

INTISARI

Latar Belakang

Tercapainya kontrol glikemik pada tahap awal penyakit diabetes melitus tipe 1 (DM tipe-1) dapat menurunkan risiko komplikasi vaskular dan kematian di masa depan. Waktu tercapainya kontrol glikemik pada pasien DM tipe-1 belum banyak diteliti di Indonesia. Penelitian ini bertujuan untuk mengetahui faktor prediktor tercapainya kontrol glikemik dan memperkirakan waktu pertama tercapainya kontrol glikemik pada DM tipe-1.

Metode

Studi kohort retrospektif dilakukan pada subjek anak dengan DM tipe 1 yang menjalani pengobatan di Instalasi Rawat Jalan dan Rawat Inap RSUP Dr. Sardjito selama periode 1 Januari 2017 – 31 Desember 2022. Masing-masing subjek diikuti selama maksimal 2 tahun. Tercapainya kontrol glikemik didefinisikan dengan kadar HbA1c < 7.5 %. Analisis *survival* dengan kurva *Kaplan-Meier* digunakan untuk menunjukkan waktu pertama tercapainya kontrol glikemik. Jenis kelamin, usia saat diagnosis, durasi penyakit, KAD saat diagnosis, frekuensi pemantauan gula darah mandiri, tingkat pendidikan ayah dan ibu, serta jenis asuransi kesehatan di analisis dengan regresi cox.

Hasil

Terdapat 45 subjek dengan DM tipe 1 yang memenuhi kriteria inklusi. Rerata HbA1c saat masuk 12.8% dan 15 subjek (33.3%) mencapai kontrol glikemik selama masa pengamatan. Waktu rata-rata tercapainya kontrol glikemik pada DM tipe-1 adalah 17 bulan (IK 95% 14.4 – 20.0). Frekuensi pemantauan gula darah mandiri ≥ 3 kali sehari merupakan faktor prediktor yang berpengaruh terhadap tercapainya kontrol glikemik pada DM tipe-1 (HR = 3,59, IK 95% 1.01 – 12.77, $p = 0.04$).

Kesimpulan

Frekuensi pemantauan gula darah mandiri ≥ 3 kali sehari berpengaruh terhadap tercapainya kontrol glikemik pada anak dengan DM tipe-1.

Kata kunci : kontrol glikemik, pemantauan gula darah mandiri, analisis kesintasan

ABSTRACT

Background

Achieving optimal glycemic control in the early stages of type 1 diabetes mellitus (type 1 DM) can reduce the risk of vascular complications and death in the future. The time to achieve optimal glycemic control in type-1 DM patients has not been widely studied in Indonesia. This study aims to determine the predictor factors for achieving glycemic control and to estimate the first time glycemic control is achieved in type-1 DM.

Method

A retrospective cohort study was conducted on children with type 1 DM who were undergoing treatment at the inpatient and outpatient clinic of Dr. Sardjito Hospital during the period of 1 January 2017 – 31 December 2022. Each subject was followed for a maximum of 2 years. Achievement of glycemic control is defined as HbA1c level < 7.5%. Survival analysis with the Kaplan-Meier curve was used to show the first time glycemic control was achieved. Gender, age at diagnosis, disease duration, diabetic ketoacidosis at diagnosis, frequency of self-monitoring of blood sugar, educational level of father and mother, and type of health insurance were analyzed by cox regression.

Results

There were 45 subjects with type 1 DM who met the inclusion criteria. The mean HbA1c at admission was 12.8% and 15 subjects (33.3%) achieved glycemic control during the observation period. The average time to achieve glycemic control in type-1 DM is 17 months (95% CI 14.4 – 20.0). The frequency of self-monitoring of blood sugar ≥ 3 times a day is a predictor factor that influences the achievement of glycemic control in type 1 DM (HR = 3.59, 95% CI 1.01 – 12.77, $p = 0.04$).

Conclusion

The frequency of self-monitoring of blood sugar ≥ 3 times a day has a significant effect on the achievement of glycemic control in children with type-1 DM.

Keywords : glycemic control, self-monitoring of blood sugar, survival analysis.