For Indian Doctors, It's Written in the Genes not Stars

Doctors are now asking patients to take genetic tests to identify 'faulty' genes which helps them diagnose and treat genetic diseases better

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Bengaluru: When five-year-old Chathura Corea from Sri Lanka landed in India for cancer treatment, his physician Sachin Jadhav got a genetic test done on his blood sample before starting any kind of treatment. Corea had been diagnosed with a very rare form of blood cancer called Juvenile Myelomonocytic Leukaemia (JMML). After a genetic test, Jadhav concluded that a "simple chemotherapy would not suffice and the kid needs a bone-marrow transplant".

"The (genetic) test helped me identify what line of treatment to give providing maximising the chance of cure and in planning treatment better," says Jadhav, who has partnered with Bengaluru-based MedGenome Labs which provides genetic tests for a range of ailments like cancer, metabolic diseases, eye diseases, neurological and prenatal disorders.

Increasingly, doctors like Jadhav are asking patients to take genetic tests to identify 'faulty' genes in treating genetic diseases better.

MedGenome has seen the number of samples triple for genetic tests in the last one year.

"We now get about 600-800 samples a month," said VL Ramprasad, COO of MedGenome Labs. "The uptake is primarily due to increased awareness among clinicians in India who see a scope for better results and efficient treatment," he said.

Another lab, Stand Life Sciences has also seen a similar spike in the number of samples received. "Strand has seen a 250% growth in the number of samples last year, and we have done about 5,000 samples this year," said cofounder Vijay Chandru. The science behind these tests is straight forward: everything about us — the length of our hair, the colour of our eyes, the complexion of our skin is coded onto the DNA — which also has hidden hints of the possible disease one might get. Scientists analyse the genetic code and figure out what mutation causes a specific disease. As the awareness among doctors increases, revenues have been surging. MedGenome revenues have doubled every year. The lab's revenues have grown from $4 million in 2015 to $16.5 million in 2017.

"At this point, we are just scratching the surface," says Chandru of Strand life sciences, adding, "The addressable market is 500,000 people according to India Council of Medical Research (ICMR) report. Say, 20% people can afford the tests... 100,000 people could be tested. Right now, only 5,000 people are being tested."

These genetic tests cost about ₹30,000 - 40,000 for a single test. "Only 2% of Indian population is covered by insurance. Hence, affordability is another bottleneck in the widespread adoption of genetic tests," said Chirantan Bose, VP of Clinical services at Medgenome.

Aside from providing insights to clinicians for better diagnosis, the milestone for genetic tests is 'targeted therapy' for specific diseases. For instance, precision medicine in the treatment of cancer when the drug hits only the cancer cells and not the entire body (like in chemotherapy). Genetic testing paves way for precision medicine. Consumers too want to dig into their genes to know more about their family history, lifestyle tendencies and information about their ancestry. Mapmygenome provides a report on 100 different conditions including inherited and acquired genetic health risks. The firm's product, Genomepatri, has found massive traction and the number of samples "have tripled over the samples we received last year," says Anu Acharya, cofounder of Mapmygenome, adding that demand was not just coming from metros but even from tier-II towns across India.

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₹30,000 - 40,000
Cost of a single genetic test

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MedGenome

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Revenue

2015 **$4 million**

2017 **$16.5 million**