The antenatal diagnostic techniques were initially described in the 19th century. It was not until the middle of 20th century that the techniques were applied to antenatal diagnosis and management of various genetic disorders and congenital malformations.

Basically the techniques were devised to help people who want to have a family and the aim was to enable parents to plan their family knowledgeably. The primary purpose of antenatal diagnosis was to relieve parents of anxiety over inheriting a genetic disease, especially if they belong to a family with a hereditary disease. Also for older women who were concerned over giving birth to a child with congenital anomalies. Thus, antenatal diagnosis is defined as intended to inform parents of the birth of an affected infant, to allow in utero treatment, or delivery at a special centre for immediate postnatal treatment.

Today, antenatal screening and diagnostic techniques are almost a norm though the list has been further extended to include the screening for infectious diseases. For several years now at certain antenatal clinics and in few hospitals counseling and testing programs are available for various infectious diseases. The purpose of antenatal screening for infectious diseases such as HBV, HCV, and HIV is to detect those diseases which have the potential to affect the mother or fetus adversely, and for which an effective intervention exists to stop vertical transmission. Positive women are then offered a prevention of mother-to-child transmission (PMTCT) program. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) has recommended screening of pregnant women for HIV and hepatitis viruses B and C (HBV and HCV) since 2004.

Unfortunately, the knowledge about management strategies to reduce perinatal transmission of blood-borne viruses and about transmission risk via different routes appears to be sub-optimal. Even queries about transmission of HBV or HCV through breastfeeding are unrequited by the family care providers such as general physicians or pediatricians because they have no information about this and hence they end up incorrectly counselling the patient about the increased risk of HBV or HCV transmission through breastfeeding and thus advise against it.

In this volume of JCPSP, the research by Sheikh et al. on universal HBV and HCV antenatal screening is an encouraging practice. Similarly, if this is taken-up by antenatal clinics, HBV and HCV could be checked at this stage for vertical transmission and that would be a huge service to the masses.

The vertical transmission of HBV or HCV is the question that has been researched a great deal. HBV has been detected in blood, sweat, tears, saliva, semen, vaginal secretions, menstrual blood and breast milk. However, only blood, semen and (possibly) saliva have been found to be the modes for transmitting the infection. HBV is transmitted in three different ways: through blood or blood products, sexual contact, or from mother to child during pregnancy and childbirth. In areas of low endemicity, usually the transmission is through sex or intravenous drug use, whereas in areas of high endemicity, such as Africa, Asia, and the Alaska, the transmission is usually at childbirth from the infected mother.

Regarding HCV transmission, a cohort study, conducted in 2005, found that membrane rupture and internal fetal monitoring were associated with higher risk of HCV transmission. Whereas genotype, viral load, vaginal vs. caesarean delivery, breastfeeding or HIV co-infection were not associated with transmission. Since post-partum transmission is quite uncommon, thus, breastfeeding is recommended.

The anti-HCV therapy is a cause of great concern for obstetricians because to-date minimum evidence is available to show that interventions reduce transmission from mother to baby. The investigators suggest that probably once the therapy is successively developed than it can be given safely in pregnancy. The treatment should start early to decrease the risk of in utero transmission. Compared to this, for HIV, there is extensive evidence that the transmission risk can be significantly reduced by interventions, such as antiretroviral therapy for mother and neonate, delivery by caesarean section, and avoidance of breastfeeding.

Today, modern obstetrics and gynaecology practice clearly defines the main objectives, indications and
complications of antenatal testing, yet, it raises many concerns, doubts and moral controversies. The immediate need is to conduct an education campaign to create awareness about the antenatal screening practice for blood-borne viruses; improving knowledge about interventions during labour that reduce rate of vertical transmission; and improving knowledge about the risk of transmission of infection via breastfeeding. An understanding of the prevalence of these infections and their risk factors in antenatal women is important to guide testing policy and practice.

Ethical issues related to antenatal diagnosis are basically associated with the termination of the pregnancy. It is argued that undergoing antenatal testing with the intention to check the gender of the fetus with termination of the undesired gender is morally incorrect compared to that of finding out the un-toward health condition of the fetus with termination as a possibility. In principle, both can be seen as equally morally acceptable or unacceptable. But un-defined religious, ethical and sacred obligations are a limitation.

Other issues related to antenatal diagnosing are raised by psychologists. The benefits of diagnosing abnormality in early stages of pregnancy could be damaging for some because there are some potential emotional costs. These include anxiety, loss of confidence about the pregnancy and negative attitudes towards the baby. A major worry is that besides the availability of antenatal diagnosis, parents who choose not to abort affected fetuses may face intolerance and hostility from others.

Continuing Medical Education (CME) for health professionals is challenging. Its impact and efficacy varies between approaches and participants. Yet, CME has been reported as an effectual approach in modifying clinicians’ testing patterns, education and feedback on compliance with clinical guidelines as has direct mail in increasing clinicians’ knowledge.5

REFERENCES