Routine antenatal screening for infants born below the 5th birthweight percentile.

Katie Stephens, Maya Al-Memar, Suzanne Beattie-Jones, Mandish Dhanjal, Christoph Lees.

Introduction

- Birthweight cannot be accurately measured until delivery, therefore accurate estimated fetal weight based on ultrasonography is important in identifying this high-risk population.
- We report 29% antenatal detection rate for SGA infants <10th percentile.

Aim

Determine the antenatal detection rate of SGA (<10th percentile) in a cohort delivered <5th percentile.

Methods

- Retrospective cohort study (October-December 2017) across two maternity units within one large inner-city London trust.
- Inclusion criteria: Infants born SGA <5th percentile (WHO criteria), delivery ≥36 weeks gestation.
- Exclusion criteria: Multiple pregnancies, in-utero transfers, known fetal anomalies, late bookers.
- Data collected from hospital computer databases. Estimated fetal weight was calculated using Hadlock’s formula.

Results

<table>
<thead>
<tr>
<th>Birthweight &lt;5th percentile n=119</th>
<th>Total deliveries (n=2086)</th>
<th>SGA &lt;5th percentile (n=119)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFW &lt;10th percentile on final USS n=34 (28.6%)</td>
<td>Maternal age (years) 32 (17-50)</td>
<td>Maternal age (years) 32 (19-45)</td>
</tr>
<tr>
<td>USS&lt; 2 weeks to delivery n=27 (79.4%)</td>
<td>Maternal BMI (kg/m²) 23.8 (16.0-52.5)</td>
<td>Maternal BMI (kg/m²) 22.5 (16.9-52.5)</td>
</tr>
<tr>
<td>EFW &gt;10th percentile on final USS/no USS n=85 (71.4%)</td>
<td>Parity 0 (0-9)</td>
<td>Parity 0 (0-8)</td>
</tr>
<tr>
<td>USS&gt;2 weeks to delivery n=7 (20.6%)</td>
<td>Presented as median (range)</td>
<td></td>
</tr>
</tbody>
</table>

USS= third trimester ultrasound scan, EFW=estimated fetal weight

Conclusion

- Most <5th percentile infants were not identified antenatally.
- Sensitivity for detection was similar to that for SGA <10th percentile.
- Despite regular antenatal SFH assessment & USS, SGA detection <5th percentile is poor & does not fulfil accepted criteria for a screening test.