Supplementary table 1. Demographic characteristics of the PPROM Subgroup (No PPROM vs. PPROM25).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables** | **No PPROM** | **PPROM25** | **Total** | ***p-*value** |
| (n=5,702) | (n=402) | (n=6,104) |
| Gestational age (wk) | 28.9±2.8 | 26.1±1.9 | 28.8±2.8 | <0.001\* |
| Birth weight (g) | 1,083.4±281.5 | 873.8±234.9 | 1,069.6±283.5 | <0.001\* |
| 1-min Apgar score | 4.7±2.0 | 3.4±1.8 | 4.6±2.0 | <0.001\* |
| 5-min Apgar score | 6.9±1.8 | 5.8±2.0 | 6.8±1.8 | <0.001\* |
| Male sex, n (%) | 2,851 (50.0) | 212 (52.7) | 3,063 (50.2) | 0.289 |
| Small for gestational age, n (%) | 1,673 (29.3) | 30 (7.5) | 1,703 (27.9) | <0.001\* |
| Cesarean section, n (%) | 4,607 (80.8) | 271 (67.4) | 4,878 (79.9) | <0.001\* |
| Multiple pregnancy, n (%) | 2,145 (37.6) | 138 (34.3) | 2,283 (37.4) | 0.188 |
| Inborn, n (%) | 5,555 (97.4) | 399 (99.3) | 5,954 (97.5) | 0.022\* |
| Pregnancy induced hypertension, n (%) | 1,407 (24.7) | 3 (0.8) | 1,410 (23.1) | <0.001\* |
| Maternal DM, n (%) | 501 (8.8) | 22 (5.5) | 523 (8.6) | 0.022\* |
| Antenatal steroid, n (%) | 4,385 (78.0) | 340 (85.4) | 4,725 (78.5) | 0.001\* |
| Chorioamnionitis, n (%) | 1,342 (28.3) | 234 (65.9) | 1,576 (31.0) | <0.001\* |
| Oligohydramnios, n (%) | 231 (9.3) | 145 (36.1) | 676 (11.1) | <0.001\* |
| Duration of PPROM (d) | 0.3±0.3 | 31.3±56.9 | 10.2±35.1 | <0.001\* |
| pH within 1 hour after birth | 7.28 (7.21-7.34) | 7.23 (7.14-7.31) | 7.28 (7.21-7.34) | <0.001\* |
| \* p<.05  Data presented as mean and standard deviation and discrete data presented as counts with percentage of cohort.  PPROM: preterm premature rupture of membranes; DM: diabetes mellitus | | | | | |

Supplementary table 2. Univariate analysis of the clinical factors associated with mortality and morbidities.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Total (N=804)** | | | | |  | **PPROM25 (N=402)** | | | | |
|  | **Early pulmonary hypertension** | **Mortality** | **BPD (≥moderate)** | **IVH**  **(≥Gr. Ⅲ)** | **Composite morbiditya** |  | **Early pulmonary hypertension** | **Mortality** | **BPD (≥moderate)** | **IVH**  **(≥Gr. Ⅲ)** | **Composite morbidity** |
|  | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) |  | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) |
| Gestational age (wk) | 0.85 (0.73, 0.99)\* | 0.63 (0.57, 0.71)\* | 0.71 (0.65, 0.79)\* | 0.63 (0.55, 0.72)\* | 0.65 (0.59, 0.71)\* |  | 0.92 (0.77, 1.09) | 0.69 (0.60, 0.80)\* | 0.75 (0.66, 0.86)\* | 0.65 (0.54, 0.79)\* | 0.69 (0.61, 0.79)\* |
| Birth weight (g) | 0.99 (0.99, 1.00) | 0.99 (0.99, 0.99)\* | 0.99 (0.99, 0.99)\* | 0.99 (0.99, 0.99)\* | 0.99 (0.99, 0.99)\* |  | 0.99 (0.99, 1.00) | 0.99 (0.99, 0.99)\* | 0.99 (0.99, 0.99)\* | 0.99 (0.99, 0.99)\* | 0.99 (0.99, 0.99)\* |
| 1 min Apgar score | 0.82 (0.71, 0.95)\* | 0.72 (0.66, 0.79)\* | 0.81 (0.74, 0.89)\* | 0.86 (0.77, 0.95)\* | 0.74 (0.68, 0.81)\* |  | 0.85 (0.71, 1.01) | 0.76 (0.66, 0.87)\* | 0.91 (0.80, 1.03) | 0.99 (0.85, 1.15) | 0.83 (0.73, 0.93)\* |
| 5 min Apgar score | 0.79 (0.70, 0.89)\* | 0.76 (0.70, 0.83)\* | 0.83 (0.76, 0.91)\* | 0.86 (0.79, 0.95)\* | 0.77 (0.70, 0.84)\* |  | 0.78 (0.68, 0.91)\* | 0.75 (0.67, 0.84)\* | 0.92 (0.81, 1.05) | 0.94 (0.82, 1.08) | 0.85 (0.75, 0.96)\* |
| Small for gestational age | 1.10 (0.51, 2.39) | 2.23 (1.45, 3.44)\* | 1.24 (0.73, 2.10) | 1.16 (0.67, 2.02) | 1.50 (0.92, 2.44) |  | 1.66 (0.60, 4.58) | 2.78 (1.31, 5.92)\* | 0.65 (0.24, 1.77) | 1.39 (0.50, 3.89) | 1.05 (0.45, 2.44) |
| Antenatal steroid | 1.09 (0.54, 2.21) | 0.58 (0.40, 0.86)\* | 0.98 (0.63, 1.53) | 0.69 (0.43, 1.11) | 0.85 (0.57, 1.26) |  | 1.12 (0.45, 2.78) | 0.73 (0.40, 1.34) | 1.36 (0.70, 2.64) | 0.62 (0.29, 1.29) | 1.21 (0.66, 2.22) |
| Chorioamnionitis | 1.28 (0.74, 2.20) | 0.86 (0.62, 1.20) | 1.36 (0.97, 1.91) | 1.14 (0.77, 1.70) | 1.24 (0.91, 1.71) |  | 1.01 (0.55, 2.13) | 0.93 (0.56, 1.55) | 1.89 (1.13, 3.16)\* | 1.53 (0.79, 2.95) | 1.79 (1.11, 2.90)\* |
| Oligohydramnios | 7.12 (4.10, 12.38)\* | 1.69 (1.18, 2.43)\* | 1.18 (0.79, 1.79) | 0.78 (0.48, 1.26) | 1.36 (0.93, 1.98) |  | 6.85 (3.34, 14.01)\* | 2.13 (1.35, 3.38)\* | 1.12 (0.68, 1.84) | 0.71 (0.39, 1.32) | 1.31 (0.82, 2.10) |
| Duration of PPROM (d) | 1.01 (1.00, 1.03) | 0.99 (0.99, 1.00) | 0.99 (0.99, 1.01) | 0.98 (0.98, 1.00) | 0.99 (0.99, 1.00) |  | 1.01 (0.99, 1.03) | 0.99 (0.98, 1.00) | 0.98 (0.97, 1.00) | 0.98 (0.97, 1.00) | 0.98 (0.97, 1.00) |
| PPROM25 | 3.25 (1.78, 5.93)\* | 0.87 (0.64, 1.19) | 1.65 (1.19, 2.28)\* | 0.75 (0.51, 1.08) | 1.43 (1.06, 1.93)\* |  |  |  |  |  |  |
| Early pulmonary hypertension |  | 3.72 (2.18, 6.35)\* | 2.08 (0.90, 4.83) | 2.10 (1.13, 3.90)\* | 3.19 (1.49, 6.82)\* |  |  | 4.47 (2.36, 8.47)\* | 1.71 (0.64, 4.54) | 2.79 (1.35, 5.76)\* | 2.71 (1.11, 6.59)\* |

\* p <.05

aMortalilty, bronchopulmonary dysplasia, high-grade intraventricular hemorrhage, or periventricular leukomalacia.

OR: odd’s ratio; CI: confidence interval; PH: pulmonary hypertension; PPROM: preterm premature rupture of membranes.

**Supplemental acknowledgements**

Ajou University Hospital, Asan Medical Center, Busan St. Mary’s Hospital, CHA Bundang Medical Center, CHA University, CHA Gangnam Medical Center, CHA University, Cheil General Hospital and Women’s Healthcare Center, Chonbuk National University Hospital, Chonnam National University Hospital, Chosun University Hospital, Chung-Ang University Hospital, Chungnam National University Hospital, Daegu Catholic University Medical Center, Dong-A University Hospital, Eulji General Hospital, Eulji University Hospital, Ewha Womans University Medical Center, Gachon University Gil Medical Center, Gangnam Severance Hospital, GangNeung Asan Hospital, Gyeongsang National University Hospital, Hanyang University Medical Center, Inje University Busan Paik Hospital, Inje University Haeundae Paik Hospital, Inje University Ilsan Paik Hospital, Inje University Sanggye Paik Hospital, Jeju National University Hospital, Kangbuk Samsung Hospital, Keimyung University Dongsan Medical Center, Konkuk University Medical Center, Konyang University Hospital, Korea University Anam Hospital, Korea University Ansan Hospital, Korea University Guro Hospital, Kosin University Gospel Hospital, Kyung Hee University Hospital at Gangdong, Kyung Hee University Medical Center, Kyungpook National University Hospital, Pusan National University Children’s Hospital, Pusan National University Hospital, Samsung Changwon Medical Center, Samsung Medical Center, Seoul National University Bundang Hospital, Seoul National University Hospital, Severance Hospital, SMG-SNU Boramae Medical Center, Soonchunhyang University Hospital Bucheon, Soonchunhyang University Hospital Cheonan, Sungae Hospital, The Catholic University of Korea Bucheon St. Mary’s Hospital, The Catholic University of Korea Seoul St. Mary’s Hospital, The Catholic University of Korea St. Vincent’s Hospital, The Catholic University of Korea Uijeongbu St. Mary’s Hospital, The Catholic University of Korea Yeouido St. Mary’s Hospital, Ulsan University Hospital, Wonju Severance Christian Hospital, Wonkwang University School of Medicine & Hospital, Yeungnam University Hospital.