

PRENATAL SCREENING

Knowing early, and safely

AFSHAN YASMEEN

COMMENT · PRINT · T T

Like 20 Share Tweet G+1 2 in Share 6 Share 7

TOPICS Weekend Being health

Expectant mothers can take a non-invasive blood test that examines foetal DNA in the mother's blood to determine whether there is a high risk of chromosomal defects

The idea of genetic disorders, an important health concern, and the third most common cause of mortality in newborns, need not baffle Indian parents-to-be anymore. Technology has now made it easier to detect problems in the early stages of pregnancy.

Many expectant mothers now access a non-invasive prenatal test (NIPT) that examines foetal DNA in the mother's blood to determine whether there is a high risk of chromosomal defects. But opinion is still divided on whether women need to undergo this expensive test.

Not a diagnostic test

Unlike the invasive amniocentesis, which is a prenatal test where a small amount of amniotic fluid is removed for testing from the sac surrounding the foetus by inserting a fine needle into the uterus through the abdomen under ultrasound guidance, or the Chorionic Villus Sampling, another prenatal test in which a sample of chorionic villi is removed from the placenta, NIPT is a blood test, according to Priya Kadam, Program Director, MedGenome NIPT, one of the players in the field.

Citing American College of Medical Genetics and Genomics (ACMG) guidelines that support the use of non-invasive prenatal tests as an optimal, initial option to screen for specific genetic conditions, she argues that NIPT should replace the conventional tests.

The test, which can be taken up anytime during pregnancy, will screen the blood sample for chromosomal disorders that include trisomy 21 (Down's syndrome), trisomy 18 (Edwards syndrome) and trisomy 12 (Patau syndrome). But this is only a screening test and not a diagnostic test. If the test shows a positive result, the doctor has to validate the defect through amniocentesis.

Amniocentesis still required

Over the last two years, the test is being recommended by some doctors as a matter of routine in every case. While there are no figures available, the number of people getting tested is increasing, according to companies conducting the tests.

However, gynaecologists and foetal medicine specialists who vouch for the safety of the test, are sceptical about the need for it.

Dr. Hema Divakar, who represents the Federation of Obstetric and Gynaecological Societies of India (FOGSI) at the International Federation of Gynecology and Obstetrics (FIGO), says with each test costing around Rs.30,000, only those cases that raise a red flag after the First Trimester Screening (FTS) need the NIP test.

"Even after getting the test done, the patient has to undergo an amniocentesis to get the result validated. This means the patient has to undergo two tests for the same purpose," she says.

Dr. C.N. Sheela, President of the Bangalore Society of Obstetrics and Gynaecology, says NIPT has several limitations. "The test results may not be as accurate in women who are obese or have had multiple pregnancies. If women in the low-risk category undergo the test, the positive predictive value is less," she says.

Genetic counselling plays an important role and the patient should be counselled that even if she undergoes NIPT, she may have to undergo amniocentesis.

Dr. N. Venkatesh, senior consultant and Head of the Department of Obstetrics and Gynaecology in Vikram Hospital, Bengaluru, says that despite some doctors being euphoric about the test, past history has shown that we need to take some universal tests and recommendations promoted by companies with a pinch of salt. "The ACMG guidelines are formulated for the western population that is genetically different from the Indian population," he says.

yasmeen.afshan@thehindu.co.in

Get News Delivered To Your Email

Email ID

Send Me News

LATEST IN THIS SECTION

Delhi dengue, chikungunya deaths: Centre seeks report

Delink drug prices from R&D costs: UN

Babies fall victim to antibiotic resistance

Chikungunya: symptoms, treatment and prevention

Harvesting good health

New single-dose treatment shows promise in anti-malaria battle

AIDS epidemic worse than ever before, says Mark Feinberg

It's official: The five-second food window is a myth

Zebrafish an animal model for one more disease

Physician, heal thyself: How graft afflicted NRHM in U.P.

POLICY & ISSUES

Personal and public choices eroding health

When policy attention is the best remedy

When a sedentary lifestyle turns deadly

It's official: The five-second food window is a myth

Battling the poverty-parasite menace

Delink drug prices from R&D costs: UN

Babies fall victim to antibiotic resistance

New single-dose treatment shows promise in anti-malaria battle

AIDS epidemic worse than ever before, says Mark Feinberg

States approve proposal to replace Medical Council of India

MOST POPULAR	MOST COMMENTED
Chikungunya: symptoms, treatment and prevention	
Delhi dengue, chikungunya deaths: Centre seeks report	
The biology of first cousin marriages	
The pigeon paradox: Feeding them could be bad for your lungs	
New single-dose treatment shows promise in anti-malaria battle	
India has 3rd-highest number of HIV-infected people: UN	
Allergic to air-conditioners?	
How overdose of paracetamol hits kids	
Breakthrough in treating leucoderma	
All those old wives' tales	

MEDICINE

Delhi dengue, chikungunya deaths: Centre seeks report

'Cervical cancer can possibly be eliminated'

Compound in turmeric may treat colon cancer: study

Fathers can help prevent obesity in children: study

Scientists investigating sperm-boosting nutrient

Made-in-India leprosy vaccine to be launched

Over 90? Hip replacement is still possible

Novel drug compound inhibits skin cancer in mice, finds study