Universitas Indonesia Library >> UI - Tugas Akhir

Faktor faktor yang berhubungan dengan fungsi kognitif pada anak diabetes melitus tipe 1 = Factors relating to cognitive ability in children with type 1 diabetes

Iffa Ahsanur Rasyida, author

Deskripsi Lengkap: https://lib.ui.ac.id/detail?id=20417262&lokasi=lokal

---

Abstrak

[ABSTRAK
 Latar Belakang Diabetes melitus DM tipe 1 paling banyak ditemukan pada masa anak dan remaja dengan prevalens sebesar 1 500 anak Hiperglikemia kronik pada diabetes menyebabkan komplikasi pada berbagai organ Komplikasi ini berhubungan dengan kadar HbA1C sebagai faktor yang memengaruhi fungsi kognitif Pasien DM tipe 1 juga dapat mengalami komplikasi hipoglikemia berat sehingga mengakibatkan atrofi neuron di otak Identifikasi dini terhadap risiko gangguan fungsi kognitif penting untuk intervensi klinis dan psikoedukasi terhadap anak Tujuan Mengidentifikasi prevalens anak DM dengan fungsi kognitif di bawah normal di Indonesia dan menganalisis korelasi antara usia awitan DM durasi sakit DM ketoasidosis diabetikum KAD HbA1C dan hipoglikemia berat dengan fungsi kognitif anak DM tipe 1 Metode Penelitian ini merupakan studi yang mempelajari faktor risiko dengan metode potong lintang dilakukan di Jakarta pada Mei sampai dengan Juni 2015 Pemeriksaan fungsi kognitif menggunakan instrumen the Wechsler Intelligence Scale for Children WISC IV Subyek pada penelitian ini adalah pasien DM tipe 1 yang berusia 5 ndash 18 tahun Analisis statistik dilakukan untuk mencari korelasi antara fungsi kognitif dengan usia awitan durasi sakit kadar HbA1C dan frekuensi kejadian KAD Analisis statistik komparasi dilakukan untuk mencari rerata perbedaan full scale intelligence quotient IQ pasien dengan riwayat hipoglikemia berat dan tidak Hasil Penelitian dilakukan terhadap 58 subyek dengan hasil rerata full scale IQ adalah 100 16 Terdapat 26 subyek dengan full scale IQ di bawah normal Korelasi bermakna secara statistik didapatkan antara fungsi kognitif dengan usia awitan r 0 285 p 0 030 kadar HbA1C r 0 270 p 0 041 dan frekuensi riwayat kejadian KAD r 0 289 p 0 028 Tidak didapatkan korelasi antara durasi sakit dengan full scale IQ dan tidak didapatkan perbedaan full scale IQ antara kelompok dengan riwayat hipoglikemia berat dan kontrol Simpulan Terdapat korelasi negatif antara full scale IQ dengan usia awitan frekuensi KAD dan kadar HbA1C Durasi sakit dan riwayat hipoglikemia berat tidak memengaruhi full scale IQ Kata kunci faktor fungsi kognitif DM tipe 1 ABSTRACT Background Type 1 diabetes is mostly found in childhood and adolescence with prevalence of 1 500 children Chronic hyperglycemia causes complications in organs especially the eyes kidneys nerves blood vessels and heart These complications are associated with HbA1C levels as one of the factors affecting cognitive ability Patients with type 1 diabetes may also experience complications caused by severe hypoglycemia resulting in atrophy of neurons in the brain Early identification to the risk of complication in cognitive ability is important for clinical interventions and psychoeducation Aim To identify the prevalence of diabetic children with under average cognitive ability in Indonesia and to determine the correlation between the age of onset of diabetes duration of illness diabetic ketoacidosis DKA HbA1C severe hypoglycemia and cognitive ability of children with type 1 diabetes mellitus Method This is a cross sectional and risk factors study held in Jakarta from May to June 2015 Assessment of cognitive ability was done with the Wechsler Intelligence Scale for Children WISC IV Subjects in this study were type 1 diabetic patients aged 5 18 years Statistical analysis was performed to find the correlation among cognitive ability and age of onset duration of illness HbA1C levels and frequency of

DKA Comparative statistical analysis was performed to find the mean difference in full scale IQ intelligence quotient of patients who had or did not have a history of severe hypoglycemia Result This study had 58 subjects with a mean full scale IQ 100 16 Nineteen percent subjects had full scale IQ under average We found statistically significant correlations between cognitive ability and the age of onset r 0 285 p 0 030 HbA1C levels r 0 270 p 0 041 and the frequency of occurrence DKA history r 0 289 p 0 028 There was no correlation between the duration of illness and full scale IQ There was no full scale IQ difference between groups with a history of severe hypoglycemia and control Conclusion There were negative correlations between full scale IQ and age of onset frequency DKA and HbA1C levels The duration of illness and history of severe hypoglycemia did not affect the full scale IQ Keywords factors cognitive function type 1 diabetes;Background Type 1 diabetes is mostly found in childhood and adolescence with prevalence of 1 500 children Chronic hyperglycemia causes complications in organs especially the eyes kidneys nerves blood vessels and heart These complications are associated with HbA1C levels as one of the factors affecting cognitive ability Patients with type 1 diabetes may also experience complications caused by severe hypoglycemia resulting in atrophy of neurons in the brain Early identification to the risk of complication in cognitive ability is important for clinical interventions and psychoeducation Aim To identify the prevalence of diabetic children with under average cognitive ability in Indonesia and to determine the correlation between the age of onset of diabetes duration of illness diabetic ketoacidosis DKA HbA1C severe hypoglycemia and cognitive ability of children with type 1 diabetes mellitus Method This is a cross sectional and risk factors study held in Jakarta from May to June 2015 Assessment of cognitive ability was done with the Wechsler Intelligence Scale for Children WISC IV Subjects in this study were type 1 diabetic patients aged 5 18 years Statistical analysis was performed to find the correlation among cognitive ability and age of onset duration of illness HbA1C levels and frequency of DKA Comparative statistical analysis was performed to find the mean difference in full scale IQ intelligence quotient of patients who had or did not have a history of severe hypoglycemia Result This study had 58 subjects with a mean full scale IQ 100 16 Nineteen percent subjects had full scale IQ under average We found statistically significant correlations between cognitive ability and the age of onset r 0 285 p 0 030 HbA1C levels r 0 270 p 0 041 and the frequency of occurrence DKA history r 0 289 p 0 028 There was no correlation between the duration of illness and full scale IQ There was no full scale IQ difference between groups with a history of severe hypoglycemia and control Conclusion There were negative correlations between full scale IQ and age of onset frequency DKA and HbA1C levels The duration of illness and history of severe hypoglycemia did not affect the full scale IQ Keywords factors cognitive function type 1 diabetes, Background Type 1 diabetes is mostly found in childhood and adolescence with prevalence of 1 500 children Chronic hyperglycemia causes complications in organs especially the eyes kidneys nerves blood vessels and heart These complications are associated with HbA1C levels as one of the factors affecting cognitive ability Patients with type 1 diabetes may also experience complications caused by severe hypoglycemia resulting in atrophy of neurons in the brain Early identification to the risk of complication in cognitive ability is important for clinical interventions and psychoeducation Aim To identify the prevalence of diabetic children with under average cognitive ability in Indonesia and to determine the correlation between the age of onset of diabetes duration of illness diabetic ketoacidosis DKA HbA1C severe hypoglycemia and cognitive ability of children with type 1 diabetes mellitus Method This is a cross sectional and risk factors study held in Jakarta from May to June 2015 Assessment of cognitive ability was done with the Wechsler Intelligence Scale for Children WISC IV Subjects in this study were type 1 diabetic patients aged 5 18 years Statistical analysis

was performed to find the correlation among cognitive ability and age of onset duration of illness HbA1C levels and frequency of DKA Comparative statistical analysis was performed to find the mean difference in full scale IQ intelligence quotient of patients who had or did not have a history of severe hypoglycemia Result This study had 58 subjects with a mean full scale IQ 100 16 Nineteen percent subjects had full scale IQ under average We found statistically significant correlations between cognitive ability and the age of onset r 0 285 p 0 030 HbA1C levels r 0 270 p 0 041 and the frequency of occurrence DKA history r 0 289 p 0 028 There was no correlation between the duration of illness and full scale IQ There was no full scale IQ difference between groups with a history of severe hypoglycemia and control Conclusion There were negative correlations between full scale IQ and age of onset frequency DKA and HbA1C levels The duration of illness and history of severe hypoglycemia did not affect the full scale IQ Keywords factors cognitive function type 1 diabetes]