BACKGROUND

Higher risks of adverse pregnancy outcomes were reported among women on antiretroviral therapy (ART) containing tenofovir disoproxil fumarate (TDF) versus lamivudine/abacavir (3TC) based ART in the PROMISE (Promoting Maternal and Infant Survival Everywhere) trial.1 Pre-term birth less than 34 weeks gestation (6.0% vs. 2.6%; P=0.04), and early infant death (4.4% vs. 0.6%, P=0.001) were significantly higher among women exposed during pregnancy and in labor on TDF-ART than those exposed to antepartum ZDV only.2

METHODS

RESULTS

• Overall, mothers who met the case definitions and were included in these analyses included 15 PTDs; 6 SBs; 23 EIDs; and 22/33 (66.7%) met the composite outcome definition.
• Of the 22 mothers included in the composite outcome analyses, TFV-DP concentrations were comparable: at week 4, overall median (inter-quartile range (IQR)) was 706 (375 – 1,523) fmol/punch and the median (IQR) for the difference between cases and controls TFV-DP concentrations was 15.4% (-232.00 – 142.50) fmol/punch (figure 2); and at week 8 were 806 (414 – 1,265) fmol/punch and 47.90 (-152.75 – 725.50) fmol/punch, respectively.
• There was no difference between cases and controls for the composite endpoint matching (p-value of 0.86 and 0.35 for weeks 4 and 8, respectively).
• For the primary analysis, the Odds Ratio (95% Confidence Interval) of composite adverse pregnancy outcomes was 1.27 (0.74, 2.18) at week 4, and 1.74 (0.66, 4.80) at week 8 (table 1).
• Similarly, non-significant differences were observed for individual adverse pregnancy outcomes. Study findings did not differ between LLQ imputation methods.

CONCLUSIONS

TFV-DP levels in DBS samples were not significantly different between cases and controls at 4 and 8 weeks post-ART initiation, respectively, and were not associated with individual or composite adverse pregnancy outcomes.

TABLE 1. Risk estimates of adverse pregnancy outcomes among cases versus controls – primary analysis1

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Week 4</th>
<th>Week 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite, n= 22</td>
<td>1.27 (0.74, 2.18)</td>
<td>0.389</td>
</tr>
<tr>
<td>Pre-term birth, n= 15</td>
<td>1.10 (0.47, 2.53)</td>
<td>0.841</td>
</tr>
<tr>
<td>Early infant death, n= 9</td>
<td>0.91 (0.44, 1.87)</td>
<td>0.800</td>
</tr>
<tr>
<td>Still-birth, n= 6</td>
<td>3.71 (0.36, 38.13)</td>
<td>0.271</td>
</tr>
</tbody>
</table>

1Primary analysis (TFV-DP values below the Lower Limit of Quantification (LLQ) were set to 1/10 the LLQ and for PK concentrations was natural log transformed). Sensitivity analyses (TFV-DP values below the LLQ were set to 1 and PK concentrations were natural log transformed) revealed similar results.

ACKNOWLEDGEMENTS

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REFERENCE