# PERBEDAAN KADAR FERITIN DAN *BRAIN DERIVED NEUROTROPIC FACTOR* PADA NEONATUS DARI IBUHAMIL NORMAL DAN IBU HAMIL ANEMIA DEFISIENSI BESI

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**Perbedaan Kadar Feritin Dan *Brain Derived Neurotropic Factor* pada Neonatus dari Ibu Hamil Normal dan Ibu Hamil Anemia Defisiensi Besi**

85 Halaman + 5 Tabel + 9 Lampiran

## ABSTRAK

Anemia defisiensi besi adalah anemia yang disebabkan karena kekurangan zat besi dalam darah. Defisiensi besi maternal berdampak pada rendahnya cadangan besi pada neonatus dan menunjukkan dampak yang dalam terhadap ekspresi *Brain Derived Neurotropic Factor (BDNF)* yang berpengaruh pada fungsi kognitif. Tujuan penelitian ini adalah untuk mengetahui perbedaan rerata kadar Feritin dan BDNF pada neonatus dari ibu hamil normal dan ibu hamil defisiensi besi.

Desain penelitian ini adalah *Cross Sectional*. Penelitian dilakukan diwilayah kerja Puskesmas Lubuk Buaya, Puskesmas Ambacang, Puskesmas Ikur Koto dan Laboratorium Biomedik Universitas Andalas pada bulan Februari 2017 – July 2018. Sampel Penelitian adalah ibu hamil sebanyak 42 orang yang dipilih secara *Consecutive Sampling*, sampel dibagi menjadi dua kelompok yaitu ibu hamil normal dan ibu hamil anemia defisiensi besi. Feritin dan BDNF diperiksa dengan metode ELISA. Data dianalisa menggunakan uji *T test*.

Kadar feritin neonatus pada kelompok ibu normal adalah 2,46±0,20(ng/ml) dan kelompok ibu anemia 1,35±0,34(ng/ml) ($p<0,05$). Kadar BDNF neonatus pada ibu kelompok normal adalah 3,65(ng/ml) dan kelompok ibu anemia adalah 1,74(ng/ml) ($p<0,05$). Secara statistik terdapat perbedaan bermakna kadar Feritin dan BDNF pada neonatus dari ibu hamil normal dan ibu anemia defisiensi besi. Kesimpulan penelitian ini adalah terdapat perbedaan rerata kadar Feritin dan BDNF pada neonatus dari ibu hamil normal dan ibu hamil defisiensi besi.

**Kata Kunci** : *Anemia Defisiensi Besi, Feritin, Brain Derived Neurotropic Factor*

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**The Differences of Ferritin and *Brain Derived Neurotropic Factor* on Neonatus from Normal Pregnant and Pregnant with Iron Deficiency Anemia**

**85 Pages + 5 Table + 9 Appendices**

Iron deficiency anemia is anemia caused by iron deficiency in the blood. Maternal iron deficiency affects the low iron reserves in neonates and it also influences on *Brain Derived Neurotropic Factor(BDNF)* which affects cognitive function. The purpose of this study was to determine the difference mean of Ferritin and *BDNF* in neonates from normal pregnant women and pregnant women with iron deficiency.

The design of this research was *Cross Sectional* design. This research was conducted in Community Health Center of LubukBuaya, Ambacang Community Health Center, Community Health Center of Ikur Koto Health Center and Biomedical Laboratory of Andalas University on February 2017 to April 2018. There were 42 pregnant women was selected as sample e of this research.The samples were chosen by *Consecutive Sampling*. Then, the sample is divided into two groups: normal pregnant women and pregnant women with iron deficiency anemia. Ferritin and BDNF are examined by the *ELISA*. Next, the data were analyzed by using *T test*.

The levels of ferritin neonates in the normal pregnant women group were around 2.46 ± 0.20(ng/ml) and the pregnantanemia group was about1, 35 ± 0.34 (ng/ml)($p < 0.05$). The level of *BDNF* neonates in normal pregnant group was 3.65(ng/ml) and the anemia pregnant group was 1.74(ng/ml) ($p < 0.05$). There was significant difference of Ferritin and *BDNF* levels in neonates from normal pregnant women and pregnant women with iron deficiency anemia.The conclusion of this study is that there is a difference of average Ferritin and BDNF in neonates from normal pregnant women and pregnant women with iron deficiency.

***Keywords***: *Iron Deficiency Anemia, Ferritin, Brain Derived Neurotropic Factor*