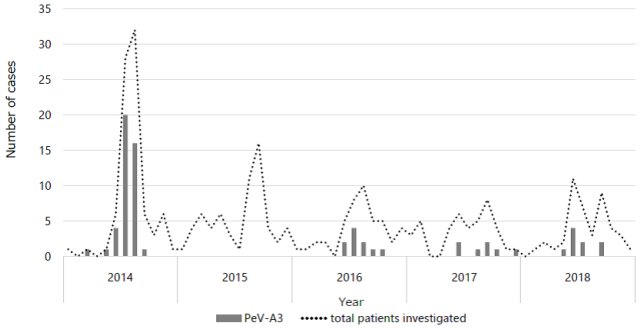


Figure. Numbers of neonates and infants (<4 months) infected with Parechovirus-A3 in Niigata, Japan between 2014 and 2018.

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

**2586. Human Breast Milk Inhibits the Replication of Parechovirus-A3**

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**Session:** 268. Neonatal Infections - non CMV/HSV
*Saturday, October 5, 2019: 12:15 PM*

***Background:*** Parechovirus-A3 (PeV-A3) is an emerging pathogen causing sepsis and meningoencephalitis in neonates and young infants. We previously reported that maternal antibodies against PeV-A3 are important to protect neonates and young infants from the infection. Recent studies showed that (1) breastfeeding had a protective effect against enterovirus, which is closely-related virus to PeV-A, and (2) human breast milk (HBM) neutralized enterovirus *in vitro*. Currently, no report is available related to the antiviral effect of HBM against PeV-A3.

***Methods:*** HBM (colostrum, 3–5 days after childbirth; mature milk, 1 month after childbirth) and serum (within ± 1 week of child's birthday) samples were obtained from mothers at obstetrics clinic in Niigata, Japan. Neutralizing antibody titers (NATs) against PeV-A3 were measured using the Vero cells.

***Results:*** The anti-PeV-A3 NATs of colostrum ($n$ = 32) ranged from 1:8 to 1:2048, those ≥1:32 was 59% (19/32). Whereas, the anti-PeV-A3 NATs of mature milk ranged from 1:8 to 1:96. and those ≥1:32 was 20% (2/20) ($P < 0.001$). The median NATs anti-PeV-A3 was higher in colostrum (1:32) compared with mature milk (1:8) ($P < 0.001$). There was a strong positive correlation between the NATs of colostrum and serum (r = 0.604, $P < 0.001$, Figure).

***Conclusion:*** This study showed that HBM had high NATs against PeV-A3, which was correlated with serum NATs. Further studies are necessary to investigate which components of HBM has antiviral effects against PeV-A3.

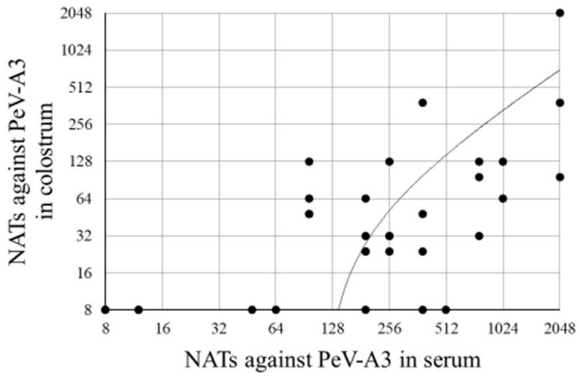


Figure. Anti-PeV-A3 titers detected in colostrum and serum samples obtained from 32 donors. In the analysis, neutralizing antibody titers (NATs) <1:16 and >1:2048 were regarded as 8 and 2048, respectively. There was a significant correlation between the NATs in colostrum and serum (r = .604, $p < .001$).

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

**2587. Etiology and Outcome of Acute Neonatal Infectious Encephalitis**

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**Session:** 268. Neonatal Infections - non CMV/HSV
*Saturday, October 5, 2019: 12:15 PM*

***Background:*** There are very few studies on acute encephalitis with onset during the neonatal period. The objectives of this study were to investigate the etiology and salient clinical features of neonatal encephalitis.

***Methods:*** Neonates with possible infectious encephalitis (IE) were prospectively enrolled. Inclusion criteria included encephalopathy (altered/fluctuating level of consciousness ≥24 hours) plus ≥2 of: fever/temperature instability; seizure(s); focal neurologic findings; CSF pleocytosis; EEG abnormalities consistent with encephalitis; neuroimaging abnormalities consistent with encephalitis. Neonates with a clear diagnosis of post-perinatal asphyxial encephalopathy or culture proven bacterial meningitis were excluded. Results shown as absolute numbers, proportions or medians [interquartile range] as appropriate.

***Results:*** Fifty-nine neonates fulfilled the inclusion/exclusion criteria (June 2013–November 2018). Empiric acyclovir was initiated in 49 (83.1%) cases. An infectious etiology was identified in 25 (42.4%): enteroviruses ($n$ = 15), HSV ($n$ = 5), HHV6 ($n$ = 2), parainfluenza 3 ($n$ = 1), influenza A ($n$ = 1), CMV ($n$ = 1). A noninfectious cause was confirmed in 20 (33.9%): missed hypoxic-ischemic encephalopathy ($n$ = 10), genetic/metabolic disorders ($n$ = 7), ischemic/hemorrhagic stroke ($n$ = 3). No specific etiology was identified in 14 (23.7%). Thirteen (52%) neonates with IE either died ($n$ = 7) or suffered neurologic sequelae ($n$ = 6). Deaths were attributable to HSV ($n$ = 4), enteroviruses ($n$ = 2) and HHV6 ($n$ = 1). Neurocognitive sequelae were documented in one case each of enterovirus, HSV2, HHV6, CMV, parainfluenza 3 and influenza A. Differences between neonates with and without IE, respectively, included age in days of symptom onset (7 [6, 10] vs. 1 [0, 3]; $P < 0.001$), gestational age (37.0 [36.0, 39.0] vs. 38.6 [37.6, 40.0]; $P = 0.045$), peripheral leukocyte count (10.5 [IQR 5.9, 14.6] vs. 14.3 [IQR 10.7, 21.7]; $P = 0.008$) and CSF glucose (2.80 [IQR 2.3, 3.2] vs. 3.10 [2.8, 3.8]; $P = 0.003$).

***Conclusion:*** Enteroviruses and HSV are the predominant causes of neonatal IE. Outcome of neonatal IE is poor with approximately half dying or suffering neurologic sequelae.

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

**2588. Acute Toxoplasmosis among Pregnant Arab Women in Northern Israel: to Screen or Not?**

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**Session:** 268. Neonatal Infections - non CMV/HSV
*Saturday, October 5, 2019: 12:15 PM*

***Background:*** The seroprevalence of toxoplasmosis among Israeli Arabs is high. Yet, the regulation of the Israeli Ministry of Health suggests not screening pregnant women for toxoplasmosis. During 2017/8 we have seen a surge in cases of acute toxoplasmosis in pregnancy in Northern Israel. We aimed to explore this surge and compare the rates of acute toxoplasmosis in pregnancy in Northern Israel among Jews and Arabs.

***Methods:*** The database of the lab of Meuhedet HMO (Northern Israel only) was retrospectively screened for all tests for *Toxoplasma* serology during 2013–2017. We focused on women of childbearing age and compared rates of seropositivity in Jews and Arabs. IgG and IgM were carried out using Abbott Architect, and IgG avidity by Vidas, BioMerieux. Birth rates were retrieved from the central computer of Meuhedet HMO.

***Results:*** : In 2017, Northern Israel had 1,397,833 citizens of whom 53% were Arabs. Of this population, 13% were insured by Meuhedet HMO, and of these 60% were Arabs (Muslims or Christians). During the 5-year period 16,044 *Toxoplasma* serology tests have been requested (both sexes), of which 26% returned IgG positive. 88% of the positive ones were of Arab citizens ($P < 0.0001$). Excluding duplicates, we found 118 women of childbearing age with a positive IgM test (2.8%). Of the latter, 37 had a low/medium avidity test (31.4%). 112 of the women were Arabs, while only 6 were Jews ($P < 0.0001$). Two-thirds of the women had a positive βHCG test at the same time. During this 5-year period there were 23,074 live births in this HMO (11,512 Arab newborns). Thus, had all these women delivered an infected newborn, the rate of congenital toxoplasmosis in the Arab population (97.2/10,000) was 19-fold higher than among the Jewish (5.2/10,000; $P < 0.00001$). Interview of 35 acute cases during 2017/8 revealed that most of the women had consumed raw meat called "Kibbe Niyye"—a popular dish unique to Northern Israeli Arabs (Galilee) and served on festive occasions.

***Conclusion:*** We found that Northern Israeli Arab women are at a high risk to contract toxoplasmosis during pregnancy due to consumption of traditional raw meat. This finding calls for awareness among women as well as doctors. We believe that the regulation not to screen pregnant women in the Arab sector should be reevaluated.

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

**2589. Two Cases of Congenital Babesiosis**

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**Session:** 268. Neonatal Infections - non CMV/HSV
*Saturday, October 5, 2019: 12:15 PM*

***Background:*** Babesiosis is caused by *Babesia microti* and often transmitted via *Ixodes scapularis*. To the best of our knowledge, only 9 cases of vertical transmission have been reported. The spectrum of clinical presentation and optimal therapy for this population remains unknown.

***Methods:*** Case 1 is a 4 week old female admitted with fever and irritability for 2 days. She was pancytopenic, with Hgb of 9.2 g/dL, Plt of 57 K/mm$^3$, and absolute