

The Effect of Intraureteric Induction of *Escherichia Coli* on Stimulation of the Expression of HMGB1 in Proximal Tubular Epithelial Cells of *Lepus Sp.* Rabbit from New Zealand Strain

Introduction and Objectives: Urinary Tract Infection (UTI) is one of the most common infection that affects humans and infects millions of people each year. The UTI which is generally caused by *Escherichia coli* is a result from bacterial lipopolysaccharide (LPS) induction. This induction will stimulate cells like monocytes and macrophages to actively release pro-inflammatory cytokines. High Mobility Group Box 1 (HMGB1) is one kind of late mediator, also an important marker of sepsis and inflammation and theoretically can stimulate the release of pro-inflammatory cytokines. The aim of this study was to determine the effect of intraureteric induction of *E. coli* on stimulation of the expression of HMGB1 in proximal tubular epithelial cells of kidney in *Lepus sp.* Rabbit from New Zealand strain.

Material and Methods: This research used true experimental design, done on 24 male *Lepus sp.* rabbits and were randomly divided into 6 groups. K-negative group (K1) was not given any exposures and ligation, K-positive group (K2) was ligated without injected by *E. coli*. Each group of exposures was injected by *E. coli*, ligated, and incubated for a day, 3 days, 5 days, 7 days. The measured parameter was the level of HMGB1.

Results: Statistical analysis with one-way Anova method followed by Post Hoc Tukey test, showed that there were differentiations between control groups and treatment groups ($p < 0.05$).

Conclusions: Intraureteric induction of *E. coli* and incubation for 1, 3, 5, and 7 days can increase the level of HMGB1 in proximal tubular epithelial cells of *Lepus sp.* strain New Zealand.