Abstract

Integrating Personalised Genomics into Diabetes Management

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The newly advancing medical field of Medical Genomics can be integrated into the day-to-day management of Type 2 Diabetes. Medical interventions are personalized to the molecular level to help patients achieve better diabetic control and prevent micro/macrovascular complications. Direct-to-consumer genetic testing is becoming increasingly more available and affordable. Together with decision-making tools that bridge the gaps between research and treatment, doctors can quickly and securely access the patient's genetic data to risk stratify patients to screen for complications, maximise lifestyle interventions, and optimise pharmacotherapy prior to dosing. To further improve outcomes, patients can also be screened for clinically-validated genetic markers associated with cardiovascular risk factors such as insulin resistance and hypertension, and also optimise end-stage treatments such as dialysis and kidney transplantation. This presentation will address the evolving role of genomics in guiding diagnoses and treatments of diabetes. Moreover, clinical examples of using an innovative digital health mobile application developed in New Zealand for real-time, point-of-care integration of clinical genomics by general practitioners and medical specialists will be presented.

(169 words)