

ABSTRAK

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KORELASI AKTIVITAS ENZIM KOLINESTERASE DENGAN KADAR KOLESTEROL TOTAL DALAM DARAH PETANI YANG TERPAPAR PESTISIDA ORGANOFOSFAT SEBAGAI PENANDA RISIKO KARDIOVASKULAR

xviii + 99 Halaman + 18 Tabel + 14 Lampiran

Pestisida organofosfat merupakan bahan kimia pertanian yang dapat menghambat aktivitas enzim kolinesterase dan diduga memengaruhi metabolisme lipid dalam tubuh, salah satunya ditunjukkan melalui kadar kolesterol total yang meningkat dan berkaitan dengan risiko penyakit kardiovaskular. Penelitian ini menggunakan metode observasional analitik dengan pendekatan *cross-sectional* untuk menganalisis korelasi aktivitas enzim kolinesterase dengan kadar kolesterol total pada petani padi yang terpapar pestisida organofosfat. Sampel penelitian berjumlah 20 petani padi di Dusun Malang, Kabupaten Ponorogo yang dipilih berdasarkan kriteria inklusi dan eksklusi. Aktivitas enzim kolinesterase diperiksa menggunakan *Automatic Chemistry Analyzer* metode kinetik DGKC dari sampel darah vena, sedangkan pemeriksaan kadar kolesterol total dilakukan melalui metode *Point of Care Testing* (POCT) menggunakan sampel darah kapiler. Analisis data mencakup tahap univariat dan bivariat. Berdasarkan uji normalitas *Shapiro-Wilk*, data yang diperoleh tidak berdistribusi normal, sehingga uji korelasi *Spearman* digunakan untuk menilai hubungan antara kedua variabel. Hasil penelitian menunjukkan bahwa rata-rata aktivitas enzim kolinesterase sebesar $7339,90 \pm 1322,006$ U/L dengan seluruh responden (100%) tergolong dalam kategori normal, sementara rata-rata kadar kolesterol total tercatat sebesar $196,70 \pm 37,522$ mg/dL. Hasil uji korelasi *Spearman* diperoleh nilai (r) sebesar 0,128 dan (p) sebesar 0,591 ($p > 0,05$), yang menunjukkan tidak adanya hubungan signifikan antara kedua variabel. Dengan demikian, dapat disimpulkan bahwa aktivitas enzim kolinesterase tidak menunjukkan hubungan yang signifikan dengan kadar kolesterol total pada petani yang terpapar pestisida organofosfat.

Kata kunci : Enzim Kolinesterase, Kolesterol Total, Pestisida Organofosfat, Petani Padi

Daftar Bacaan : 8 buku + 55 Jurnal (2012-2025)

ABSTRACT

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CORRELATION BETWEEN CHOLINESTERASE ENZYME ACTIVITY AND TOTAL CHOLESTEROL LEVELS IN THE BLOOD OF FARMERS EXPOSED TO ORGANOPHOSPHATE PESTICIDES AS A MARKER OF CARDIOVASCULAR RISK

xviii + 99 Pages + 18 Tables + 14 Appendices

Organophosphate pesticides are agricultural chemicals that can inhibit cholinesterase enzyme activity and are suspected to affect lipid metabolism, as evidenced by increased total cholesterol levels and cardiovascular disease risk. This study uses an observational analytic method with a cross-sectional design to analyze the correlation between cholinesterase enzyme activity and total cholesterol levels in 20 rice farmers in Dusun Malang, Ponorogo Regency. Cholinesterase activity was measured using an Automatic Chemistry Analyzer with the DGKC kinetic method from venous blood, and total cholesterol levels were measured through Point of Care Testing (POCT) from capillary blood. Data were analyzed univariately and bivariately. The Shapiro-Wilk normality test showed that the data were not normally distributed, so the Spearman correlation test was used. The average cholinesterase activity was 7339.90 ± 1322.01 U/L with 100% of respondents in the normal category, while the average total cholesterol level was 196.70 ± 37.52 mg/dL. The results of the Spearman correlation test showed an r value of 0.128 and a p value of 0.591 ($p > 0.05$), which means there is no significant relationship between cholinesterase enzyme activity and total cholesterol levels. In conclusion, cholinesterase enzyme activity is not significantly related to total cholesterol levels in farmers exposed to organophosphate pesticides.

Keywords : Cholinesterase Enzyme, Total Cholesterol, Organophosphate Pesticide, Rice Farmers

Reference : 8 books + 55 journals (2012-2025)