

## The Predictive Value of a Low Lying Placenta at the Booking Scan

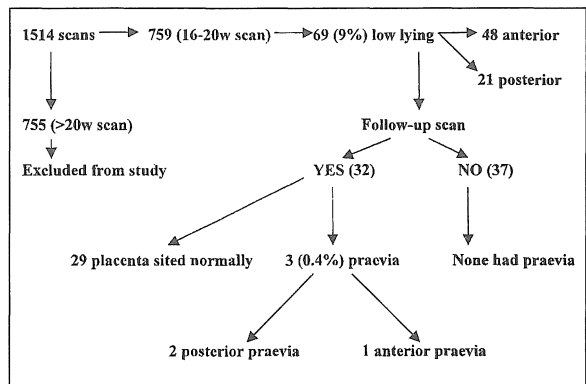
Sir,

Routine ultrasonography in the second trimester of pregnancy is common place in obstetric practice. Its advantages include accurate dating, detection of structural anomalies and other information such as multiple pregnancy and placental localisation. However, the predictive value of diagnosing placenta praevia at term on the basis of 'low lying' placenta at booking has been questioned<sup>1</sup>. In an attempt to throw more light on this issue, we have audited our own experience.

Every patient who had a routine booking ultrasound scan in a tertiary referral centre over a one-year period was included. Out of a total of 1514 ultrasound scan results analysed, only 759 patients had scans between 16 and 20 weeks gestation. The other 755 patients had their first ultrasound scan performed after 20 weeks and were therefore excluded from the study. A patient was said to have a low lying placenta if the placenta encroached upon or covered the internal cervical os. Of the 759 patients who had an early ultrasound scan, 69 (9%) of these had a 'low lying placenta' diagnosed and in 48, the placenta was sited anteriorly. None of the 37 who had no further follow up scans in the third trimester had no further follow up scans in the third trimester had placenta praevia at term. Of the 32 patients who had follow-up scans, only 3 (0.4%) was found to have placenta praevia requiring caesarean section. Two patients had a posteriorly situated placenta praevia and the fetus in both of them had an unstable lie. The third case presented with an antepartum haemorrhage. In 29 patients with a 'low lying placenta' diagnosed at 16 to 20 weeks, repeat scanning at 32 weeks showed the placenta to be normally situated. The summary of the results is given below.

In this series, 9% of patients undergoing a booking scan had a low lying placenta but only 0.4% of these patients had a significant placenta praevia at

term. These results show that detection of placental site at 16 to 20 weeks of pregnancy has little predictive value in determining the likelihood of a placenta praevia at term. However, our data is at variance with that of McClure and Dornan<sup>1</sup> who had a low lying placenta rate of 25.8% and yet their placenta praevia rate at delivery was comparable with ours.



The incidence of placenta praevia at term is only about 0.5% and the majority of these have a posterior situated placenta was the case in our study. Ruparella and Chapman<sup>2</sup> have suggested that in patients with a low lying placenta, a repeat scan was unnecessary unless there was bleeding; thus saving time, money and undue maternal anxiety. Our data would support this policy in that the 3 patients with placenta praevia all presented with obstetric complications in whom a scan was done and placenta praevia documented.

There are some explanations of these observations. Firstly, the lower part of the uterus is distended by a full bladder or a partially full bladder. Ultrasonically, this gives the cervix a greater apparent length and makes visualisation of the internal os difficult leading to a false impression of the placenta proximity to the internal os. Secondly, the appearance of myometrial contractions in the second trimester of pregnancy can confound the position. The uterine muscle can thicken and simulate a placenta praevia or shorten and make the placenta appear low. However, these events are transient. Artis *et al* have recommended scanning patients with an empty bladder to overcome problem of the uterine distention<sup>3</sup>. They also suggested a repeat scan later the same day or within the next few days to exclude myometrial contractions. With this protocol

their incidence of low lying placenta in early pregnancy was apparently reduced to only 2.6%. However, the situation can be resolved more quickly by the use of a vaginal ultrasound probe in a patient with the empty bladder. This has been shown not only to be a safe procedure but have also been found to be superior to the trans-abdominal route yielding significantly improved the accuracy of the diagnosis of placenta praevia. Indeed, Lauria *et al* were able to identify with 100% sensitivity and 85% specificity patients who are at risk of placenta praevia at delivery using the transvaginal scan in the second trimester<sup>4</sup>.

Placenta praevia rarely, if ever, presents as a catastrophic haemorrhage in the first instance. The value of finding a low lying placenta is therefore questionable as in the majority of cases a normal vaginal delivery is the outcome.

P Chia, MRCOG, K L Liu, MRCOG, E Versi  
FRCOG, Royal London Hospitals Trust, Whitechapel,  
London E1 1BB, United Kingdom.

## References

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## Pregnancies and Births after Ovarian Stimulation with Recombinant Human Follicle Stimulating Hormone

Sir,

Assisted reproductive technologies such as in-vitro fertilisation (IVF), gamete intra-fallopian transfer (GIFT) and intracytoplasmic sperm injection (ICSI) require ovarian stimulation to increase the number of female gametes. The standard stimulation regimes involve the use of human menopausal gonadotrophins (HMG) or urinary follicle stimulating hormone (uFSH). The manufacture of these products from the urine has its disadvantages such as cumbersome collection, poor source control, low purity, low specific activity and some luteinising hormone (LH) contamination. Recombinant follicle stimulating hormone (recFSH), nearly 100% pure, without LH contamination has been suggested as a better option for ovulation induction<sup>1</sup>. We present the first reported pregnancies and births with the use of recFSH (Puregon, Organon International) in Malaysia. As the drug is yet to be registered, special permission was obtained from the Pharmacy Division of the Ministry of Health, Malaysia for the use of the drug.

Four patients with different infertility factors were stimulated with recFSH after downregulation with gonadotrophin releasing hormone analogue. One patient with unexplained infertility had intrauterine insemination of "washed" spermatozoa, one had the IVF procedure for tubal pathology while the other two were subjected to ICSI of their oocytes due to severe oligoasthenozoospermia in their male partners. A total of seven pregnancies - three singletons and one set of quadruplets resulted from the fertility procedures. Paediatric examination of the babies at birth did not reveal any abnormality. Overall, the treatment was well tolerated and no adverse effects were noted.

The first reported case of pregnancy and birth after ovarian stimulation with recFSH was in 1993<sup>2</sup>. Studies using recFSH in recent years have suggested a better