The Sri Lankan symphysiofundal height chart is misleading

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One of the most important aspects of antenatal care is detection of fetal growth restriction (FGR). This is most frequently done by measurement of symphysiofundal height (SFH). Ideally, measurements should be plotted either on charts specially constructed for the population (1) or on "customised" charts (2). A commonly used standard is that after 20 weeks of gestation, the SFH should be within plus or minus 2 of the period of gestation taken in centimetres (3).

The Mother's Card issued by the field clinics conducted by the Government of Sri Lanka carries a SFH chart showing the 50th and 10th centile lines, constructed by studying a population of mothers in Mawanella (4). In a recent study (5) we found that this chart was usually left unused. We decided to test its sensitivity.

Low birthweight (LBW) babies (birthweight <2500g) born at term (gestational age=37 completed weeks) are very likely to have suffered FGR. Such a baby would have a high chance of having one or more recordings that fell below the 10th centile line.

![Figure. SFH measurements plotted on the Sri Lankan chart.](image)

Antenatal records of 50 consecutive LBW babies born at term were reviewed and their SFH measurements (208 recordings) plotted on the Sri Lankan chart. The birth weights ranged from 1.5 to 2.48 kg with the mean at 2.24 kg. For comparison, we also plotted them on a simple chart, which showed two lines representing the numerical value of the period of gestation plus or minus 2 cm. When the measurements were plotted on the national chart none of them fell below the 10th centile line while only 6 fell below the 50th (Figure). The sensitivity of the national chart for detecting LBW babies was therefore zero. The fact that our SFH measurements were made by many individuals reduced the possibility of an observer error affecting this result.

When the measurements were plotted on the second chart, 65 readings (31%) were either on or below the line for the expected SFH range. Thirty-four (68%) women showed at least one deviant measurement. The national SFH chart is grossly inaccurate and misleading.

Until a more accurate chart is developed, the recommendation should be to use gestational age in cm plus or minus 2 as the "normal range". It is also possible to detect FGR by plotting serial measurements on a chart. This would, however, necessarily entail a delay in diagnosis, which in some cases may be crucial.

References


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