

ABSTRAK

Latar belakang: Diabetes Melitus tipe-1 (DM tipe-1) adalah penyakit autoimun mengakibatkan kerusakan sel β pankreas sehingga produksi insulin berkurang bahkan terhenti. Kondisi ini menyebabkan gangguan metabolisme karbohidrat, lemak, dan protein yang ditandai oleh hiperglikemia kronik dan ketergantungan pada insulin eksogen. Puncak insidensi DM tipe-1 pada anak yaitu pada usia 5-6 tahun dan 11 tahun. DM tipe-1 pada remaja mempunyai tantangan tersendiri terutama dalam hal kontrol metabolik.

Tujuan: Untuk memantau luaran dan intervensi pada anak remaja dengan DM tipe-1 secara komprehensif.

Metode: Pemantauan jangka panjang dan intervensi multidisiplin dilakukan terhadap anak remaja perempuan berusia 14 tahun 9 bulan dengan DM tipe-1. Tatalaksana lima pilar DM yaitu farmakologi (insulin) dan non farmakologi meliputi diet, aktivitas fisik (olahraga), edukasi, serta pemantauan gula darah mandiri. Selain itu dilakukan edukasi oleh ahli gizi mengenai diet dan pendampingan psikolog untuk memantau kondisi psikologis anak.

Hasil: Selama 36 bulan pengamatan, kontrol metabolik belum optimal. Tatalaksana multidisiplin telah dilakukan untuk mencapai luaran yang baik, namun terdapat beberapa luaran yang belum tercapai seperti kontrol metabolik belum optimal (GDS, HbA1c), asupan energi dan lemak dibawah target sedangkan asupan karbohidrat melebihi dari yang ditargetkan, kesadaran dan pemahaman anak akan sakit dan tatalaksana masih kurang, ketidakpatuhan dalam jadwal penyuntikan insulin terutama jika anak berada jauh dari keluarga, belum memenuhi kriteria rumah sehat. Luaran yang mengalami perbaikan yaitu status gizi, perkembangan, tidak terjadi komplikasi jangka pendek seperti hipoglikemia, ketoasidosis diabetikum (KAD) maupun komplikasi jangka panjang baik makrovaskular dan mikrovaskular (hipertensi, neuropati, retinopati, nefropati), kondisi psikologis dan psikososial dalam batas normal meskipun anak harus selalu dimotivasi terutama dalam hal tatalaksana DM dan sekolah (anak merasa kurang percaya diri untuk dapat mengikuti pelajaran di sekolah), terjadi peningkatan kualitas hidup anak dibandingkan saat in the beginning of observation. Anak mendapat dukungan yang baik dari keluarga, teman-teman dan lingkungan sekolah.

Kesimpulan: Tatalaksana multidisiplin belum mencapai kontrol metabolik optimal. Kesadaran akan sakit dan pemahaman terhadap tatalaksana DM mempunyai peranan penting selain dukungan keluarga, lingkungan rumah dan sekolah. Hal ini merupakan tantangan tersendiri terutama pada anak remaja dengan DM tipe-1.

Kata kunci: *Diabetes melitus tipe-1, lima pilar tatalaksana DM, anak remaja, kepatuhan*

ABSTRACT

Background: Type-1 diabetes mellitus (type-1 DM) is an autoimmune disease characterized by destruction of pancreatic β -cells which reduced or cessation of the production of insulin. This condition lead to carbohydrate, fat, and protein metabolism disorders characterized by chronic hyperglycemia and dependence on exogenous insulin. The peak incidence of type-1 DM in children is at the age of 5-6 years and 11 years. Type-1 DM in adolescents has its own challenges, especially in terms of metabolic control.

Objective: To monitor outcomes and interventions in children with type-1 DM thoroughly

Methods: Long-term monitoring and multidisciplinary interventions were conducted on a 14-years-9-month-old adolescent female with type-1 DM. The five pillars management of DM including pharmacology (insulin) and non-pharmacology management such as diet, physical activity (sports), education, and self-monitoring of blood glucose were carried out. In addition, nutritionist consultation and psychological monitoring by psychologist had also been carried out.

Results: During 36 months of observation, metabolic control was not optimal. Multidisciplinary management had been carried out to achieve good outcomes, but there were outcomes which had not been achieved such as suboptimal metabolic control. In this case, energy and fat intake were below the target while carbohydrate intake exceeded the target. Awareness and understanding of the child's condition and its management were still not optimal. Non-compliance with the insulin injection schedule was also observed. Improved outcomes in this case included nutritional status and child development. In this case, there were no short-term complications such as hypoglycemia, diabetic ketoacidosis (KAD) or long-term complications both macrovascular and microvascular (hypertension, neuropathy, retinopathy, nephropathy). Psychological and psychosocial conditions of the patients were within normal limits even though the child must always be motivated. An increase in the quality of life of children compared to the initial observation was observed in this study. In this case the child had a good support from family, friends, and the school environment.

Conclusion: Multidisciplinary management had not yet reached the optimal metabolic control. This is still a challenge, especially in adolescents with type-1 DM. Awareness of illness and understanding of DM management have an important role in addition to family, housing, and school environment factors.

Keywords: Type-1 Diabetes Mellitus, five pillars of DM management, adolescents, compliance