Distribution of birth weight discordancy between monochorionic and dichorionic twin pregnancy

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Objectives
Fetal weight discordance in twin pregnancy is an important subject related to perinatal outcome. There are many studies on the clinical implication of weight discordancy in twin pregnancies, but there is not much research on the distribution of weight discordancy according to chorionicity. We undertook this study to show it.

Methods
- Retrospective cohort study
  - from Sep. 2001 to January 2019 at SNUH
- Inclusion criteria
  - Twin neonates
- Exclusion criteria
  - stillbirths of one or both twins
  - at least one fetus with major anomaly
  - neonates with twin related complications (TTTS, TAPS, TRAP)
  - monoamniotic twin pregnancy
  - undetermined chorionicity
- Birth weight difference (BWD)
  \[
  \text{twin birth weight difference} = \frac{\text{the birth weight of a larger twin}}{\text{the birth weight of a smaller twin}}
  \]

Results

Figure 1. Flow diagram of study population

Chorionicity

<table>
<thead>
<tr>
<th></th>
<th>MC twins</th>
<th>DC twins</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal age, year</td>
<td>31 (29-34)</td>
<td>33 (31-35)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>GAD, weeks</td>
<td>37.1 (35.7-37.7)</td>
<td>37.3 (36.1-37.9)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Discordancy, %</td>
<td>9 (4-16)</td>
<td>10 (5-17)</td>
<td>NS</td>
</tr>
<tr>
<td>SGA (Sp), %</td>
<td>4.0 (41/1016)</td>
<td>3.0 (127/4291)</td>
<td>NS</td>
</tr>
</tbody>
</table>

Chi-square test for categorical variables
Mann-Whitney’s U-test for continuous variables

Conclusion
In this large-scale study of uncomplicated twin cohort, the intra-twin BWD showed no significant difference between monochorionic and dichorionic twin pair.