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EDITORIAL

3 - D ULTRASOUND SYSTEMS

During the past two decades there has been tremendous interest in the developing fetus. The development of high resolution U.S.G. has been the single most influential factor responsible for our increased ability to explore the intrauterine environment.

It was Prof. Ian Donald who introduced Ultrasound in Obstetrics in the 50's. Since then it has been an important tool of fetal surveillance. At present the images displayed on the monitor are 2 dimensional and the skill of an USG Operator comes from interpreting them in a 3-D fashion and from avoiding interpretational errors due to artefacts. The worlds first

industrial 3-D Ultrasound System was presented in 1989. Technology used processed Ultrasound data of an entire volume of tissue.

In Obstetrics the primary use of Ultrasound was a) To identify intrauterine pregnancy and confirm viability, b) facilitate detailed viewing of foetal anatomy and evidence of altered growth and multiple pregnancy, c) essential aid in the safe performance of various diagnostic procedures.

Although USG can improve the dating of gestional age, no improvement in outcome was seen in terms of perinatal mortality and morbidity.

The American College of Obstetricians and Gynaecologists Health Care Commission have declined to make a recommendation in favour of routine use.

The only indication for routine USG is exclusion of congenital malformations and the parents should understand this. Obstetricians offering prenatal diagnosis or screening bear a heavy responsibility.

At present only 50% of major malformations are detected at Screening, these being the severe ones such as anencephaly, hydrocephalus, abdominal wall defects etc. The important ones should be those not easily detected like cystic hygroma, renal agenesis, polycystic kidneys, and minor hydronephrosis and hydroureter and prenatal detection and evaluation of foetal intracranial haemorrhage. This is important as if the haemorrhage is detected in the gestational period, birth Trauma is not responsible for the problems and complications it can

cause and also it reduces the medicolegal problems for the doctor.

The proportion of all perinatal deaths that resulted from congenital malformations had definitely decreased since the 1990's. This decrease has reflected an increase in termination for foetal anomalies.

Although routine USG yielded an increase in anomalies detected before birth, many are beyond 24 weeks and in many countries the women then do not have the option of termination.

In this respect the 3-D Sonography has an outstanding advantage. Even minute observations should be able to be detected by the Operator and this does not require any exceptional degree of skill.

Thus if the 3-D USG becomes available in the interest of the patient and to be able to rule out anomalies as early as the first trimester, every expectant mother should have the option of being examined with 3-D Ultrasound.

- DR. R. D. PANDIT