ABSTRACT

ANTIBIOTIC RESISTANCE AND PLASMID PROFILES OF *Escherichia coli* ISOLATES FROM URINARY TRACT INFECTION PATIENTS IN ABDUL MOELOEK HOSPITAL LAMPUNG PROVINCE

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Urinary tract infection (UTI) is a public health problem in Indonesia which cause of high morbidity and mortality. *Escherichia coli* (*E.*coli) is reported as the major cause of 85-95% UTI's infections. Improper use of antibiotics can increase the occurrence of antibiotic resistance. Resistance can be encoded by a chromosome or plasmid. Resistance plasmid encoded by an extra chromosome. Plasmids can transmit resistance to other microbes, so the surrounding microbes that were not resistant can become resistant also. The study was aimed to determine the antibiotic resistance pattern and plasmid profiles from *E. coli* isolates from UTI's patients. Antibiotics susceptibility test was performed against the isolates following the protocol of the Kirby-Bauer disc diffusion method. The plasmids were isolated alkaline lysis by using plasmid mini prep kit, electroporated on 1% agarose gel, and documented using Gel Documentation System. The result showed that thirty of *E. coli* isolates out of 205 urine samples from the patients were obtained. These isolates showed high resistance to ampicillin (96,7%), trimetoprim (76,7%), siprofloxacin (73,3%), cefotaxime (70%), cefixime (70%), ceftriaxone (63,3%) and aztreonam (60%) while 56,7% was susceptible to amikasin. Around 90% of the isolates were multidrug resistance. Among 19 of *E. coli* isolates, 63,3% harbored plasmids, ranged from 0,5 – 10,8 kb of the size. Some isolates possessed a single plasmid while other possessed multiple plasmids. There is a correlation between the pattern of antibiotic resistance with plasmid profile.

**Key Words** : Urinary tract infection, *Escherichia coli*, antibiotic resistance, plasmid profile.