



Intrauterine growth restriction: more than just low birth weight

introducing a new method of quantitating growth asymmetry



Roger McMaster-Fay

Over twenty five years ago, we published our original study on asymmetrical versus symmetrical IUGR.^{1,2} We found Ponderal index (PI) to be a better measure of infants with intrauterine growth problems than birth-weight (BWt) centiles with higher rates of Caesarean section delivery and fetal distress / stillbirths.

$$PI = BWt (g) / [Crown-heel length]^3 \times 100$$

Here it is proposed that head circumference (HC) is as good if not better measure of growth potential than length as HC is a more reproducible than length (there is less room for variation in its measure).

Thus, **Cephalic Index** would be:

$$CI = Weight (g) / HC (cm)$$

References

1. Fay RA, Dey PL, Saadie CMJ, Buhl JA, Gebiski VJ. Ponderal Index: a better definition of the 'at risk' group with intrauterine growth problems than birthweight for gestational age in term infants. Aust N Z J Obstet Gynaecol 1991; 31: 17-19.
2. Fay RA, Ellwood DA. Categories of intrauterine growth retardation. Fetal Mat Med Review 1993; 5: 203-212.