Maternal Weight Gain during Pregnancy and Somatic Classification of Neonates According to Birth Weight and Duration of Pregnancy Taking Account of Maternal Body Weight and Height.

Abstract:

Background and Aim: The classification of weight gain during pregnancy and the somatic classification of neonates according to birth weight and duration of pregnancy can be done using percentile values. We aimed to compare such classifications using percentiles of the overall study population with classifications using percentiles that were calculated taking account of maternal height and weight. Material and Methods: Using data from the German Perinatal Survey (1995-2000, over 2.2 million singleton pregnancies) we classified weight gain during pregnancy as low (90th percentile), or medium (10th-90th percentile). Neonates were classified by birth weight as small for gestational age (SGA, 90th percentile), or appropriate for gestational age (AGA, 10th-90th percentile). Classifications were performed for 12 groups of women and their neonates formed according to maternal height and weight, either with the percentiles calculated from the total study population or with group-specific percentiles. Results: Using percentiles of the total study population there was large variability between the 12 groups in the proportions with low and high weight gain and in the proportions of SGA and LGA neonates. The variability was much lower when group-specific percentiles were used. Conclusions:
Classifications of maternal weight gain during pregnancy and birth weight differ substantially, depending on whether percentiles calculated from the total study population or group-specific percentiles are used. The impact of using percentiles that take account of maternal anthropometric parameters for the medical care and health of neonates needs to be elucidated in future research.