

Foetus screening without pricks

OUR SPECIAL CORRESPONDENT

New Delhi, Jan. 7: A non-invasive test that will screen foetuses for 10 congenital disorders and eliminate unnecessary tests that require pricking the amniotic sac will be available in India from March this year, a genome testing company announced today.

The test offered by Bangalore-based MedGenome will look for a set of chromosomal disorders using traces of foetal genetic material circulating in the bloodstream of pregnant women. Similar tests are currently available in India, but from companies that send material blood samples to foreign testing laboratories.

The company will accept material blood samples from hospitals across the country and screen the foetal genetic material for Down Syndrome, sex chromosome disorders and other structural abnormalities whose incidence ranges from four per 100,000 to 120 per 100,000 live births.

"A test available in India will mean lower costs and quicker results," said Ram

Prasad, a geneticist and chief operating officer with MedGenome, which will use a prenatal screening test for which technology was developed by the US-based company, Natera.

Senior doctors familiar with prenatal diagnostic procedures said the introduction of the test, which can be performed at 10 weeks of gestation, will help eliminate unnecessary use of amniocentesis in which a fine needle is used to pick up foetal cells from the amniotic fluid to study foetal genetic material.

Such prenatal screening tests are usually prescribed for pregnant women above the age of 35 years, and to women who have a family history of congenital disorders. While certain biochemical tests are also used to predict some disorders, they are not reliable and amniocentesis remains the confirmatory test.

"But among 20 women prescribed amniocentesis after biochemical screening, only one actually has a foetus with Down Syndrome," said Ishwar Chander Verma, head of genetics department

at the Sir Ganga Ram Hospital, New Delhi. "Nineteen of the 20 amniocentesis procedures are unnecessary."

Amniocentesis can be carried out from the 13th week of gestation.

The new prenatal test has a much higher reliability, although amniocentesis will for the moment remain the confirmatory test, said Verma, who plans to conduct a study involving hospitals in cities across India to assess the reliability of the test in the Indian population.

"We'll accept maternal blood samples only from hospitals — we'll have no direct contact with pregnant women," said Sam Santhosh, a mechanical engineer who switched to genomics five years ago and founded MedGenome.

The test will screen foetuses for Down syndrome and other chromosomal disorders that carry a range of symptoms — from anatomical and physical abnormalities to moderate-to-severe intellectual disability to obesity-related medical problems. Some disorders also carry the risk of miscarriage.