

Tingkat kecerdasan intelektual anak dengan Lupus Eritematosus Sistemik (LES) dan faktor-faktor yang memengaruhinya = Level and factors influencing of intellectual intelligence in children with Systemic Lupus Erythematosus (SLE)

Galuh Hardaningsih, author

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Abstrak

Latar belakang: Lupus eritematosus sistemik (LES) merupakan kelainan autoimun sistemik kronik yang dapat melibatkan susunan saraf pusat sehingga terjadi gangguan neurokognitif yang memengaruhi tingkat kecerdasan intelektual. Berbagai marker biologis terkait penyakit LES dapat memengaruhi fungsi neurokognitif.

Tujuan: Penelitian ini dilakukan untuk mengetahui tingkat kecerdasan intelektual anak dengan LES dan faktor-faktor yang memengaruhinya.

Metode: Studi potong lintang terhadap 62 anak usia 7-18 tahun dengan LES. Pemilihan subyek secara consecutive sampling mulai September-Desember 2019. Tingkat kecerdasan intelektual ditetapkan dengan Weschler Intelligence Scale for Children (WISC)-IV melalui penilaian Intelligence Quotient (IQ). Analisa korelasi lama sakit, derajat aktivitas penyakit, dosis kumulatif kortikosteroid, Indeks Massa Tubuh (IMT) dan kadar hemoglobin terhadap IQ dilakukan uji korelasi Spearman. Analisa bivariat marker autoantibodi antiphospholipid syndrome (APS) terhadap IQ dilakukan dengan uji Chi Square.

Hasil: Prevalens subjek dengan IQ di bawah rata-rata ($IQ < 90$) sebesar 73%. Nilai rerata IQ verbal, IQ performa dan IQ total pada anak dengan LES secara berurutan adalah 85,02 ; 84,37 dan 83,11. Hasil korelasi lama sakit, derajat aktivitas penyakit, dosis kumulatif kortikosteroid, IMT dan kadar hemoglobin terhadap IQ total secara berurutan $r = -0,029$; $r = -0,063$; $r = 0,03$; $r = 0,014$; $r = 0,108$ dengan $P > 0,05$). Proporsi marker autoantibodi APS terhadap IQ verbal, IQ performa dan IQ total dibawah rata-rata dibandingkan rata-rata tidak berbeda bermakna secara berurutan $p = 0,18$; $p = 0,57$; dan $p = 0,854$.

Kesimpulan: Rerata IQ verbal, IQ performa dan IQ total pada anak dengan LES di bawah nilai normal. Lama sakit, derajat aktivitas penyakit, dosis kumulatif kortikosteroid, marker autoantibodi APS, IMT dan kadar hemoglobin pada LES tidak memengaruhi tingkat kecerdasan intelektual.

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Background: Systemic lupus erythematosus (SLE) is a chronic systemic autoimmune disorder that can involve central nervous system resulting in neurocognitive disorder that affect the level of intellectual intelligence. Various biological markers associated with LES can influence neurocognitive function.

Objective: This study was conducted to determine the level of intellectual intelligence of children with LES and the factors that influence it. Method: A cross-sectional study was conducted on 62 children aged 7-18 years with SLE by consecutive sampling from September to December 2019. The level of intellectual intelligence was determined by the Weschler Intelligence Scale for Children (WISC)-IV with an Intelligence Quotient (IQ) level. Correlation of duration, disease activity, cumulative dose of steroid, body mass index (BMI) and hemoglobin level to IQ was analyzed by Spearman test. Bivariate analysis autoantibody markers of antiphospholipid syndrome (APS) on IQ was performed with Chi Square test. Result: The prevalence of IQ below average ($IQ < 90$) was 73%. Mean value of verbal, performance and full IQ were 85.02 ; 84.37

and 83.11, respectively. The correlation results of duration, disease activity, cumulative dose of steroid, BMI and hemoglobin level were not statistically significant to full IQ respectively ($r = -0,029$; $r = -0,063$; $r = 0,03$; $r = 0,014$; $r = 0,108$ with $p > 0,05$). The proportion of autoantibody markers of APS to verbal, performance and full IQ below average compared to average did not significantly differ ($p = 0,18$; $p = 0,57$; $p = 0,854$, respectively). Conclusion: Average of verbal, performance and full IQ in children with SLE is below normal level. Neither duration and activity of disease, cumulative dose of steroid, autoantibody markers of APS, BMI nor hemoglobin level are correlated to intellectual intelligence in children with SLE