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Renal Function Improvement Effects of the Extract Kecombrang (Etlingera elatior) Fruit in Mice Model of Sepsis

Evi Nurhayatun[1], Bambang Purwanto[1], Soetrisno Soetrisno[2], Dono Indarto[3], Mila Ulfia[1], Febriola Hotmaida Sagala[1], Dalilah Salsabila Salma[1], Atika Sri Raharjani[1]
[1]Department of Internal Medicine, Sebelas Maret University, Indonesia
[2]Department of Obstetrics and gynecology, Sebelas maret university, Indonesia
[3]Department of Biomedical Laboratory and Department of Physiology, Sebelas Maret University, Indonesia

Objectives: Sepsis is a condition with high morbidity and mortality, accompanied with high burden expenses. Acute kidney injury is one of the complications of organ damage due to sepsis. This study investigated the effects of an extract of Kecombrang (E. elatior) fruit on renal function improvement in sepsis model mice.

Methods: Forty Mus musculus mice were divided into five groups (n = 8), and the intervention group received 0.03 mg/kg BW lipopolysaccharide (LPS) intraperitoneal. There was a normal group without LPS induction (E-1), one with LPS injection only (E-2), and those that received ethanol extracts of Kecombrang fruit containing 2.1 mg/20 g (E-3), 4.2 mg/20 g (E-4), and 8.4 mg/20 g (E-5). ELISA was used to gauge NGAL levels. The ANOVA was conducted to examine the differences between the groups.

Results: After administration of the extract at a varied dose, the lowest NGAL levels were in the E-5 group (8.4 mg/20 g; p=0.001). Ethanol extract of Kecombrang (E.
elatior) fruit has antiinflamatory effects. In this study, a dosage of 8.4 mg/20 g of extract may significantly lower the levels of NGAL

Conclusions: The ethanol extract of E. elatior might be considered a complementary treatment to decrease inflammation and kidney injury in sepsis.