Latency from PPROM to delivery is not altered with discontinuation of antibiotics after 48 hours

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Objective

- Latency antibiotic protocols for PPROM vary across institutions.
- Our goal was to determine if there is a difference in latency from PPROM to delivery after administration of antibiotics for 48 hours compared to 7 days.

Study Design

- Multi-center retrospective cohort study of singleton non-anomalous pregnancies admitted with PPROM from 20-33 weeks from 1/2016 – 10/2019.
- Subjects from 2 centers were compared; the first gave a short course (SC) of antibiotics with 48 hrs of penicillin (PCN), and the second gave a long course (LC) for 7 total days including the same PCN dose plus 5 days of PO amoxicillin. Both groups received a dose of PO azithromycin.
- Primary outcome was latency from PPROM to delivery
- Secondary outcomes included chorioamnionitis, neonatal sepsis, RDS, NEC, and IVH.

Results

- 185 total subjects (39.5% in SC and 60.5% in LC)
- There was no difference in rates of chorioamnionitis, neonatal sepsis, NEC, or IVH (Table 1)
- No cases of stillbirth occurred
- The average gestational age (GA) at birth was 31 weeks for SC compared to 30.4 weeks for LC (p=0.14)
- After adjusting for GA at birth (Table 1):
  - SC subjects had a 4.3 times higher risk of neonatal RDS compared to those with LC (95% CI 1.8, 10.2)
  - Neonates of SC subjects were also 4.6 times more likely to require intubation as compared to those of LC subjects (95% CI 1.9, 11.2)

Treatment with an additional 5 days of oral amoxicillin did not prolong latency from PPROM to delivery compared to only 48 hours of IV penicillin.

The shorter treatment group had higher rates of RDS and intubation.

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Figure 1. Box Plot of Latency by Antibiotic Protocol

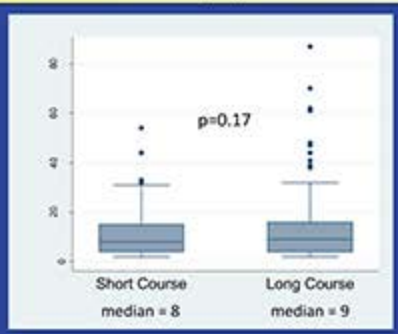

Table 1. Secondary Outcomes by Antibiotic Protocol

	Short Course (n=73)	Long Course (n=112)	aOR (95% CI)
Chorioamnionitis	10 (13.7%)	24 (21.4%)	0.6 (0.3, 1.4)
Neonatal sepsis	4 (5.5%)	5 (4.6%)	1.5 (0.4, 6.6)
Respiratory distress syndrome (RDS)	45 (61.6%)	56 (50.5%)	**4.3 (1.8, 10.2)**
Necrotizing enterocolitis (NEC)	1 (1.4%)	6 (5.4%)	0.3 (0.03, 2.6)
Intraventricular hemorrhage (IVH)	10 (13.7%)	9 (8.2%)	2.6 (0.9, 7.4)
Neonatal Intubation	35 (47.9%)	39 (34.5%)	**4.6 (1.9, 11.2)**

Conclusion

- Our study found no difference in latency from PPROM to delivery with 48 hours of IV PCN compared to a protocol with 5 additional days of amoxicillin.
- Those receiving only 48 hours of PCN had a higher risk of RDS and need for intubation.