ABSTRAK

Penyakit jantung koroner (PJK) merupakan *silent killer* dan terjadi karena penyumbatan pembuluh darah akibat plak. Indeks trombosit seperti *Mean Platelet Volume* (MPV) dan *Platelet Distribution Width* (PDW) digunakan sebagai *biomarker* potensial untuk diagnosis dini penyakit tromboemboli. Troponin-I merupakan penanda sensitif dan spesifik untuk diagnosis infark miokard. Penelitian ini bertujuan untuk mengetahui korelasi *Mean Platelet Volume* (MPV) dan *Platelet Distribution Width* (PDW) terhadap pemeriksaan troponin-I pada penyakit jantung koroner. Jenis penelitian yang digunakan adalah penelitian korelasi dengan pendekatan *cross sectional.* Sampel yang digunakan yaitu pasien dengan riwayat diagnosis penyakit jantung koroner berdasarkan rekam medis. Penelitian ini dilaksanakan pada bulan Maret sampai bulan April 2024. Pemeriksaan MPV, PDW, dan Troponin-I dilakukan di Laboratorium Patologi Klinik RSUD Haji Provinsi Jawa Timur. Pemeriksaan MPV dan PDW menggunakan alat *hematology analyzer* yakni *Sysmex* XN-L-550 dan pemeriksaan Troponin-I menggunakan alat *autoanalyzer* SD Biosensor F200. Hasil dari penelitian ini didapatkan rata-rata kadar MPV sebesar 10,16 fL, kadar PDW sebesar 11,19 fL, rata-rata kadar Troponin-I sebesar 2,60 ng/mL. Tidak ditemukan adanya korelasi nilai *Mean Platelet Volume* (MPV) terhadap pemeriksaan Troponin-I *p value* 0,916 dan tidak ditemukan adanya korelasi nilai *Platelet Distribution Width* (PDW) terhadap pemeriksaan Troponin-I *p value* 0,616.

Kata Kunci : Penyakit Jantung Koroner, *Mean Platelet Volume* (MPV), *Platelet Distribution Width* (PDW), Troponin-I

ABSTRACT

Coronary heart disease (CHD) is a silent killer and occurs due to blockage of blood vessels due to plaque. Platelet indices such as Mean Platelet Volume (MPV) and Platelet Distribution Width (PDW) are used as potential biomarkers for early diagnosis of thromboembolic diseases. Troponin-I is a sensitive and specific marker for the diagnosis of myocardial infarction. This study aims to determine the correlation of Mean Platelet Volume (MPV) and Platelet Distribution Width (PDW) with troponin-I examination in coronary heart disease. The type of research used is correlation research with a cross sectional approach. The samples used were patients with a history of a diagnosis of coronary heart disease based on medical records. This research was carried out from March to April 2024. MPV, PDW and Troponin-I examinations were carried out at the Clinical Pathology Laboratory of the Haji Hospital, East Java Province. MPV and PDW examinations used a hematology analyzer, namely the Sysmex XN-L-550, and Troponin-I examinations used the SD Biosensor F200 autoanalyzer. The results of this study showed that the average MPV level was 10.16 fL, the PDW level was 11.19 fL, the average Troponin-I level was 2.60 ng/mL. There was no correlation found in the Mean Platelet Volume (MPV) value with the Troponin-I examination, p value 0.916 and no correlation was found with the Platelet Distribution Width (PDW) value with the Troponin-I examination, p value 0.616.

Keywords: *Coronary Heart Disease, Mean Platelet Volume (MPV), Platelet Distribution Width (PDW), Troponin-I*