

MedGenome, Apollo doctors deliberate on NIPT & benefits of PGS/PGD in IVF

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Leading Obstetricians/Gynaecologists, IVF specialists and Embryologists participated in the medical session.



MedGenome, the market leader in genomics-based diagnostics and research, along with Apollo CM fertility, a leading In Vitro Fertilization (IVF) chain, organized a Continuing Medical Education (CME) session recently to discuss the scope for NIPT (non-invasive prenatal test) and benefits of Pre-implantation Genetic Screening/Diagnosis (PGS/D) in IVF.

The CME hosted talks by Dr Priya Kadam, Programme Director, NIPT, MedGenome and Dr Sam Balu, Manager Scientific Affairs, MedGenome. The CME was attended by city's leading consultants and specialists from the field of obstetrics/gynecology and assisted reproduction.

Dr Priya Kadam, Programme Director, NIPT, MedGenome spoke about the need to offer non-invasive screening/testing (NIPT) solutions to all pregnant women; especially considering the risk of Microdeletion Syndromes, which occur irrespective of maternal age.

DiGeorge syndrome is caused by a loss of a specific small part of chromosome 22 and is the second most common chromosomal abnormality after Down syndrome. It leads to developmental delay, intellectual abnormalities, structural defects (such as cleft lip and palate) and/or organ malformations like congenital heart disease. The frequency of this syndrome is estimated to be about 1 in every 3000 live births (the risk can go up to 1 in 1000 prenatally).

Speaking on the management of these disorders she said, "There is no cure for such disorders. However commonly occurring, clinically relevant chromosomal abnormalities such as aneuploidies and microdeletions can be screened during pregnancy with non-invasive prenatal screening. Blood collected from the mother's arm contains the cell-free DNA from the growing baby. This DNA is isolated and screened for the chromosomal abnormalities associated with these disorders. The results can tell scientists and clinicians about the baby's risk of being affected by these conditions. This information can empower the parents to make informed choices, enable them to be fully aware of these conditions and seek medical help." She also touched upon the capability of MedGenome's NIPT test to screen twins, egg donor and surrogate pregnancies for such chromosomal abnormalities.

Dr Sam Balu, Manager Scientific Affairs, MedGenome discussed the increasing burden of infertility with about 10% of the nation's population affected by the condition which has led to an increasing demand for IVF. However a drawback in IVF is a

lower success rate, which can result in a patient requiring multiple cycles for a successful pregnancy.

Dr. Balu highlighted that even with IVF the chances of getting pregnant being around 40% on average, but by including PGS in the process the chances may be increased up to 70%. The aim of using PGS is to improve the overall success rate of IVF pregnancy and reduce the number of IVF cycles required to achieve a successful pregnancy. Similarly using PGD, IVF Embryos can be tested for disease causing mutation(s) inherited for their parents (such as Thalassemia and Sickle Cell Anemia). This would allow the clinician to selectively implant embryos without these mutations, thereby allowing such couples to have a child unaffected by the disorder.

Talking on the benefits of PGS and PGD he said, "Technology advances in medicine has helped couples to embrace parenthood which otherwise was a distant dream. PGS/PGD is a latest genomic technology which will significantly improve the chances of having a healthy baby."