

Gene therapy catching on

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KOLKATA: It could soon be possible to identify not just the gene that triggers cancer but also deactivate it through targeted therapy. Once that happens, families with a history of the disease may go for a genetic diagnosis and take preventive measures before the disease has struck another member.

At a seminar on gene therapy organized by MedGenome last week, experts pointed out that the city was on the threshold of a gene therapy revolution that could take off in the next five years. It will help to address a whole range of oncological and neurological disorders that can't be prevented or cured now.

Very few were aware that most forms of blood cancer are now diagnosed and treated on the basis of genes, said oncologist Tuphan Kanti Dolai. "Genes dictate the kind of drugs that can be used. The genetic abnormality, once detected, also helps to check if the disease has been cured. Even though targeted therapy is yet to be fine-tuned for most other forms of cancer, it is definitely the future. In fact, a whole range of cancers will be treated through gene therapy within the next five years," said Dolai.

While renal and colo-rectal cancer have gene therapy, neurological disorders were still to have it, though they can be diagnosed through genes. Hereditary sensory moto neuropathy, ataxia, dystonia, some cases of stroke and dementia were among those which can be identified from genes. "It helps us to know the exact source and tell us what to expect. We can predict how the gene in question will express itself in

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Gene diagnosis for neurological disorders can be done for Rs 20-25000. "We need to develop therapy or else just diagnosis won't catch up. But it has helped us to have non-invasive diagnosis for muscle pathology or nerve biopsy. Now, all we need is a blood sample," added Das.

Disease prediction from blood samples of the unborn fetus has been a big step as well, said the experts. The ambit of ante-natal gene diagnosis has been steadily expanding. Diseases like spinal muscular atrophy can now be predicted. But therapy isn't available as yet," said neurologist Arijit Chatterjee.

Cost of gene diagnosis and therapy has been sliding down, though. It could halve in the next five years, according to Chatterjee. "Various forms of blood cancer can be diagnosed for Rs 2000-10000. Targeted gene therapy could cost Rs 5000-10000 a month. It's not entirely out of reach for the common patient, but not very cheap either. It will definitely come down in the next five years," said Chatterjee