

## Editorial

# Prenatal Diagnostic Techniques and the PNDT Act



Dr. R. D. Pandit

The incidence of congenital anomalies in humans varies from 2 to 7%. Before the availability of ultrasonography foetal anomalies were recognized only at the time of delivery. As diagnostic capabilities with ultrasound in accurately evaluating abnormalities improved, management concerns evolved from route and timing of delivery to feasibility of inutero therapy, either medical or surgical remote from term.

Differential diagnosis can be narrowed considerably with identification of combinations of anomalies that may be suggestive of syndromes.

Anxiety surrounds prenatal genetic screening and all patients should be counselled. Counselling should address issues such as conditions for which fetus is at risk for which there is screening, risks to the woman or pregnancy due to the procedure, accuracy of testing and management options in case of abnormal result.

Prenatal genetic screening and diagnostic testing include chorion villus sampling, amniocentesis, foetal blood sampling, maternal serum alpha fetoprotein screening, foetal skin, liver and muscle sampling, foetoscopy and ultrasonographic surveillance for foetal

structural anomalies. Actually all invasive tests are also done under sonographic guidance. Great advances have been made in prenatal diagnosis in screening for conditions like Downs syndrome, Taysache disease. Sickle cell anaemia, Thalessemia, cystic fibrosis, neural tube disorders and antenatal diagnosis of certain metabolic disorders.

Advances in ultrasonography and Doppler flow studies leading to more precise diagnosis have led to success with a few medical and surgical interventions to treat the patient.

Medical methods include transplacental transfer of drugs to the foetus for conditions like supraventricular Tachycardia, congenital adrenal hyperplasia or direct administration to the foetus including blood transfusion, drug therapy or stem cell transfusion.

Surgical methods include shunts, amnioinfusion, intrauterine cardiac valvotomy and intrauterine surgery by exteriorization of the foetus.

There are great psychological benefits to the parents of gaining understanding of the conditions affecting their unborn child and the necessary postnatal interventions.

When faced with a prenatal diagnosis of a severe foetal abnormality many couples may elect pregnancy termination.

Unfortunately in the hands of a few, prenatal diagnostic technique is limited to prenatal sex determination by noninvasive means like an ultrasonography and abortion if the sex of the foetus is not the one desired by the parents.

The Centre for enquiry into Health and Allied Themes Pune (CEHAT) and others had filed a Writ Petition No. 301/2000 in the Supreme Court against

Union of India and others for alleged violation and contravention of the Provisions of the Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994 [PNDT]. The Supreme Court has issued directions vide its order dated 1-5-2001 that the Appropriate Authorities are required to register all Genetic Counselling Centres, Genetic Laboratories and Genetic Clinics including bodies using ultrasound machine under the PNDT Act 1994 Rules.

Keeping in view the directive of the Supreme Court regarding registration of bodies using ultrasound machines is mandatory. The Ministry of Health and Family Welfare, Government of India has directed that all persons/bodies using ultrasound machines (Capable of detecting sex of foetus) may be treated as Genetic Laboratory and a registration fee of Rs. 3,000/- be charged for their registration under Rules of the Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Rules 1996. Registration of Genetic Counselling centres, Genetic Laboratories and Genetic clinics including bodies operating ultrasound machines (capable of detecting sex of the foetus) is applicable to all the bodies functioning in public as well as private sector. Registration fee is to be charged from all these bodies.

Accordingly the State Governments are to direct all Districts/Municipal Corporations to see that the registration is done in accordance with the law. The State

Appropriate Authority would be ultimately responsible for effective registration of all such bodies/persons all over the State.

The Appropriate Authorities would also have to take prompt action against all bodies and persons operating without registration.

The Appropriate Authority is directed to publicize in the print and electronic media details of addresses for implementation of the said act in that area and create public awareness against the practice of prenatal determination of sex and female foeticide and take prompt action against any person or body who issues or causes to be issued any advertisements in violation of Section 22 of the Act.

There are several ethical and legal issues involved in prenatal diagnosis and foetal therapy but one thing is very clear today that using Prenatal Diagnostic Techniques to detect the sex of the foetus to satisfy the desire of a couple to know the sex of a child with a view to abort the foetus if the sex is not the desired one is a criminal offence by Law and ignorance of the Law is no excuse. We are all expected to follow the Law in Letter and spirit.

Dr. R. D. Pandit