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**Background.** Congenital infections cause significant morbidity globally. In the United States, population studies have indicated that congenital infections disproportionately affect minorities and the economically disadvantaged. Through their chronic and disabling effects these infections perpetuate generational poverty among these groups. The objectives of this study were to (i) provide a national prevalence estimate of congenital infections among newborns; (ii) assess factors contributing to infections; (iii) compare risk of congenital infection between white and non-White children; and (iii) investigate the relationship between socioeconomic status and risk of congenital infection in the United States.

**Methods.** The 2012 HCUP Kids’ Inpatient Database was used to identify discharges of children 0–2 years with an ICD-9 diagnosis code for congenital CMV (771.1), congenital syphilis (090.0–9), or congenital infection other (771.2). Univariate and multivariate logistic regression was used to estimate prevalence rates and potential risk factors for these infections.

**Results.** Prevalence of any congenital infection in children 0–2 years is 0.048%. Risk factor analyses found that African-American children are 1.85 times more likely to have any congenital infection compared with Caucasians (95% CI: 1.56–2.20), 1.49 times more likely to have congenital CMV (95% CI: 1.10–2.02), and 5.97 times more likely to have congenital syphilis (95% CI: 4.36–8.17). Children with private insurance are less likely than those with Medicaid to have any congenital infection (RR = 0.54, 95% CI: 0.43–0.66), congenital CMV (RR = 0.49, 95% CI: 0.37–0.65), or congenital syphilis (RR = 0.29, 95% CI: 0.19–0.34). Finally, children from higher income households had 0.23 lower risk of income to have any congenital infection (RR = 0.87, 95% CI: 0.80–0.94).

**Conclusion.** Risk for congenital infections in children 0–2 years in the United States is substantially higher for non-Whites, those with Medicaid insurance, and those in lower income households. Supporting previous literature suggesting that socio-economic conditions disproportionately affect socially and economically disadvantaged groups. Further research is needed to define optimal cost-effective screening and prevention strategies.

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609. Acute Kidney Injury During Treatment with Intravenous Acyclovir (AKITA) for Suspected Neonatal Herpes Simplex Virus Infection

Brittany L. Haltzman, MS, MPH, CCRC; Kevin J. Downes, MD; Susan E. Coffin, MD, MPH, FSHWA, FFIDP; Kellie M. Loston, MSc; Hannah M. Emerson, MPH; Edwin Doe, MD; Rossana Fulcherio, DO; Van Tran, PharmD, BCPS, BCPS, MBACP; Young Liu, PharmD, BCPS; Sara J. Gilchrist, PharmD; Alison G. Grasso, PharmD, BCPS; Ida Aka, MPH; Jennifer Hall, PharmD, MPA; Germany K. R wifi, PharmD, BCPS; Jessica Gillon, PharmD, BCPS; Julie Pingel, PharmD, BCPS; Dqing Xie, PhD; Gerald Wharton, MS' and Ann McMahon, MD, MPH; Division of Infectious Diseases, Children’s Hospital of Philadelphia; Philadelphia, Pennsylvania.

**Background.** Intensive care of neonates requires complex medical decision-making and the potential for adverse events, including acute kidney injury (AKI) during treatment with intravenous (IV) acyclovir (ACV). We described AKI during treatment with IV ACV among 0–28-day-old infants with confirmed or suspected neonatal herpes simplex virus (HSV) disease in a national cohort of neonatal intensive care units (ICUs).

**Methods.** We identified all infants transferred to US NICUs from January 1, 2011 to December 31, 2015, through the HCUP Kids’ Inpatient Database. We further identified infants with diagnoses of confirmed or suspected neonatal HSV disease that received ACV during their hospitalization. We defined AKI as creatinine that increased ≥50% from baseline or to ≥2 mg/dL within 48 hours of treatment with IV ACV. The outcomes were: (i) the incidence of AKI; (ii) time of AKI; (iii) the duration of AKI; and (iv) the impact of AKI on patient outcomes. To analyze demographic data and characteristics of infants who developed AKI, we compared infants with and without AKI using descriptive statistics.

**Results.** The study included 52,898 infants. In 52,898 infants (2016), 646 infants (1.3%) developed AKI during treatment with IV ACV. The incidence was 1.54/1000 NICU admissions, 1.54/1000 infants treated with IV ACV. Median age was 2 weeks; median weight was 2500 g. AKI was detected on Day 1 in 14.4% of infants treated with IV ACV. Median time from treatment initiation to AKI was 3 days (IQR: 3–6). Thirty-two infants had confirmed HSV disease (10 CNS, 14 disseminated, and eight skin, eye, and mucous membrane disease). In all, 96 infants (6.3%) had AKI detected before acyclovir initiation including 62 (64.5%) on Day 0, 20 (20.8%) on Day 1 or 2, and 14 (14.6%) on Day 3 or after Day 3. Of those with AKI on Day 1 or later, 41% (n = 14) had Stage 2 AKI (doubling of Scr or more from baseline), Seven of 32 (21.8%) infants with confirmed HSV had AKI during on Day 0, 2 on Days 1–2, and 1 on Day 12.

**Conclusion.** The incidence of AKI among infants treated with IV ACV in our study was low. Most AKI was detected soon after acyclovir initiation, potentially owing to more severe illness at the start of treatment and/or drug toxicity, but AKI also developed later. Scr monitoring should be considered throughout acyclovir treatment in infants.

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608. The Effect of Prenatal Screening for Chlamydial trachomatis (CT) on Chlamydial Conjugativities in Infants

Natalie Bannett, MD; Sheinse Clement, HS; Margaret Hammerschlag, MD, and Stephie Kohlhofer, MD, Pediatrics, The State University of New York, Downstate Medical Center, Brooklyn, New York; The City University of New York, Medgar Evers College, Brooklyn, New York

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**Background.** CT was the most common identifiable infectious cause of neonatal conjunctivitis in the USA during the 20th century, accounting for 20–40% of cases. Infection is transmitted to newborns via exposure to infected mothers during passage through the birth canal. The transmission risk for an infant born vaginally to a woman with CT has been reported to be as high as 70%, including newborns with asymptomatic infection. A study of 844 infants born to women with clinical CT in the Chlamydia Research Laboratory at SUNY Downstate Medical Center for CT culture from 1986 to 2002. Culture results were divided into two groups by time period: pre-screening (1986–1993) and post-screening (1994–2002). Results. A total of 880 samples obtained from infants with signs and symptoms of conjunctivitis were submitted for CT culture, 103 (11.7%) were positive. The number of submitted samples and positive cultures both declined over time. The positivity rate for eye cultures was 15.6% during the pre-screening period (1986–1993) and was 1.8% during post-screening period (1994–2002) (P < 0.0001). A separate hospital audit confirmed 98% of positive women were screened during the post-screening period.

**Conclusion.** The prevalence of neonatal chlamydial conjunctivitis decreased significantly in our population after the implementation of routine screening and treatment of pregnant women in the United States in 1993. These results also confirm that the most effective way to prevent perinatal chlamydial infection is prenatal screening and treatment of pregnant women. These data have important implications for maternal and infant health globally.

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