

ABSTRACT

THE RELATIONSHIP BETWEEN LOW-DENSITY LIPOPROTEIN CHOLESTEROL (LDL-C) LEVELS AND BLOOD PRESSURE IN PATIENTS WITH CORONARY HEART DISEASE AT RSI SAKINAH MOJOKERTO

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Low Density Lipoprotein Cholesterol (LDL-C) is one of the main risk factors for coronary heart disease because it plays a role in the process of atherosclerosis which can increase blood vessel stiffness and blood pressure. This study aims to determine the relationship between LDL-C levels and blood pressure in patients with coronary heart disease at RSI Sakinah Mojokerto. This study uses a quantitative method with a correlational analytical design and a retrospective approach. The population in this study is all medical records of Coronary Heart Disease patients who were hospitalized recorded from January to March 2026 at RSI Sakinah Mojokerto, with a population of 102 patients. The research sample consisted of 50 respondents selected using a purposive sampling technique. The research data obtained from patient medical records were LDL-C levels, systolic blood pressure, and diastolic blood pressure. Data analysis was carried out using the Pearson correlation test and simple linear regression test. The results of the Pearson correlation test showed a positive and significant relationship between LDL-C levels and systolic blood pressure ($r = 0.704$; $p = 0.000$) and diastolic blood pressure ($r = 0.367$; $p = 0.009$). The results of the simple linear regression test showed that LDL-C levels were able to explain 49.6% ($R^2 = 0.496$) of the variation in systolic blood pressure and 13.5% ($R^2 = 0.135$) of the variation in diastolic blood pressure. It can be concluded that the higher the LDL-C levels, the more the patient's blood pressure tends to increase, especially systolic blood pressure. Controlling LDL-C levels is necessary to help maintain stable blood pressure in patients with coronary heart disease.

Keywords : Low-Density Lipoprotein Cholesterol (LDL-C), Coronary Heart Disease, Blood Pressure

ABSTRAK

HUBUNGAN KADAR *LOW DENSITY LIPOPROTEIN CHOLESTEROL* (LDL-C) DENGAN TEKANAN DARAH PADA PENDERITA PENYAKIT JANTUNG KORONER DI RSI SAKINAH MOJOKERTO

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Low Density Lipoprotein Cholesterol (LDL-C) merupakan salah satu faktor risiko utama penyakit jantung koroner sebab mempunyai peran dalam proses aterosklerosis yang bisa meningkatkan kekakuan pembuluh darah serta tekanan darah. Penelitian ini mempunyai tujuan untuk mengetahui hubungan antara kadar LDL-C dengan tekanan darah pada pasien penderita penyakit jantung koroner di RSI Sakinah Mojokerto. Penelitian ini menggunakan metode kuantitatif dengan desain analitik korelasional dan pendekatan retrospektif. Populasi dalam penelitian ini adalah semua data rekam medis pasien Penyakit Jantung Koroner yang menjalani rawat inap yang terdata pada periode Januari sampai dengan Maret 2026 di RSI Sakinah Mojokerto, dengan jumlah populasi sebanyak 102 pasien. Sampel penelitian berjumlah 50 responden yang dipilih menggunakan teknik *Purposive sampling*. Data penelitian didapatkan dari rekam medis pasien berupa kadar LDL-C, tekanan darah sistolik, serta tekanan darah diastolik. Analisis data dilaksanakan menggunakan uji korelasi *Pearson* dan uji regresi linear sederhana. Hasil uji korelasi *Pearson* memperlihatkan adanya hubungan positif serta signifikan antara kadar LDL-C dengan tekanan darah sistolik ($r = 0,704$; $p = 0,000$) serta tekanan darah diastolik ($r = 0,367$; $p = 0,009$). Hasil uji regresi linear sederhana memperlihatkan bahwa Kadar LDL-C mampu menjelaskan 49,6% ($R^2 = 0,496$) variasi tekanan darah sistolik dan 13,5% ($R^2 = 0,135$) variasi tekanan darah diastolik. Dapat disimpulkan bahwa semakin tinggi kadar LDL-C maka tekanan darah pasien cenderung semakin meningkat, terutama tekanan darah sistolik. Pengendalian kadar LDL-C diperlukan untuk membantu menjaga kestabilan tekanan darah pada pasien penyakit jantung koroner.

Kata kunci : *Low Density Lipoprotein Cholesterol* (LDL-C), Penyakit Jantung Koroner, Tekanan Darah