

L47

**MONITORING THE IUGR FETUS****GP Mandruzzato, GP Maso, YJ Meir**, Dept Obst. Gynaecol. Istituto per l'Infanzia Burlo Garofolo IRCCS Trieste, Italy

Intrauterine growth restriction (IUGR) according to the present definition is encountered in about 15 % of the pregnancies. It can be associated to many fetal or adnexal abnormal conditions but the most frequent and dangerous complication is represented by foetal hypoxaemia observable in 30-35 % of the cases. This is the principal cause of fetal demise and /or neonatal morbidity and mortality. As a consequence in order to improve the clinical outcome an objective monitoring of the fetal oxygenation is crucial particularly for assessing the timing of the delivery. In case of hypoxaemia the fetus adapts to this condition by altering the vital functions. Blood flow redistribution first occurs and the cardiac functions are also altered. Doppler technology allows to observe haemodynamic changes and cardiotocography (CTG) depicts, if assisted by computer evaluation, even subtle changes in heart activity particularly the variability of the heart rate.

By investigating with Doppler umbilical arteries and fetal aorta and studying the fetal heart rate variability it is possible to assess with good accuracy the presence or absence of hypoxaemia and the risk to develop acidemia therefore modulating the characteristics of the control and of the management improving the perinatal outcome.

L49

**MANAGEMENT OF IUGR FETUSES****Yves Ville**, Poissy, France

Background: When decisions about the optimal timing of delivery have to be made in pregnancies complicated by intrauterine growth retardation, the risks of prematurity must be balanced against the risks of prolonged fetal exposure to a hostile intra-uterine environment. Investigation of the time sequence in which alterations of fetal monitoring parameters occur, may assist in the management of these pregnancies.

Methods: 110 singleton fetuses with intrauterine growth retardation were studied longitudinally from 24 weeks of gestation onwards. Short-term variation (STV) of fetal heart rate, pulsatility indices (PI) of arterial and venous Doppler waveforms and amniotic fluid index were assessed at each monitoring session. The study population was divided into two groups: group 1 comprised pregnancies with severely premature fetuses, which were delivered < 32 weeks and group 2 included pregnancies delivered after 32 completed weeks. Logistic regression was used for modeling the probability for abnormality of a variable in correlation to the time interval before delivery. Trends over time were analyzed for all variables by multilevel analysis.

Results: 93 (60 in group 1 and 33 in group 2) fetuses had at least three data sets (median: 4; range: 3-27) and last measurements were taken within 24 hours of delivery or intrauterine death. The percentage and degree of abnormal findings were much higher in group 1 as compared to group 2. Amniotic fluid index and umbilical artery PI were the first parameters to become abnormal and they were followed by the middle cerebral artery, aorta, STV, ductus venosus and inferior vena cava. In group 1, STV and ductus venosus PI showed mirror images of each other in their trend over time. Perinatal mortality was significantly higher if both parameters were abnormal as compared to only one or neither of them being abnormal [13/33 (39%) vs 4/60 (7%);  $P = 0.0002$ ].

Conclusions: Ductus venosus PI and STV of fetal heart rate are important indicators for the optimal timing of delivery before 32 weeks of gestation. Delivery should be considered if one of these parameters becomes persistently abnormal.

Key Words: Intrauterine growth retardation, Fetal monitoring, Fetal heart rate, Fetal Doppler, Amniotic fluid index, Short-term variation, Ductus venosus.

## L51

**PREGNANCY, LABOUR AND DELIVERY: A JOURNEY TO BE MADE SAFE**

**G. Benagiano, B. Thomas**, *The International Federation of Gynecology and Obstetrics (FIGO)*, London, United Kingdom

Statistics on maternal mortality show the persistent inequity existing for women of the developing world and remain the indicator with the greatest gap between the western, industrialized world and many countries in Africa, Asia and Latin America, where more than 95% of all deaths occur. The difference between the more and the less fortunate women is abysmal: in the west, death rates fluctuate around 10 per 100'000, whereas in certain parts of Africa they reach 1'500 per 100'000. While, in 1990, there were no deaths attributable to pregnancy, labour or delivery in Iceland, Luxembourg and Malta, in certain areas of Africa the lifetime risk of dying because of pregnancy-related causes, is 1 in 7. The World Bank has reported that, in developing countries, maternal mortality is the most important health problem for women aged 15-44, accounting for 18% of the total burden of disease.

In addition, maternal mortality must be recognized as the tip of an iceberg made of human suffering because of sequelae of maternal morbidity; WHO has estimated that between 15 and 20 million women each year suffer long-term disabilities because of child-bearing and delivering. Although no firm statistics exist, it is guessed that vesico-vaginal fistulae alone affect over 2 million young women of Africa and Asia and that only a fraction of those are repaired.

Maternal mortality and morbidity should not be ranked with other diseases and set aside because of low figures compared to malaria or tuberculosis, because child bearing is not a disease. It is the means through which every species, including the human, propagates. For this reason a global ethical consideration imposes an obligation upon society to avoid those almost totally preventable deaths.

FIGO, the International Federation of Obstetrics and Gynecology, has recently decided to make the journey through pregnancy, labour and delivery a safe one for all women; to this end, it is mobilizing the obstetricians-gynecologists of the world to join the fight against maternal mortality and morbidity, utilizing the skills existing in its member societies in the industrialized world to help those from the most affected countries. We hope that all obstetricians-gynecologists will join this fight.

## L53

**ORGANISATION OF PERINATAL CARE IN DEVELOPING COUNTRIES**

**Manuel RG Carrapato**, *Hospital S Sebastião, Santa Maria da Feira, Portugal*

Everyone acknowledges that maternal and perinatal mortality in developing countries represents an appalling and shameful disrespect for mankind – figures speak for themselves. The question, however, is what has been done about it? The answer is nothing. What can be done? The answer is a lot.

Although perinatal care is a medical problem it is also, and primarily, a social-political affair. The first step is education. To try to deliver medical services to an illiterate population with a great preponderance of women is a pointless exercise. It is then a Public Health matter to provide minimal housing and sanitation without which it is fruitless to even attempt to have any sort of health care; to improve nutritional status of women of reproductive age; to implement a nationwide vaccination schedule for mothers-to-be; to eradicate malaria and other parasital infections; to instruct women on HIV infection and transmission (whether they will have any choice is a different matter); to identify and train 2-3 midwives per 1000 inhabitants in the communities, providing them with the skills for family planning, antenatal care and advice, applying scientific knowledge to local customs; to advise mothers on simple but very important issues of personal hygiene; to encourage mothers to breastfeed and kangaroo mother care; to create small personalised health centres ("Day Hospitals") with minimal facilities for a normal birth in safety and make them available to the population; to initiate immunisation schemes for babies immediately after birth; to supervise the welfare of mothers and babies by offering postnatal consultations and follow-up clinics for children which can easily be run by trained nursing personnel under the regular supervision of medical officers.