INTRODUCTION – The widespread use of inappropriate prophylactic antibiotics in urological surgery patients can increase the risk of resistance and development of postoperative nosocomial infection. Infections that often occur mainly in urological surgery and are the main cause of postoperative nosocomial infection in urological surgery are Surgical Site Infection (SSI) and Urinary Tract Infection (UTI). In urological surgery, SSI occurs after major surgery while UTI occurs after endourological surgery. The number of patients at Slamet Martodirjo Hospital who undergo urological surgery each month ranges from 80-100 patients. Until now, there has never been an evaluation regarding the rationality of the use of prophylactic antibiotics and the incidence of postoperative nosocomial infection.

OBJECTIVE – This study was aimed to analyze the quality of prophylactic antibiotics use and identify the risk factor of postoperative nosocomial infection in urological surgery patients.

METHOD – To analyze the quality of prophylactic antibiotics was using Gyssens method. To determine the risk factors of postoperative nosocomial infection in urological surgery patient was using chi square method.

RESULTS – There were 64 patients consisted of 9 (14%) patients with skin incision and 55 (86%) patients with urethral incision. 9 patients with skin incision was observed to determine the incidence of surgical site infection and 55 patients with urethral incision was observed to determine the incidence of urinary tract infection postoperative. Observation was conducted until 30 days after incision.

DISCUSSIONS – There is no incidence of surgical site infection and 3 incidence of urinary tract infection. Gender and catheter use were the risk factor that increasing the risk of urinary tract infection postoperative in urological surgery patients (p value <0.05). The qualitative analysis of prophylactic antibiotics using the Gyssens method showed that 13 (20.31%) was inappropriate in administration timing. Based on the guideline, prophylactic antibiotics should be given less than 30 minutes before surgery and ideally at the time of induction (Ministry of Health, 2016). Meanwhile the European and American Urolgical Guideline states that prophylactic antibiotics in urological surgery can be given up to 1 hour before the incision. Prophylactic antibiotics must be appropriate so as to ensure the achievement of high or optimal levels in serum or tissue at the time of incision, these levels must be maintained during the operation. If the surgical procedure is longer than the half-life of the antibiotic given, the antibiotic administration can be repeated during the operation (SIGN, 2008). It need the improvement of administration timing to increase the rationality of prophylactic antibiotics use in urological surgery patient.

CONCLUSION – IMPROVEMENT OF ADMINISTRATION TIMING OF PROPHYLACTIC ANTIBIOTICS USE IN UROLOGICAL SURGERY PATIENTS WAS NEEDED TO INCREASE THE RATIONALITY.

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