ABSTRACT SUBMISSION FORM

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CHILD HEALTH RESEARCH DAYS

# CHRD 2020: Abstract Submission Form

**Submitter Name**
Katarina Nikel

**Email**
nikelk@myumanitoba.ca

**Title**
Examining the relationship between previable PPROM and neurodevelopmental outcomes at 18-24 months of age.

**Background**
Preterm prelabour rupture of membranes (PPROM) occurs in 3% of pregnancies and is associated with several neonatal and maternal complications. PPROM that occurs prior to viability (or pPPROM) is even rarer (0.1% of pregnancies). Because of the the association between low amniotic fluid volume and poor lung development/respiratory morbidity, neonatal survival after pPPROM is less than 25%. However, very little is known about neurodevelopmental outcomes of survivors of pPPROM.

**Objective**
To evaluate the neurodevelopmental outcomes at 18-24 months corrected age (CA) following pPPROM.

**Methods**
This case-series of premature children born following pPPROM and seen antenatally in a tertiary-level fetal assessment unit (2009-2015). Eligible cases included those seen in a Neonatal Follow-Up Clinic at 18-24 months CA. Fetal ultrasound findings (including amniotic fluid volumes), pregnancy outcomes, and neonatal complications were collected and cases linked to prospectively-collected neurodevelopmental outcomes stored in a clinical database. The main outcomes of interest were Bayley-III scores and diagnosis of cerebral palsy at 18-24 months CA.

**Results**
89 of 113 pregnancies with pPPROM were managed expectantly and only 21.3% survived to 18 months CA. There was no obvious relationship between amniotic fluid volume at ROM and survival. 7/19 survivors (born at median GA of 26+2 weeks) had neurodevelopmental outcomes in the database. Mean Bayley-III scores were: cognitive 84.9 (SD 12.2); language 66.4 (SD 18.9); and motor 82.3 (SD 11.5). There were particular deficiencies in language development with all but one child scoring at least 1 SD below the population mean and 67% scoring more than 2 SDs below the mean. There were no cases of cerebral

palsy.

**Conclusion**
Following pPPROM, children in this small study tended to have lower Bayley-III scores than predicted for gestational age at delivery, particularly in language development. Larger studies are still required to evaluate the impact of previable PPROM and amniotic fluid on long-term child development.

**Theme:**
Clinical

**Do you have a table/figure to upload?**
No

**Are you willing to participate in Goodbear's Den?**
Yes

**Presenter Status:**
Residents

**What was your role in the project?**
PI

# Authors


| Name | Email | Role | Profession |
|---|---|---|---|
| Christy Pylypjuk | cpylypjuk@hsc.mb.ca | Co Author | Assitant Professor |
| M. Florencia Ricci | fricci@hsc.mb.ca | Co Author | Assitant Professor |