

**ABSTRACT****ANALYSIS OF PROPHYLACTIC AND EMPIRICAL ANTIBIOTICS UTILIZATION IN PATIENTS WITH CAESAREAN SECTION DELIVERY****(Study at Obstetric and Gynecology Department,  
Dr. Iskak Teaching Hospital Tulungagung)**

**Background** - Caesarean section (C-section) is a delivery method using surgical incision on the abdomen and uterus with high risk of surgical site infection (SSI) which can occur immediately (24-48 hours post surgery) or delayed SSI. Prophylactic antibiotics are given to minimize the risk of infection, and frequently continued with empirical antibiotics.

**Objective** - This study was designed to analyze the effectiveness of prophylactic and empirical antibiotics in patients with cesarean section delivery.

**Method** - The data were collected prospectively between May until July 2017 period. Patients who met the inclusion criteria were performed measurement on the parameters including temperature, heart rate, respiratory rate, white blood count, and CRP prior to prophylactic antibiotics administration and 24 hours post-surgery. The wound were observed on 24 hours post-surgery and the same parameters were measured again on day 10 or 11. The effectiveness were analyze by comparing every parameters. This study had been reviewed by Ethical Committee Dr Iskak Teaching Hospital Tulungagung.

**Results** - 41 caesarean section patients were included and given prophylactic and empirical antibiotics. Effectivity of the prophylactic antibiotics were studied by comparing the pre-surgery and 24 hours post-surgery parameters. All of patients' parameters including temperature, heart rate, respiratory rate, and WBC were constantly in normal category. CRP value changes were occurred in 17 patients (42%) but it was still in a normal range at 24-48 hours post operation condition. There was no found SSI on day 3. Empirical antibiotics were mostly effective (98%) based on the measured clinical and laboratory parameters. A patient with SSI was found in day 10. Qualitative analysis of prophylactic antibiotics therapy by Gyssens method showed that 39% patients were identified irrational time of administration and 5% patients were irrational dosage use. While problems of empirical antibiotics therapy were found irrational route of administration as much as 17% and 22% patients indicating ineffective antibiotics selection.

**Conclusion** - Majority (98%) of prophylactic and empirical antibiotics utilization were effective. Qualitative analysis Gyssens method 59% of prophylactic and 78% of empirical antibiotics were appropriate and rationale for implementing in patients with C-section delivery.

**Keywords** - prophylactic and empirical antibiotics, caesarean section, SIRS, Gyssens