

Precision Medicine in the Treatment of Alzheimer's disease: Opportunities and Challenges

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Abstract

Precision medicine is an innovative approach that takes into account the individual variability in people's genes, environmental exposures and lifestyle. Precision medicine contradicts the traditional "one-size-fits-all" approach in which treatments and prevention strategies of a particular disease reflect the average person without taking into account the individual variability. Omic sciences offer the opportunity to generate these more precise individual data that can guide the prevention, risk assessment, and treatment strategies of diseases. A comprehensive literature search was conducted in the period from October 2017 to January to collect and research articles that contain information about the opportunities and challenges of implementing precision medicine in the treatment of neurological diseases, more specifically Alzheimer's. PubMed is the database that was used to collect such information. There were 76 article hits, of which 18 were included in this review. Inclusion criteria were: full-text, English written, and published in the last 10 years. Articles that are not focused on Alzheimer disease, or genetics, or precision medicine were excluded from this review. Further, the opportunities and challenges for the implementation of precision medicine for the treatment of Alzheimer disease were investigated. Alzheimer's disease and neurological disorders in general, are still among the most poorly served fields with new therapies. Implementing precision medicine in Alzheimer disease and in neurology can accelerate the translation of genetic discoveries, and other personal information - such as epigenetic, proteomic, other omics, lifestyle and environmental exposures - into clinical practice and therefore provide targeted therapeutic intervention for Alzheimer disease.

Biography:

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References :

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