Role of single nucleotide polymorphisms in susceptibility of stroke: a systemic review

ABSTRACT

Stroke is the second-leading cause of global mortality and the third leading cause of disability. Numerous in-dependent studies have reported that genetic mutations such as single nucleotide polymorphisms (SNPs) within genes may alter an individual's susceptibility towards several health disorders that subsequently lead to the development of stroke incidence. To date, constructive information that summarizes this particular relationship is limited. Hence, this comprehensive review focuses on the role of SNPs in facilitating susceptibility to several health disorders including brain aneurysms, atrial fibrillation, atherosclerosis, and hyperlipidemia, and their association with the development of higher stroke incidence. We discussed a total of 33 SNPs in this review that includes 11 SNPs associated with brain aneurysms, 4 SNPs associated with atrial fibrillation, 13 SNPs associated with atherosclerosis, and 5 SNPs associated with hyperlipidemia. The SNPs data could assist in determining an individual's risk of different health disorders and subsequently stroke. Therefore, pharmacogenomics could be applied to effectively provide appropriate personalized medications and genetic counseling.