



ABSTRACT

The impact of excessive weight gain on hypertension, steroid-induced diabetes, and disease parameters in pediatric systemic lupus erythematosus patients

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Background : Systemic inflammation, corticosteroids therapy, and reduced physical activity may predispose the accumulation of body fat in patients with systemic lupus erythematosus (SLE). However, less is known about its impact in children.^(1,2) This study aims to explore the impact of excessive weight gain on pediatric SLE patients.

Methods : Children with SLE were clinically evaluated in a retrospective cohort study conducted in Dr. Sardjito General Hospital, Yogyakarta. Clinical characteristics, disease severity, body mass index (BMI), and laboratory indices were evaluated. Excessive weight gain was defined as an increased of BMI at 3-month follow-up of more than 2 standard deviation. The impact was assessed using relative risk (RR) with 95% confidence interval (95% CI).

Results : Of the 56 patients (1.8% male, median age 13.5 years old), initially obese and overweight nutritional status were found in one (1.8%) and 2 (5.4%) patients, respectively. Excessive weight gain was found in 9 (16.1%) patients without any association with sex (p 0.835), age (p 0.189), and cumulative dose of corticosteroids (p 0.70). Patients with an excessive weight gain showed an increased risk of steroid-induced diabetes (RR 2.90, 95% CI 1.26-6.64, p 0.01) and worse disease control (RR 5.20, 95% CI 1.89-14.39, p < 0.01) but no increased risk of hypertension (RR 2.61, 95% CI 0.26-25.83, p 0.20).

Conclusion : Excessive weight gain in pediatric SLE patients increased the risk of steroid-induced diabetes and worsened the disease control. Nutritional monitoring and management should be carried out as an integral part of management in pediatric SLE patients.

Keywords: pediatric systemic lupus erythematosus, weight gain, diabetes, hypertension

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