

Physical Signs

Measurement of fundal height

The assessment of fundal height is the most important physical sign in the continual assessment of the fetus in utero. The fundus usually becomes palpable at 12 weeks gestation and reaches the umbilicus at 22 to 24 weeks. In the first half of pregnancy a fundal height less than expected for the gestational age suggests immaturity or a non continuing pregnancy. A fundal height greater than expected is suggestive of multiple pregnancy, a hydatidiform mole, incorrect dates or a pelvic mass (e.g. fibroids, ovarian tumour). Extremes of maternal height may confuse the assessment of fundal height at any stage and the most important landmark is the umbilicus at 22 weeks when the apparent discrepancies are minimised. The fundus is at the xiphisternum between 36 weeks and term and the distance between the umbilicus and the xiphisternum divided into thirds corresponds with 28 and 34 weeks.

Fifty percent of small babies are missed during antenatal assessment and the perinatal mortality is greatly increased in undiagnosed small for dates babies. For this reason attempts have been made to make the assessment of fundal height more objective, particularly in the second half of pregnancy. By an extraordinary quirk of nature the symphysial fundal height measured from the upper border of the symphysis pubis to the fundus corresponds in centimetres to the gestation age in weeks e.g. at 34 weeks the symphysial fundal height is 34cm,

while the circumference of the abdomen measured at the umbilicus corresponds to the gestation age in weeks but in inches.

Various trials support the measurement of fundal height in the assessment of fetal growth and the diagnosis of small for dates babies¹ while others dispute its usefulness.² Despite these caveats measuring the s-f height concentrates the mind on the importance of intrauterine growth retardation. Where pregnancies are screened routinely by ultrasound clinical palpation of the abdomen could almost be regarded as obsolete. This is not the case in many centres for a variety of reasons and any adjuvant that might improve a detection rate of IUGR of only 50% by palpation alone is worth considering, particularly as the test costs nothing and takes no time to perform. The art of obstetrics is to combine the skills of palpation measurement and experience to make what is essentially a three dimensional measurement.

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References

- 1 Quaranta P, Currel R, Redman CWG, Robinson JS. Prediction of small for dates infants by measurement of symphysial fundal height. *Br J Obstet Gynaecol* 1981; **124**: 865-72.
- 2 Bagger PV, Eriksen PS, Scher NJ, Thistel J, Westergard M. The precision and accuracy of symphysial - fundal distance measurement during pregnancy. *Act Obstet Gynaecol Stand* 1985; **64**: 371-6.