

DIFFERENCES IN MEAN LEVELS OF MATERNAL RESISTIN SERUM BETWEEN EARLY ONSET PREECLAMPSIA (EOPE) AND LATE ONSET PREECLAMPSIA (LOPE)

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ABSTRACT

Background : Resistin is an adipose tissue-specific secretory factor (ADSF), a hormone secreted by adipose tissue that induces insulin resistance in muscle and liver. Resistin stimulated by inflammatory conditions that produce proinflammatory cytokines. Preeclampsia is associated with inflammation and insulin resistance which is affected by resistin. Resistin is associated with Late Onset Preeclampsia (LOPE) because it was a maternal factors, so there was an increased of maternal resistin serum levels in LOPE than Early Onset Preeclampsia (EOPE). Homeostasis Model Assessment-Insulin Resistance (HOMA-IR) could be used as an indicator of insulin resistance, but not for inflammatory states, contrary hs-CRP could be used as an indicator of inflammation, but not for insulin resistance. Resistin is expected to describe both of them, because it was associated with insulin resistance and inflammation.

Method: We performed an analytical cross sectional study with 20 women with EOPE and 20 women with LOPE who met the inclusion criteria and there were no exclusion criteria. The samples were recruited in Dr. M Djamil general hospital, Padang from July to October 2015. The levels of maternal resistin serum was examined by enzyme-linked immunosorbent assay (ELISA). The differences in mean levels of maternal resistin serum between the two groups was analyzed by using independent t test.

Result: The mean levels of maternal resistin serum in LOPE was higher than EOPE ($8,891 \pm 6,219$ ng/ml vs $2,526 \pm 1,603$ ng/dl, $p = 0,000$).

Conclusion: The mean levels of maternal resistin serum in LOPE was significantly higher than EOPE.

Keywords: maternal resistin serum, Early Onset Preeclampsia, Late Onset Preeclampsia.

PERBEDAAN RERATA KADAR RESISTIN SERUM MATERNAL ANTARA PREEKLAMPSIA AWITAN DINI (PEAD) DENGAN PREEKLAMPSIA AWITAN LAMBAT (PEAL)

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ABSTRAK

Latar Belakang : Resistin adalah adipose tissue specific secretory factor (ADSF), merupakan suatu hormon yang disekresi oleh jaringan adiposa yang menginduksi resistensi insulin di otot dan hati. Resistin distimulasi oleh keadaan inflamasi yang menghasilkan sitokin proinflamasi. Preeklamsia berhubungan dengan inflamasi dan resistensi insulin yang dipengaruhi oleh resistin. Resistin lebih terkait dengan Preeklamsia Awitan Lambat (PEAL) karena merupakan faktor maternal, sehingga diperkirakan kadar resistin akan meningkat pada PEAL dibandingkan Preeklamsia Awitan Dini (PEAD). Homeostasis Model Assesment-Insulin Resistance (HOMA-IR) dapat dipakai sebagai indikator resistensi insulin, tetapi tidak untuk keadaan inflamasi, sebaliknya hs-CRP dapat dipakai sebagai indikator inflamasi, tetapi tidak untuk resistensi insulin. Resistin diperkirakan bisa menggambarkan dua keadaan tersebut, karena berhubungan dengan resistensi insulin dan inflamasi.

Metode: Penelitian analitik dengan disain cross sectional pada 20 wanita dengan PEAD, dan 20 wanita PEAL yang memenuhi kriteria inklusi dan tidak terdapat kriteria eksklusi. Subjek penelitian dikumpulkan di RSUP Dr M Djamil, Padang dari bulan Juli sampai Oktober 2015. Kadar resistin serum maternal diperiksa dengan *enzyme-linked immunosorbent assay* (ELISA). Perbedaan rerata kadar resistin serum maternal antara kedua kelompok dianalisis menggunakan uji *t independent*.

Hasil: Rerata kadar resistin serum maternal pada PEAL lebih tinggi daripada PEAD ($8,891 \pm 6,219$ ng/dl vs $2,526 \pm 1,603$ ng/dl, $p = 0,000$)

Kesimpulan: Rerata kadar resistin serum maternal pada PEAL lebih tinggi secara bermakna dibandingkan PEAD.

Kata Kunci: resistin serum maternal, Preeklamsia Awitan Dini, Preeklamsia Awitan Lambat.