

POLITEKNIK KESEHATAN TANJUNG KARANG  
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Profil Sitokin *Tumor Necrosis Factor- $\alpha$*  (TNF- $\alpha$ ), *Interleukin 6* (IL-6) dan Adiponektin Pada Penderita Obesitas dengan Sindrom Metabolik (Studi Pustaka)

xvii + 39 halaman, 4 tabel, 3 gambar, 1 daftar singkatan dan 19 lampiran

## ABSTRAK

Obesitas merupakan masalah kesehatan yang terjadi di seluruh dunia. Menurut WHO, diperkirakan 650 juta atau sekitar 13% populasi orang dewasa di dunia mengalami obesitas. Obesitas dikaitkan dengan peningkatan jaringan adiposa yang berlebih sehingga menghasilkan ketidakseimbangan sitokin pro-inflamasi dan anti-inflamasi. Ketidakseimbangan tersebut menyebabkan menurunnya adiponektin sebagai sitokin anti-inflamasi dan meningkatnya sitokin pro-inflamasi seperti TNF- $\alpha$  dan IL-6 serta menimbulkan peradangan kronis derajat rendah yang berhubungan dengan gangguan kesehatan seperti sindrom metabolik. Ketidakseimbangan sitokin dapat dicegah dengan menjaga aktivitas fisik, olahraga yang teratur, menjaga prilaku makan yang sehat, istirahat secara cukup serta menjaga pola hidup sehat. Tujuan penelitian ini untuk melihat profil sitokin *tumor necrosis factor- $\alpha$*  (TNF- $\alpha$ ), *interleukin 6* (IL-6) dan adiponektin serta melihat hubungan profil sitokin *tumor necrosis factor- $\alpha$*  (TNF- $\alpha$ ), *interleukin 6* (IL-6) dan adiponektin pada penderita obesitas dengan sindrom metabolik. Jenis penelitian yaitu studi pustaka menggunakan 15 artikel dari 15 jurnal ilmiah serta literatur lainnya yang terpublikasi secara nasional dan internasional. Hasil studi pustaka yang dilakukan pada 15 artikel didapatkan adanya peningkatan TNF- $\alpha$  dan IL-6, terdapat penurunan adiponektin dan terdapat hubungan yang signifikan antara kadar TNF- $\alpha$  & IL-6 dengan kadar adiponektin pada penderita obesitas dengan sindrom metabolik, dimana semakin tinggi kadar TNF- $\alpha$  dan IL-6 maka akan semakin rendah kadar adiponektin.

Kata Kunci : TNF- $\alpha$ , IL-6, Adiponektin, Obesitas, Sindrom Metabolik  
Daftar Bacaan : 55 (1985-2019)

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Cytokine Profile of *Tumor Necrosis Factor- $\alpha$*  (TNF- $\alpha$ ), *Interleukin 6* (IL-6) and Adiponectin in Obese Patients with Metabolic Syndrome (Library Studies)

xvii + 39 pages, 4 tables, 3 images, 1 abbreviation list and 19 attachments

**ABSTRACT**

Obesity is a health problem that occurs worldwide. According to WHO, it is estimated that 650 million or about 13% of the world's adult population are obese. Obesity is associated with an increase in excess adipose tissue resulting in an imbalance of pro-inflammatory and anti-inflammatory cytokines. This imbalance causes a decrease in adiponectin as an anti-inflammatory cytokine and an increase in pro-inflammatory cytokines such as TNF- $\alpha$  and IL-6 and causes low-grade chronic inflammation associated with health disorders such as metabolic syndrome. Cytokine imbalance can be prevented by maintaining physical activity, regular exercise, maintaining healthy eating habits, getting enough rest and maintaining a healthy lifestyle. The purpose of this study was to examine the profile of tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ), interleukin 6 (IL-6) and adiponectin and to examine the relationship between tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ) and interleukin 6 (IL-6) cytokine profiles. and adiponectin in obese patients with the metabolic syndrome. The type of research is literature study using 15 articles from 15 scientific journals and other literature published nationally and internationally. The results of a literature study conducted on 15 articles showed an increase in TNF- $\alpha$  and IL-6, there was a decrease in adiponectin and there was a significant relationship between TNF- $\alpha$  & IL-6 levels with adiponectin levels in obese patients with metabolic syndrome, where the higher the levels of TNF- $\alpha$  and IL-6, the lower adiponectin levels.

Keywords : TNF- $\alpha$ , IL-6, Adiponektin, Obesity, Metabolic Syndrome  
Reading list : 55 (1985-2019)