These measures should start at local level and then spread regionally, establishing priorities and goals. Most pregnancies and deliveries are normal and physiological - efforts should be made to keep them that way. Once a risk pregnancy has been identified regional services should then make arrangements to provide advice and care in loco.

With these simple measures some women and many babies will, of course, continue to die - but a lot more will be saved. It can be argued that the organisation of perinatal care in developing countries is a total and unrealistic utopia and this may be true. However, many of the past attempts and failures are not just due to the lack of financial resources but also due to indiscriminate misuse, to permissiveness, to greed and corruption, often with the blessing of the Western World. It should be emphasised that the organisation of perinatal care in developing countries does not include the availability of high technologies which, I am convinced, will make no difference whatsoever to the overall perinatal scene at this stage.

## L55

## THE ROLE OF PERINATAL CENTER ON NEONATAL SURGERY FOR GIS

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The fetus with an anomaly requires a team of specialists working together. A multidisciplinary team includes perinatologists experienced in fetal diagnosis and intrauterine interventions, geneticists, obstetrical sonologists experienced in the diagnosis of fetal anomalies and a pediatric surgeon and neonatologist who will manage the infant after birth. Fetal therapy is a team effort needing varying amounts of input from all team members.

The options for perinatal management of a fetus with gastrointestinal malformation cover a wide spectrum, depending on the type and the severity of the lesion and on the probability of associated malformations. Most correctable defects are best managed by maternal transport to an appropriate center and delivery near term. Some may benefit from change in timing or mode of delivery to minimize postnatal morbidity and mortality.

Esophageal duodenal or jejunoileal atresias, anorectal malformations, enteric ovarian mesenteric or choledochal cysts, uncomplicated meconium ileus and small intact omphalocele are best corrected after delivery.

Gastrochisis or ruptured omphalocele, intestinal ischemia-necrosis secondary to volvulus, meconium ileus etc. may benefit from induced preterm delivery for early correction ex utero.

Giant omphalocele, large sacrococcygeal teratoma or a cervical cystic hygroma may benefit from cesarean delivery.

Congenital gastrointestinal malformations comprise a relatively small proportion of all fetal anomalies (less than 10%) and prenatal ultrasound is commonly used to detect them. Duodenal and high intestinal obstructions are more readily diagnosed. The ability of prenatal ultrasound to detect esophageal atresia depends on the presence of a trachea esophageal fistula. The diagnosis of pure esophageal atresia is relatively easy. However midgut abnormalities and hindgut abnormalities are difficult to diagnose. The commonly reported sonographic appearance of "echogenic" bowel is usually nonspecific. Those involved in prenatal scanning must be aware of limitations of ultrasonography. It is important to ensure that the level of diagnostic uncertainty is communicated to parents and those responsible for the postnatal care of the infant.

#### L57

# THE ROLE OF PERINATAL CENTER ON NEONATAL SURGERY FOR LUNG

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Many congenital defects can now be detected before birth. Fetal anatomy, normal and abnormal, can be accurately delineated by prenatal ultrasound. Prenatal diagnosis and treatment has decreased mortality rate in some life-threatening thoracic malformations, such as congenital diaphragmatic hernia (CDH) and congenital cystic adenomatoid malformation (CCAM) of the lung.

Although less severely affected babies survive with modern postnatal surgical care, including extracorporeal membrane oxygenation support, many neonates with CDH defect die despite all intervention because of underdeveloped (hypoplastic) lungs and associated pulmonary hypertension. These lesions, when first evaluated and treated postnatally, demonstrate a favorable selection bias because the most severely affected fetuses often die in utero or immediately after birth. Salvage of these severely affected babies remains an unsolved problem. It has been shown experimentally that repair before birth, allowing the lungs to grow while the fetus remains on placental support, is physiologically sound and technically feasible. Fetal intervention may be recommended in the fetuses of <32 weeks' gestation who in the poor prognosis group (herniated early in gestation, herniated liver, low lung-to-head ratio, severe mediastinal shift, dilated intrathoracic stomach). Presently, fetal intervention for CDH consists of endoscopic (FETENDO) tracheal occlusion to induce lung growth; the hernia is repaired postnatally.

Although CCAM often presents as a benign pulmonary mass in infancy or childhood, some fetuses with large lesions die in utero or at birth from hydrops or pulmonary hypoplasia, or both. Differences in the survival rate of patients with CCAM are related to the associated hydrops. The potentially fatal outcome with large CCAM lesions may also be related to lung hypoplasia secondary to prolonged compression in utero. Most lesions can be successfully treated after birth, and that some lesions resolve or significantly regress before birth. Less than 10% of all fetuses with CCAMs can be successfully treated by emergency resection of the cystic lobe in utero. For lesions with a single large cyst, percutanous thoracoamniotic shunting may be successful.

Mild hydrothorax especially when unilateral is relatively benign. The diagnosis of severe pleural effusion, particularly bilateral once, before 32 weeks' gestation may be associated with considerable morbidity and mortality. A small number of these lesions may progress rapidly and cause lung hypoplasia secondary to prolonged compression. In such cases, if fetal needling fails, thoracoamniotic shunting may improve the outcome by preventing lung hypoplasia and hydrops.

## L58

## FETAL WEIGHT ESTIMATION IN DIABETIC PREGNANCIES: THE REAL FACTS

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Ultrasound plays a crucial role in the management of diabetic pregnancies. Among its aims is the correct estimation of fetal weight, especially when suspicion of either macrosomia or IUGR develops during pregnancy. Although ultrasound can detect in many instances the macrosomic fetus, still a debate exists regarding the use of EFW in preventing adverse outcome. A macrosomic fetus may be defined as one whose absolute weight is of 4000-4500 grams and in the diabetic patient the macrosomia is asymmetric (AC>HC), leading to an increased risk of shoulder dystocia. Therefore, US prediction of fetal weight in extremely important.

The question to be asked is: is US a goof tool for EFW in utero? Several methods for EFW exist: clinical, maternal, sonographic (2D, 3D) and by MRI. Over the last 30 years, numerous formulas for EFW have been suggested using sonographic measurements of fetal organs with consideration of AFI and obesity. The predictive accuracy of these formulas varies from +/- 14.8% to +/- 20.2%, and the accuracy is related to the size of the fetus. It was found by many investigators that formulas incorporating AC alone are