

CHAPTER 7

DISCUSSION

The main outcome of these research, infectious morbidity was not significant difference when compared prophylaxis to non-prophylaxis group. The secondary outcome, febrile morbidity was significant difference when compared prophylaxis to non-prophylaxis group. The bad outcome, the outcome defined as combination of infectious morbidity and febrile morbidity. The bad outcome was significant difference when compared prophylaxis to non-prophylaxis group.

There were many research conducted about usage of antibiotic prophylaxis in abdominal hysterectomy (20,21,22,27). There were wide variety of prophylactic antibiotics regimens. There were different in kind of antibiotics and also in dosage. According to anaerobe progression theory⁽¹⁾, and awareness of resistant bacteria Cefazolin might be used as a single dose in prevention

post operative infection in abdominal hysterectomy⁽²⁹⁾. In meta-analysis, that summarized randomized controlled trial, concluded that cefazolin in three dose regimens decreased post abdominal hysterectomy infection in term of infectious morbidity⁽²⁸⁾. There was some different result to this thesis.

The results of this research were differ from meta-analysis and the expected hypothesis that single dose cefazolin could decreased post operative infection in women underwent simple abdominal hysterectomy. There were many reasons to cause this result.

First, this research was not finish yet. The infection rate in non-prophylaxis group was about 14.44% and the infection rate in prophylaxis group was 6.67% more than expected rate in prophylaxis 5%. The sample population was 90 in each group. The sample size was too small to detect any difference if there was any existed real difference. So it was too early to conclude that there was no significant difference between two groups.

The power of study was only 56% according to these number of recruited patients. There might become different if sample size was large enough.

Second, the rate of infection was another factor that might be influence outcome. In the literature review, some of them had high rate of infection as 60%. Even in meta-analysis, the rate of infection in control group was 21%, and the rate of prophylaxis group was 11% when used cefazolin as a prophylactic antibiotics in three dose regimens. However, there was only 10.55% over all infection rate in this study. It was very difficult to show difference in efficacy of treatment when the infection rate in control group was low. However, if there was real difference existed, it would be used larger sample size to detect it.

Third, there might be debated about sensitivity of infection diagnosis. The criteria to diagnose infection in this study were very sensitive. There were 90% of patients who had no post operative infection in

this study came back to two week follow up visit. None of them had symptom and sign of infection that needed antibiotics treatment.

The febrile morbidity group, that added the patients who had other causes of infection to the infectious morbidity group. The result show that prophylactic antibiotics could decreased this febrile morbidity significantly when compared to non-prophylaxis group. The febrile morbidity were composed of respiratory tract infection, urinary tract infection and unknown cause of infection. The cause of urinary tract infection was mainly from insertion of Foley catheter prior to surgery and removed it out in at least 24 hours later. Every patient must used this Foley catheter for this type of operation. Cefazolin prevented these urinary tract infection because it was excreted unchange form in urine and had high concentration in urine. The respiratory tract infection that might be a complication of general anesthesia could be prevented by cefazolin because most of the colonized bacteria in respiratory tract were sensitive to cefazolin. Even though there were some

unknown etiology of infection in febrile morbidity group. The prophylactic antibiotics had some benefit to this group of patients.

The researcher combined febrile morbidity and infectious morbidity to a single result, bad outcome. When used bad outcome as a final outcome, it made more clinically value to the patients. The bad outcome was also significant difference.

There were six cases contamination between two group. All of them were treated with combination antibiotics after operation without any infection according to criteria occurred. Three of them were missed diagnosis because ovarian infected masses were diagnosed as benign tumor. Other three cases were failure to follow research protocol. All of them were in non-prophylaxis group and were included in the result calculation according to intention to treat concept.

The strength of this research was the design. Randomized double-blinded trial was strongest design to control other biases that might be effected the results. The weakness of this study was power of study is too low to detect any difference in main outcome. The continuous study to reach the expected number of population will be performed.

Even though the main outcome was no significant difference, there was another meaningful result. The significant difference of bad outcome had clinically significance. It decreased suffering of the patients from infection and fever and also decreased the used of antibiotics treatment. Single dose cefazolin could be used as prophylactic antibiotics in simple abdominal hysterectomy because in decreased postoperative bad outcome.