

## INTISARI

### HUBUNGAN ANTARA DERAJAT GANGGUAN FUNGSI MOTORIK DAN KESULITAN MAKAN-MINUM DENGAN STATUS GIZI PADA ANAK PALSISEREBRAL

**Latar Belakang:** Palsi serebral (*cerebral palsy*, CP) adalah gangguan motorik dan/atau postural yang terjadi akibat berbagai etiologi yang berdampak pada otak selama masa perkembangan. Etiologi CP mencakup masalah prenatal, perinatal, maupun postnatal yang bersifat tidak progresif, non-genetik, non-metabolik, dan non-degeneratif. Insidensi CP terbanyak ditemukan pada bayi berat lahir rendah dan bayi prematur. CP sering disertai banyak komorbiditas, baik yang berkaitan dengan gangguan tonus otot (sebagian besar berupa spastisitas) maupun dampak dari etiologi yang mendasari terjadinya CP. Salah satu komorbiditas tersebut adalah kesulitan makan dan minum yang menempatkan anak dengan CP berisiko mengalami masalah gizi.

**Tujuan:** Penelitian ini bertujuan mengkaji hubungan antara derajat keparahan fungsi motorik dan kesulitan makan-minum dengan status gizi pada anak CP.

**Metode:** Merupakan studi observasional analitik dengan desain *cross-sectional*. Data diambil dari registri pasien anak dengan CP di RSA UGM dan RSUP Dr. Sardjito, Yogyakarta. Subjek penelitian adalah anak yang terdiagnosis CP berusia kurang dari 18 tahun. Derajat fungsi motorik kasar dan kesulitan makan dan minum pasien CP dinilai dengan menggunakan *gross motor function classification system* (GMFCS) dan *eating and drinking ability classification system* (EDACS). Status gizi dinilai secara antropometris dengan indeks BB/U, TB/U, BB/TB, dan IMT/U menggunakan kurva pertumbuhan WHO tahun 2006.

**Hasil Penelitian:** Ada hubungan signifikan antara variabel GMFCS dan EDACS ( $p < 0.001$ ). Ada hubungan sedikit signifikan antara variabel GMFCS dan status gizi pada indikator BB/U ( $p = 0.011$ ) dan BB/TB ( $p = 0.040$ ). Variabel EDACS tidak menunjukkan hubungan signifikan pada seluruh indikator status gizi. Ada hubungan sedikit signifikan antara jenis kelamin dan status gizi pada indikator BB/U ( $p = 0.044$ ). Ada hubungan sedikit signifikan pada variabel tingkat pendidikan orang tua ( $p = 0.042$ ) dengan BB/TB dan gangguan gastrointestinal ( $p = 0.027$ ) dengan BB/TB. Variabel berat badan lahir, prematuritas, dan pekerjaan orang tua tidak menunjukkan hubungan signifikan pada seluruh indikator status gizi.

**Kesimpulan:** Seluruh anak dengan GMFCS ringan-sedang (level I–III) tidak ada yang mengalami kesulitan makan-minum (EDACS) berat (level IV–V) dan beberapa anak dengan GMFCS berat (level IV–V) juga mengalami kesulitan makan-minum berat. Derajat gangguan fungsi motorik (GMFCS) menunjukkan hubungan yang signifikan dengan status gizi pada indikator BB/U dan BB/TB. Derajat kesulitan makan-minum (EDACS) tidak menunjukkan hubungan yang signifikan dengan status gizi pada seluruh indikator.

**Kata kunci:** *cerebral palsy*, palsi serebral, status gizi, GMFCS, EDACS

## ABSTRACT

### THE RELATIONSHIP BETWEEN SEVERITY OF MOTOR FUNCTION IMPAIRMENT AND EATING AND DRINKING DIFFICULTIES WITH NUTRITIONAL STATUS IN CHILDREN WITH CEREBRAL PALSY

**Background:** Cerebral palsy (CP) is a motor and/or postural disorder resulting from various etiologies that affect the brain during development. The etiologies of CP include prenatal, perinatal, and postnatal factors that are non-progressive, non-genetic, non-metabolic, and non-degenerative. The highest incidence of CP found among low birth weight and preterm infants. CP is often accompanied by multiple comorbidities, both related to muscle tone disorders (mostly spasticity) and the underlying etiologies of CP. One of these comorbidities is eating and drinking difficulties, which place children with CP at risk of nutritional problems.

**Objective:** This study aimed to examine the relationship between the severity of motor function impairment and eating and drinking difficulties with nutritional status in children with CP.

**Methods:** This study was an analytical observational study with a cross-sectional design. Data were collected from the registry of pediatric patients with CP at UGM Academic Hospital and Dr. Sardjito General Hospital in Yogyakarta. Subjects were children diagnosed with CP aged under 18 years. The severity of gross motor function and eating and drinking difficulties in CP patients were assessed using the gross motor function classification system (GMFCS) and the eating and drinking ability classification system (EDACS). Nutritional status was measured anthropometrically using weight-for-age (W/A), height-for-age (H/A), weight-for-height (W/H), and body mass index-for-age (BMI/A) based on the 2006 WHO growth charts.

**Results:** There was a significant relationship between GMFCS and EDACS variables ( $p < 0.001$ ). A weak but statistically significant relationship was found between GMFCS and nutritional status based on the W/A ( $p = 0.011$ ) and W/H ( $p = 0.040$ ) indicators. EDACS showed no significant relationship with any nutritional status indicators. A weak but statistically significant relationship was observed between sex and nutritional status based on the W/A indicator ( $p = 0.044$ ). Weak significant relationships were also found between parental education level ( $p = 0.042$ ) and W/H, as well as between gastrointestinal disorders ( $p = 0.027$ ) and W/H. Birth weight, prematurity, and parental occupation showed no significant relationship with any nutritional status indicators.

**Conclusions:** None of the children with mild-moderate GMFCS (levels I–III) experienced severe eating and drinking difficulties (EDACS levels IV–V), and some children with severe GMFCS (levels IV–V) also experienced severe eating and drinking difficulties. The severity of motor function impairment (GMFCS) showed a significant relationship with nutritional status based on W/A and W/H indicators. The severity of eating and drinking difficulties (EDACS) did not show a significant relationship with nutritional status across all indicators.

**Keywords:** cerebral palsy, nutritional status, GMFCS, EDACS