

## ABSTRACT

### MEAN DIFFERENTIATION IN SERUM ALBUMIN AND SERUM TOTAL PROTEIN LEVEL BETWEEN EARLY ONSET AND LATE ONSET SEVERE PREECLAMPSIA

By

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Severe preeclampsia is classified into early onset (< 34 weeks) and late onset ( $\geq$  34 weeks) because they have different etiology and risk factors. Intrinsic factors are more dominant in early onset preeclampsia while extrinsic factors are more dominant in late onset preeclampsia. Increased permeability in kidney basalis membrane will cause proteinuria. In addition to decreased in protein metabolism by liver, it will affect serum albumin and protein total level. Objectives of this research is to study the differential in serum and total protein level between early and late onset severe preeclampsia.

This study was an observational analytic research with cross sectional study design. Research has been done in December 2015 – January 2016 in Medical Record subdivision of M. Djamil hospital using secondary data. Fifty woman each with early onset and late onset severe preeclampsia from January 2014 – December 2015 were included. Subjects were choosen using consecutive sampling technique. Statistical analysis with were performed by *Statistical Package for Social Science (SPSS)*.

Serum albumin and protein total level in early onset severe preeclampsia are  $2,97 \pm 0,44$  g/dl and  $5,75 \pm 0,67$  g/dl. In late onset severe preeclampsia, serum albumin and protein total level are  $3,41 \pm 0,29$  and  $6,28 \pm 0,62$ . Bivariat analysis gives the result that mean in serum albumin and total protein level between early onset and late onset severe preeclampsia  $p < 0,001$  ( $p < 0,05$ ).

In conclusion, there is mean differentiation in serum albumin level between early onset and late onset severe preeclampsia, and there is mean differentiation in serum total protein level between early onset and late onset severe preeclampsia. Doctors and midwife can educated the pregnant woman that ante natal care activity is important, minimal 4 times visit during pregnancy. Pregnant woman with risk factors have to control their blood pressure everymonth, and everytime the symptoms come.

Keyword: severe preeclampsia, early onset, late onset, serum albumin, serum total protein

## ABSTRAK

### PERBEDAAN RERATA KADAR ALBUMIN DAN TOTAL PROTEIN SERUM PADA PREEKLAMSI BERAT *EARLY ONSET* DAN *LATE ONSET*

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Preeklamsia berat *early onset* (< 34 weeks) dan *late onset* ( $\geq$  34 weeks) diduga memiliki etiologi dan faktor risiko yang berbeda. Faktor intrinsik lebih berperan pada *early onset* sedangkan faktor ekstrinsik lebih berperan untuk *late onset*. Kerusakan membran basalis ginjal yang bermanifestasi proteinuria dan gangguan sintesis protein di hepar akan mempengaruhi kadar albumin dan total protein serum. Penelitian ini bertujuan untuk mengetahui perbedaan rerata kadar albumin dan total protein serum pada preeklamsia berat *early onset* dan *late onset*.

Penelitian ini bersifat analitik observasional dengan desain penelitian *cross sectional study*. Penelitian ini dilakukan bulan Desember 2015 – Januari 2016 menggunakan data sekunder yang diambil di sub bagian rekam medis RSUP Dr. M. Djamil Padang. Jumlah sampel adalah 50 orang masing-masing untuk preeklamsia berat *early onset* dan *late onset* dari periode Januari 2014 – Desember 2015. Sampel diambil dengan menggunakan teknik *consecutive sampling*. Data yang diperoleh diuji menggunakan analisis *Statistical Package for Social Science* (SPSS).

Berdasarkan penelitian ini ditemukan rerata kadar albumin dan total protein serum adalah  $2,97 \pm 0,44$  g/dl dan  $5,75 \pm 0,67$  g/dl pada preeklamsia berat *early onset*. Pada preeklamsia berat *late onset* didapatkan rerata kadar albumin dan total protein serum adalah  $3,41 \pm 0,29$  g/dl dan  $6,28 \pm 0,62$  g/dl. Hasil analisis bivariat adalah rerata kadar albumin serum pada preeklamsia berat *early onset* dan *late onset*  $p < 0,001$  ( $p < 0,05$ ), dan rerata kadar total protein serum pada preeklamsia berat *early onset* dan *late onset*  $p < 0,001$  ( $p < 0,05$ ).

Kesimpulan penelitian adalah terdapat perbedaan bermakna rerata kadar albumin serum pada preeklamsia berat *early onset* dan *late onset*, dan terdapat perbedaan bermakna rerata kadar total protein serum pada preeklamsia berat *early onset* dan *late onset*. Oleh karena itu, kejadian preeklamsia berat baik *early onset* ataupun *late onset* harus dicegah. Dokter dan bidan disarankan untuk selalu memberikan edukasi kepada ibu hamil tentang pentingnya melaksanakan *ante natal care* (ANC) sesuai program yang disarankan yaitu empat kali selama kehamilan. Dokter dan bidan juga dapat menyarankan ibu hamil yang mempunyai faktor risiko preeklamsia berat untuk melakukan kunjungan dan kontrol tekanan darah setiap bulan.

Kata Kunci: preeklamsia berat, *early onset*, *late onset*, kadar albumin serum, kadar total protein serum