

performed between 18 and 22 weeks can help identify patients at risk of preterm delivery. However, given the low prevalence of preterm births, screening would generate either a high false positive rate or a low sensitivity. One non-randomized interventional study among patients with a short cervix on routine ultrasound examination found a lower risk of delivery before 32 weeks in the cerclage group than in the expectant management group. However, the only prospective randomized trial published in a low risk population has shown that cerclage of a modified cervix on TVS in the second trimester did not improve perinatal outcome.

Conclusion: Although the level of evidence is still low, there does appear to be a benefit in performing a cerclage rather than continuing with expectant management in cases with ultrasound appearance of cervical incompetence. Ultrasound can be offered to reduce the indications of cerclage in cases where the situation is uncertain.

Within the general obstetric population, TVS might help selecting asymptomatic but high risk women, however, the benefit associated with cerclage for sonographic indication is not demonstrated.

Key-words : Preterm labor. Preterm delivery. Cervical length. Cervical incompetence. Cerclage. Ultrasound

## L66

### **PREMATURITY AND PREVENTION: IS IT FEASIBLE?**

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Preterm birth, especially at gestational ages less than 33 weeks is the major cause of neonatal mortality and late morbidity as well. In the last two decades major improvements have been achieved in the field of management both on the obstetrical and neonatological side. Consequently the mortality rate has been strongly reduced but unfortunately the same success has not been always observed as far as handicaps rate in survivors is concerned. Moreover it has been pointed out that the positive trend observed in the first half of the last decade has stopped and no major progresses have been noticed after 1995. Therefore it is crucial to prevent the premature birth. Unfortunately the rate of babies born at very early gestational ages seems to be increasing mainly due to the increasing number of multiple pregnancies from IVF programs and a better detection of fetal compromise inducing iatrogenic premature birth. Prevention's programs can be applied with success when dealing with one particular possible cause but, due to the multiplicity of aetiological factors, preventive programs directed toward a general population have offered unsatisfactory results. Among the many factors responsible of premature births socio-economic conditions play a principal role and any effort should be directed toward removing the unfavourable situations. From the neonatological point of view the availability of technical resources adequate for assisting these fragile babies is necessary to improve at least the mortality rate. The clinical and ethical implications must be evaluated.

## L69

### **A NEW NON INVASIVE METHOD FOR THE PREDICTION OF FETAL LUNG MATURITY**

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We have observed by ultrasound (US) technology recurrent patterns in respiratory behaviour during the study of fetal breathing movements (FBMs) related with pulmonary maturity/immaturity. We aimed to correlate these findings with fetal lung maturity (FLM) tests currently performed in our institution in order to validate the hypothesis that some FBMs patterns may correspond to FLM, independent from gender, weight and gestational age. We enrolled 39 high risk pregnancies in whom a complete US study of FBMs was performed and correlated to FLM tests. All women delivered by cesarean section within one week from amniotic fluid sampling. US-FLM was defined as presence of nasal fluid flow velocity wave-

forms (NFFVW) detected by Doppler flow plus spectral image analysis synchronous to thoracic movements (TM) as evaluated by M-mode. An US guided amniocentesis was performed and FLM testing evaluated by L/S ratio, phosphatidylglycerol presence and lamellar bodies count. Diagnostic accuracy for US-FLM, with RDS as endpoint parameter, was as follows: sensitivity: 100%, specificity: 80%, PPV: 73% and NPV: 100%.

FBMs are known to reflect pulmonary development and maturation and thus are feasibly correlated with the risk of RDS. The synchronous presence of NFFVW and TM correlate accurately with conventional FLM tests.

We suggest that this non-invasive assessment of FLM may be the choice when certain situation arise, such as: amniocentesis refusal, religious concerns, critical anhydramnios, laboratory logistic difficulties or heavily stained amniotic fluid sample.

## L71

### ANOMALIES IN TWINS

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There is an increased prevalence of congenital anomalies in twins (6-10%). This increase in malformations is due to both constraint deformities and malformations associated with monozygotic (MZ) twins. Classification of anomalies in twins should be as follows:

1. Anomalies unique to multiple conception (Conjoined twins, Acardiac twins, Fetus in-fetu).
2. Anomalies not unique to multiple conception, but that occur more often in twins (Hydrocephalus, CHD – congenital heart defects).
3. Anomalies not unique to twins, but more frequent because of mechanical or vascular factors associated with twinning (Clubfoot, CDH – congenital dislocation of hip).

The rate of concordance for congenital malformations in twins varies from 3/6-18.8%, and this rate is influenced by zygosity and type of anomaly.

Obstetrical problems associated with anomalies in twins include: a. Ultrasound demonstration of a twin pregnancy with discordant anomalies; b. amniocentesis with discordancy for abnormal karyotype. Selective fetocide is the solution for discordant anomalies, however, there risks to the procedure including abortion/death of the second twin and permanent damage to brain and renal tissue of the remaining fetus.

Prenatal diagnosis using ultrasonography for the various types of anomalies in twins, will be presented.

## L72

### IATROGENIC MULTIPLE PREGNANCY: LESSONS FROM THE DEVELOPED COUNTRIES

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Assisted reproduction technologies (ART) expose multiple ova to sperm, either in-vivo (by ovulation induction - OI) or in-vitro (IVF). Iatrogenic – physician-made – multiple pregnancies (IMPs) are a consequence of an attempt to increase pregnancy rates of costly therapies. A distinction is made between unavoidable (most of OI cases) and avoidable (IVF) IMPs. Over the last decade, epidemic dimensions of IMPs have been observed: twins increased 60-80% and higher-order multiples increased 400-600% in most developed countries. The common etiology for this increase in developed countries is advanced maternal age at conception, characterized by reduced fecundity and increased need for ART. ART is a particularly efficient treatment of mechanical infertility – the most common cause of infertility in developing countries.

Irrespective of debates such as therapy vs. prevention and governmental vs. private subsidizing, data show that most developing countries have ART centers. It is therefore important to learn a lesson from the developed countries about the consequences of this mode of conception.