PhD;1 Tim Du, M.Sc;2 George R. Golding, MD;2 Jonathon L. Pitha, M.D;3 Bonita Lee, MD MSc (Epi);1 Linda Chui, PhD;1 Stephen Freedman, MDCM;4 and Alberta Provincial Pediatric EtiTeric Infection Team (APPETITE);1 Laboratory Medicine and Pathology, University of Alberta, Edmonton, AB, Canada, 2National Microbiology Laboratory, Public Health Agency of Canada, Winnipeg, MB, Canada, 3Pediatrics, Stollery Children’s Hospital, Edmonton, AB, Canada, 4University of Calgary, Calgary, AB, Canada

Background. Clostridium difficile is a notorious nosocomial pathogen, but little is known regarding the colonization commonly observed in children. It is suspected that C. difficile carriage in infants is a reservoir for toxigenic strains. To test this hypothesis, we sought to determine the genetic relatedness between a prospective cohort of C. difficile toxin gene positive healthy children and those with acute gastroenteritis (AGE) and strains identified in adult and pediatric C. difficile infection (CDI) cases from Alberta, Canada. Additionally, we compared C. difficile toxin production in healthy and AGE children.

Methods. C. difficile was cultured from 97 hospitalized CDI cases (n = 79 adult; n = 18 pediatric) from stool samples tested positive for toxigenic C. difficile by C.DIFF QUIK CHEK COMPLETE® enzyme immunosay (EIA) in 2015 and samples tested positive for toxin genes by the Linumex XTAG® Gastrointestinal Panel (Vanco, Kampen, The Netherlands) in a prospective cohort of 59 children with AGE seeking care at the emergency department (ED) and 17 healthy children attending public health clinics. Isolates were then characterized by PCR-ribotyping, pulsed-field gel electrophoresis (PFGE), PCR of the tcdA, tcdB, tcdC, and cdt genes and C. difficile toxigenicity by EIA for a subset of 14 healthy and 45 AGE children.

Results. Ribotype 106 was predominant among all pediatric isolates (n = 21, 27.6% AGE and healthy children; n = 5, 27.8% pediatric CDI) and ribotype 027 in adult CDIs (n = 35, 44.3%). Eighteen ribotypes were shared between children and CDI cases (n = 134, 77.5%). Sixteen unique ribotypes and PFGE patterns (n = 84, 48.6%) were identified in two or more cohorts. Similar toxin gene profiles were observed across the three cohorts, but adult CDI isolates had a higher proportion of binary toxin positive isolates (n = 42, 53.2%) compared with children (n = 3, 3.9%) and pediatric CDI (n = 1). C. difficile toxigenicity was similar (P = 0.23) amongst the subset of healthy (n = 6, 42.9%) and AGE (n = 28, 62.2%) children.

Conclusion. Production of C. difficile toxins in children was not significantly associated with symptoms of AGE. C. difficile strains found in children were similar to those from CDI cases; especially pediatric cases. This suggests that strains might be shared, and the development of CDI may be related to factors other than C. difficile strain type.

Disclosures. All authors: No reported disclosures.