

Efek Ekstrak Air Daun Kelor (*Moringa oleifera*) Terhadap Kadar Nitrit (NO₂⁻) pada Infark Miokard Tikus Sprague Dawley = The Effect of *Moringa oleifera* Aqueous Extract Toward Nitrite Concentration in Sprague Dawley Rats with Isoproterenol-induced Myocardial Infarction

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Abstrak

Penyakit kardiovaskular masih menempati peringkat pertama penyakit penyebab kematian terbanyak di dunia, yaitu 31% dari seluruh kematian. Berdasarkan data dari World Health Organization (WHO), 85% dari 17,9 juta orang yang meninggal akibat penyakit kardiovaskular mengalami serangan jantung dan stroke. *Moringa oleifera* yang banyak ditemukan dan telah digunakan di Indonesia, memiliki bahan-bahan yang berperan sebagai antiinflamasi, seperti quercetin, kaempferol, dan flavonoid. Belum ada penelitian yang mengkaji efek ekstrak air daun kelor (*Moringa oleifera*) terhadap infark miokard tikus. Penelitian ini dilakukan menggunakan bahan biologi tersimpan jaringan jantung dari tikus yang telah menerima 3 perlakuan berbeda (kontrol negatif: tanpa perlakuan; ISO: pemberian isoproterenol 85 mg/kgBB; serta ISO+MO: pemberian isoproterenol 85 mg/kgBB dan ekstrak air daun kelor 200 mg/kgBB). Kadar nitrit diukur menggunakan Nitrite Assay Kit (Griess Reagent). Hasil uji kadar nitrit signifikan antara ketiga kelompok dengan nilai $p=0,009$. Uji Post-Hoc menunjukkan nilai signifikan antara kelompok kontrol negatif dengan ISO ($p=0,290$) dan ISO dengan ISO+MO ($p=0,013$). Dengan demikian, ekstrak air daun kelor (*Moringa oleifera*) dapat menurunkan kadar nitrit (NO₂⁻) secara signifikan ($p=0,013$) pada tikus yang mengalami infark miokard akibat induksi isoproterenol.

.....Cardiovascular diseases remain as the most common cause of death worldwide, accounted for 31% of all deaths. According to World Health Organization (WHO), 85% out of 17,9 million of people died due to cardiovascular disease, had heart attack and stroke. *Moringa oleifera*, which is found abundantly in Indonesia, is rich of anti-inflammation properties, such as quercetin, kaempferol, and flavonoids. Up to now, there is no research done to evaluate the effect of *Moringa oleifera* aqueous extract in myocardial infarction Sprague Dawley rats. This study was conducted using cardiac tissues from 3 groups of rats with different treatments: negative control group (no intervention), ISO group (85 mg/kg body weight of isoproterenol), and ISO+MO group (85 mg/kg body weight of isoproterenol and 200 mg/kg body weight of *Moringa oleifera* aqueous extract). Nitrite Assay kit (Griess Reagent) was used to evaluate nitrite concentration. Nitrite concentration was found to be significant between three groups (p - value = 0.009). Post-Hoc analysis revealed a significance difference between the negative control and ISO group ($p=0.029$) as well as the ISO and ISO+MO group ($p=0.013$). Hence, *Moringa oleifera* aqueous extract significantly reduced nitrite concentration in rats with myocardial infarction ($p=0.013$).