**Introduction**

- Measuring the resistance in the fetal UA and MCA is an important factor in the assessment of fetal well-being.
- Cerebro-Placental Ratio (CPR = MCA PI / UA PI) is used to evaluate late onset placental insufficiency.
- The question that occupies practitioners is whether the MCA measurement (and calculated CPR) is reliable near term.
- The objective of this study was to evaluate the intra-observer variability of the MCA measurement taken under optimal conditions in term, uncomplicated pregnancies as compared to the UA.

**Methods**

- A prospective study - 100 singleton, term uncomplicated pregnancies who came for an elective fetal and maternal evaluation @ 38-42 weeks.
- Single examiner - fetal biometry and Doppler studies were done. 2-3 Doppler measurements per fetus were taken with intervals between each measurement.

**Results**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>38-40w Mean ± SD</th>
<th>40-42w Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCA-PSV</td>
<td>53.4 ± 9.9</td>
<td>56.4 ± 10</td>
<td>0.559</td>
</tr>
<tr>
<td>MCA-PI</td>
<td>1.49 ± 0.25</td>
<td>1.23 ± 0.23</td>
<td>0.001</td>
</tr>
<tr>
<td>UA-PI</td>
<td>0.75 ± 0.12</td>
<td>0.78 ± 0.11</td>
<td>0.472</td>
</tr>
<tr>
<td>CPR</td>
<td>2.03 ± 0.49</td>
<td>1.60 ± 0.35</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

- All measurements had a statistically **good-very good intra-rater agreement**.
- A significant decrease (~20%) was found in the MCA PI measurements during the interval close to term (38-42 weeks gestation).
- Accordingly, CPR was influenced as well by 20% decrease near term.
- UAPI and MCA-PSV were stable between 38-42 weeks.

**Conclusion**

- The MCA PI measured at the interval close to term is highly reliable and superior to the UA PI measurement near term.
- The MCA PI and CPR significantly decreases in the days “near term”.

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*Meirav Segev, Yoav Yinon, Anat Kalter, Shlomo Lipitz and Boaz Weisz. Institute of fetal and maternal imaging, Fetal Medicine Unit, ObGyn, Sheba Medical Center, Israel.*