

13 **DIABETES DISTRESS AND QUALITY OF LIFE**

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T1DM is a chronic disease that requires intensive day to day management from the first day of diagnosis. These daily tasks along with the stress associated with hypoglycemia, hyperglycemia and long term-complications with diabetes often leads to lower perceived health-related quality of life in children and their parents. In this presentation we will discuss common diabetes related mental-health issues along with interventions to improve the perceived health-related quality.

14 **MEDICAL NUTRITION THERAPY (MNT) IN DIABETES: A PRACTICAL SESSION**

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Lifestyle management is a cornerstone of diabetes care. Medical nutrition therapy (MNT) is a key point in the management of children and young people with type 1 diabetes mellitus (CYP T1DM).<sup>1</sup> Studies have found that the diabetes self-management education and support (DSMES) is associated with improved diabetes knowledge, self-care behaviours and improved quality of life.<sup>3</sup> MNT can be used to better understand how dietary factors and choices can influence the progression and the risk of complications associated with type 1 diabetes. There is a need to customise dietary management according to patient needs and behaviours by a Diabetes Specialist Dietitians.<sup>2</sup> MNT can demonstrate tailored education respective of culture and based on healthy dietary habits. People with diabetes should be actively engaged in education, self-management, and treatment planning with the healthcare team delivering MNT. In addition, carb counting may have a positive effect on metabolic control, improves quality of life, and seems to do so without influencing body mass index.<sup>4</sup> A number of digital resources have developed. Technology-enabled diabetes self-management solutions improve A1C most effectively when there is two-way communication between the patient and the health care team, individualised feedback, use of patient-generated health data, and education.<sup>5</sup> The session demonstrated the use of multiple methods including technology, cultural resources and tailored education to address the challenges faced while delivering MNT, including, the cultural preferences, food availability, social, economic and motivational factors, which need to be individualised during MNT.

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15 **MONOGENIC DIABETES; AN UPDATE ON DIAGNOSIS AND MANAGEMENT**

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Monogenic diabetes (MGD) is diabetes caused by a defect in one or more genes or chromosomal locus. Currently, mutations in more than 50 genes have been identified resulting in different forms of MGD through various mechanisms. With development and availabilities of genetic testing, MGD became increasingly recognized and accounts for up to 6.3% of diabetes caseload in children and adolescent. The main subtypes of MGD are neonatal diabetes, MODY and monogenic insulin resistance syndromes. The phenotype of individuals with MGD can mimic type 1 or type 2 diabetes, however recognizing MGD would allow selecting the best treatment for the patients and their families and avoid the need for invasive investigations to explain some associated features. For making the diagnosis of MGD, we have moved from the traditional phenotype-based targeted testing to the comprehensive next-generation sequencing approach, which allows earlier molecular diagnosis that can guide treatment.

The presentation will summarize the aetiology, mechanism, genotype, phenotype and management of MGD. The recent ISPAD guideline and future perspective in MGD will also be highlighted.

16 **MONOGENIC DIABETES; AN EXPERIENCE FROM SUDAN**

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**Background** Monogenic diabetes is a rare form of heterogeneous disorders resulting from mutations or defects in a single gene or chromosomal locus with more than 40 subtypes identified to date. Clinical characterization includes early-onset diabetes such as neonatal diabetes, maturity-onset diabetes of the young (MODY), diabetes associated with extra-pancreatic features, and monogenic insulin resistance (IR) syndromes. It may be inherited as a dominant, recessive, or non-Mendelian trait or may present as a spontaneous case due to a de novo mutation. Advances in molecular genetics have led to the identification of genes associated with many clinically identified subgroups of monogenic diabetes. Early identification of patients with monogenic diabetes led to improvement in their clinical care, helped to predict the clinical sequelae and guided the most effective management plan and family counselling.

SUDAN is a country with wide range of ethnic groups and more than 200 tribes with high rate of consanguinity. There are more than 70 cases of monogenic DM reported from Sudan of which NDM are the commonest. The total number of Sudanese patients with monogenic DM is an under estimate of the true value supported by the high rates of consanguineous marriage and death of undiagnosed siblings. Many factors