Pharmacogenetics

Pharmacogenetics is the study of how people respond differently to drug therapy based upon their genetic makeup or genes. Diet, overall health, and environment also have significant influence on medication response, but none are stronger indicators of how you will process medication than your genetics.

Effective interventions and treatments for complex diseases have been implemented globally, however, coverage in Africa has been comparatively lower due to lack of capacity, clinical applicability and knowledge on the genetic contribution to disease and treatment. Currently, there is a scarcity of genetic data on African populations, which have enormous genetic diversity. Pharmacogenomics studies have the potential to revolutionise treatment of diseases, therefore, African populations are likely to benefit from these approaches to identify likely responders, reduce adverse side effects and optimise drug dosing. This review discusses clinical pharmacogenetics studies conducted in African populations, focusing on studies that examined drug response in complex diseases relevant to healthcare. Several pharmacogenetics associations have emerged from African studies, as have gaps in knowledge [1].

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