

**PENGARUH PEMBERIAN SUPLEMEN OMEGA-3 TERHADAP KADAR
LIPOPOLISAKARIDA (LPS) SERUM PADA PASIEN SKIZOFRENIA YANG
MENGONSUMSI ANTIPSIKOTIK ATIPIKAL DI BANGSAL RAWAT INAP RS Jiwa
PROF HB SAANIN PADANG**



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ABSTRAK

PENGARUH PEMBERIAN SUPLEMEN OMEGA-3 TERHADAP KADAR LIPOPOLISAKARIDA (LPS) SERUM PADA PASIEN SKIZOFRENIA YANG MENGONSUMSI ANTIPSIKOTIK ATIPIKAL DI BANGSAL RAWAT INAP RS Jiwa PROF HB SAANIN PADANG

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Pendahuluan: Skizofrenia, penyakit psikiatri serius yang termasuk kedalam 10 penyakit utama penyebab disabilitas di dunia, merupakan gangguan fungsi otak berupa gangguan persepsi, pikiran, perasaan, proses kognitif dan perilaku. Antipsikotik atipikal adalah pilihan terapi saat ini, namun obat ini memiliki efek sekunder terhadap asupan makan dan menyebabkan disbiosis usus, salah satunya ditandai dengan peningkatan kadar Lipopolisakarida (LPS) serum. **Tujuan:** untuk menganalisis pengaruh pemberian suplemen Omega-3 terhadap kadar LPS serum pada pasien skizofrenia yang mengonsumsi antipsikotik atipikal. **Metode:** Penelitian ini bersifat eksperimental dengan *randomized pretest-post test control group design*, dilaksanakan dengan *double blind* di RS Jiwa Prof HB Saanin Padang dan Laboratorium Biomedis Fakultas Kedokteran Universitas Andalas dari bulan Juli 2023 sampai Februari 2024. Sampel penelitian yaitu 15 orang kelompok perlakuan yang diberikan 1000 mg Omega-3 PUFA (180 mg EPA and 120 mg DHA) per hari selama 21 hari, dan 15 orang kelompok kontrol. Kadar LPS serum diperiksa pada hari ke-0 dan pada hari ke-22 menggunakan ELISA secara duplikat. Data dianalisis menggunakan uji *t-paired*. **Hasil:** terdapat perbedaan yang bermakna pada kadar LPS serum pada pasien skizofrenia yang mengonsumsi antipsikotik atipikal sebelum dan sesudah diberikan suplemen omega-3 PUFA di bangsal rawat inap RS Jiwa Prof HB Saanin Padang dengan $p= 0.02$ ($p<0.05$). **Kesimpulan:** Suplemen Omega-3 PUFA 1000 mg/hari dapat menurunkan kadar LPS serum pada penderita skizofrenia yang mendapat terapi antipsikotik atipikal.

Kata Kunci: Antipsikotik Atipikal, Omega-3 PUFA, Kadar Lipopolisakarida (LPS) Serum, Skizofrenia

ABSTRACT

THE EFFECT OF ADMINISTERING OMEGA-3 SUPPLEMENTS ON SERUM LIPOPOLYSACCHARIDE (LPS) LEVELS IN SCHIZOPHRENIA PATIENTS WHO ARE TAKING ATYPICAL ANTIPSYCHOTICS IN THE PSYCHIATRIC HOSPITAL OF PROF HB SAANIN PADANG

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Introduction: Schizophrenia is a serious psychiatric illness that is among the top 10 leading causes of disability in the world. Schizophrenia is a disorder of brain function in the form of impaired perception, thoughts, feelings, cognitive processes and behavior. They require long-term atypical antipsychotics for therapy, but they have secondary effects on food intake and cause intestinal dysbiosis, one of which is characterized by increased serum Lipopolysaccharide (LPS) levels. **Objective:** to analyze the effect of Omega-3 supplementation on serum LPS levels in schizophrenia patients taking atypical antipsychotics. **Methods:** This research is experimental with a randomized pretest-post-test control group design, with a double-blind study in Psychiatric Hospital of Prof HB Saanin Padang and the Biomedical Laboratory, Faculty of Medicine, Andalas University from July 2023 to February 2024. Research sample were 15 people who were given 1000 mg Omega-3 PUFA (180 mg EPA and 120 mg DHA) per day for 21 days, and 15 people in the control group. Serum LPS levels were checked on day 0 and day 22 using ELISA in duplicate methode. Data was analyzed using the paired t-test. **Results:** There was a significant difference in serum LPS levels in schizophrenia patients taking atypical antipsychotics before and after being given omega-3 supplements in the inpatient ward of Prof HB Saanin Mental Hospital Padang with $p = 0.02$ ($p < 0.05$). **Conclusion:** Omega-3 supplement 1000 mg/day can reduce serum LPS levels in schizophrenia patients who receive atypical antipsychotic therapy.

Keywords: Atypical Antipsychotics, Omega-3 PUFA, Lipopolysaccharide (LPS) levels, Schizophrenia