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The Heredity of Mental Illness: A Case Report of Psychosis in Triplets

This case report presentation explores the heredity of mental illness through the evaluation and data review of psychosis found in a set of triplets. By the end of this session, viewers will appreciate the role of "twin studies" in understanding the heredity/genetics of
Schizophrenia. They will also be able to identify the different roles that genes and the environment can play in identical twins or triplets. Literature review reveals the polygenic model of Schizophrenia which is a cumulative model of gene variants that contribute to psychotic illness and are promising biomarkers for diagnosis and prevention. The literature on twin studies in Schizophrenia are much more common than that on triplets. Our literature search produced a two-part article, published in 1995 and 1997, on a set of monozygotic triplets with Schizophrenic psychoses. The data collected in these articles, is the basis for our further interests in areas such as prenatal history, imaging findings, genomic assessment, neuropsychology assessments, etc. Using existing literature data and results for comparison, we obtained detailed information and conducted studies on the triplets we observed. These triplets (A, B, C) presented to the hospital at different times with varying presentations, medication managements, and post-discharge plans. Results of data collection and comparison revealed similar components including similar prenatal experiences, home life, education, family history, negative CT imaging, and negative substance usage. Differences included presenting symptoms, medications used to manage symptoms, hospital course, and final diagnoses. This study will continue to be expanded to include more data in the future including obtaining additional brain imaging, genomic analyses, and neurological testing. By analyzing the data, we can understand more about the heredity/genetics and polygenic model of Schizophrenia.

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