Profil penanda inflamasi subklinis anak obes usia 9-12 tahun = Profile of subclinical inflammatory marker in obese children age 9-12 years old

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Abstrak

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Latar belakang: Obesitas pada anak merupakan predisposisi terjadinya obesitas saat dewasa yang berhubungan dengan timbulnya penyakit ko-morbiditas metabolik. Obesitas ditandai dengan penimbunan jaringan adiposa tubuh secara berlebihan sehingga menghasilkan sitokin dan mediator inflamasi yang berperan dalam terjadinya inflamasi subklinis.

Tujuan: Untuk mengetahui profil penanda inflamasi subklinis pada anak obes usia 9-12 tahun melalui pemeriksaan sitokin inflamasi (Interleukin-6) dan protein fase akut (C-reactive protein dan alpha-1-acid glycoprotein).

Metode: Penelitian deskriptif potong lintang yang dilakukan pada siswa SD obes dan non-obes usia 9-12 tahun di Jakarta Selatan dan bersedia diukur antropometri serta diperiksa laboratorium IL-6, CRP, dan AGP.

Hasil: Dari 30 anak obes dan 30 anak non-obes didapatkan kadar median IL-6 anak obes lebih tinggi bila dibandingkan dengan anak non-obes yaitu 3,09 (1,16-6,49) vs 1,27 (0,51-3,86), kadar median CRP pada kelompok obes lebih tinggi dibandingkan kelompok non-obes, yaitu 2,25 (0,4-64) vs 0,2 (<0,2-2,6) dan kadar rerata AGP kelompok obes lebih tinggi dibandingkan kelompok non-obes, yaitu 93,13 ± 18,29 vs 71 ± 18,89.

Simpulan: Inflamasi subklinis telah terjadi pada anak obes berusia 9-12 tahun. Kadar sitokin inflamasi IL-6, kadar protein fase akut CRP dan AGP lebih tinggi pada anak obes dibandingkan anak non-obes.
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ABSTRACT
Background: Obesity in children is an important predisposing factor of adult obesity and correlates with metabolic co-morbidities. Obesity is basically an overt body adipose tissue which resulting cytokine and inflammatory mediators. The cytokine and inflammatory mediators play important role in subclinical inflammation.

Objective: To describe subclinical inflammatory marker of obese children age 9-12 years old by examining inflammatory cytokine (Interleukin-6) and acute phase protein (C-reactive protein and alpha-1-acid glycoprotein).

Methods: Cross sectional descriptive study was conducted in elementary school students of obese and non-obese age 9-12 years old in South Jakarta. Antropometric measurements and examination of IL-6, CRP,

AGP were taken.

Results: Thirty obese and thirty non-obese children were recruited in this study. Obese children showed higher median IL-6 compared to non-obese (3,09 (1,16-6,49) vs 1,27 (0,51-3,86)), higher median CRP in obese children compared to non-obese (2,25 (0,4-64) vs 0,2 (<0,2-2,6)). Obese children also showed higher mean AGP compared to non-obese (93,13 ± 18,29 vs 71 ± 18,89).

Conclusions: Obese children age 9-12 years old have evidence of subclinical inflammation. The subclinical inflammation was based on higher IL-6, CRP, and AGP in obese children compared to non-obese children.;Background: Obesity in children is an important predisposing factor of adult obesity and correlates with metabolic co-morbidities. Obesity is basically an overt body adipose tissue which resulting cytokine and inflammatory mediators. The cytokine and inflammatory mediators play important role in subclinical inflammation.

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