The Evolving Role of Genetic Counseling in Genomic Medicine

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Genetic counseling involves educating at-risk patients or their close relatives about the occurrence of genetic diseases, their likelihood, and treatment, including ways to prevent or cure them. Counsellors will discuss the genetics and treatment of the disease, as well as the personal, familial, social and insurance implications. Additional diagnostic procedures, such as genetic testing, may be recommended to better understand risks or confirm the diagnosis.[1]

Genetic counselling not only informs the patient about the risks of disease but also helps them to be psychologically prepared to face it. There have been several ongoing researches, one particular in which meta-analysis techniques were employed to evaluate the psychological impacts of genetic counseling on women with a family history of breast cancer shows significant decreases in generalized anxiety and stress.[2]

In the emerging field of Genomic medicine, Genetic counselors play a crucial role throughout the entire patient's experience. They are crucial in the early phases, helping to establish agreement, facilitate decision-making, and aid in the assessment of genetic risk. To facilitate efficient communication between patients, healthcare providers, and the system, they also assist in the administration and interpretation of test results. Furthermore, genetic counselors advise patients on an ongoing basis and assist kids in comprehending and incorporating genetic knowledge into their life.[3]

Historically, a key ethical ambiguity for genetic counseling has been the idea of patient's autonomy. But as the genomic era approaches, it is necessary to reassess this principle's application in genetic counseling. To enable counselors to provide clarity on the acquisition and use of genetic information, this paper argues for a more balanced strategy that replaces the prioritization of patient autonomy. We start by outlining the historical setting in which the patient's independence was attained in the field and how it changed over time, including the incorporation of abstract, non-existent concepts. Understanding the initial stages of removing injustice, we offer the reasons why, considering the significance of patient autonomy and the rising levels of genetic variation, it has not been successful.[4]

We believe that some new molecular tests will be developed because of the global endeavor to sequence the human genome in the 21st century. Adoption of these tests will also increase the variety of conversations about genetics. These developments in technology can more effectively gather the information required to interpret genetic results appropriately and create preventative or therapeutic interventions. For instance, before epidemiological and molecular data were available to appropriately interpret the results, clinical trials for BRCA1 and BRCA2 mutations were started in the United States. These days, geneticists, genetic counselors, and geneticists are crucial to the use of novel tests. However, it is envisaged that specialists and primary care doctors will use genetic testing directly to predict the risk of disease and this will completely transform our current practice of medicine.[5]

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