

Events of Operating Wound Infections in Post Operating Patients, East Sumba in 2017

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Abstract

The HAIs incidence in Umbu Rara Meha Waingapu Hospital 2016 was still classified as high at 13.7%, while the incidence of surgical wound infection was still high, namely in 2017 as much as 4%, the standard number set by Umbu Rara Meha Waingapu Hospital was no more from 1.5%. The aim is to determine the incidence of surgical wound infection HAIs on patients in the inpatient room of Umbu Rara Meha Waingapu Hospital. This study was quantitative analytic with design cross sectional. The sample were 35 SC patients who received treatment with using incidental sampling technique. The instruments used observation sheets, interview sheets, and medical records of patients. Result show that the majority were 20-35 years old (62.9%), most of them had low education (Primary school and Junior high school) 51.4%. Based on the treatment preparation the pre operation category was good 60.0% and not good 40.0%. Postoperative care preparations were well categorized as 34.3% and less well as 65.7%. Patients who did not have infection were 65.7%, patients with surgical wound infections were 34.3%. While post-operative preparation was associated with the incidence of HAIs: Surgical Wound Infection (PR = 2.091; 95% CI = 1.364-3.204; p value = 0.002). There is a need for policies to improve compliance and discipline of officers in applying treatment measures in accordance with SOPs and always provide information and education about operations and about wound care, hand hygiene and nutrition to patients.

Keywords: HAIs, Surgical wound infections, Sectio caesaria, Post surgery

1. INTRODUCTION

In Indonesia, Health care Associated Infection (HAIs) reached 15.74%, higher when compared to developed countries which ranged from 4.8-15.5% (Darmadi, 2008). In Umbu Rara Meha Waingapu Hospital based on medical record data (2016), the incidence of surgical wound infections both minor surgery and major surgery that experienced fluctuations but were still relatively high, namely in 2015 the incidence of infection was 11%, in 2016 the infection was 3.5% and January-September 2017 was 4%. The numbers above the laparotomy surgery is still increasing both sectio caesaria (SC), perforated appendicitis, while the target set by the section Implementation of Infection Prevention and Control program (PPI) in Umbu Rara Meha Waingapu Hospital incidence rates should not exceed 1.5% per year.

Efforts to prevent and control HAIs infections due to surgical wound infections need to be considered starting with preoperative preparations, intra-surgery and post-operative care. Pre-operative patient preparation that needs to be done is before the operating room the patient must take a clean bath/flush, clean the operating location 1 hour before surgery, and give prophylaxis 60 minutes before surgery. In post-operative care, the wound is done properly, namely the nurse or midwife washing hands, wearing clean hanscoen and replacing it with sterile hanscoen, using sterile tools and materials and providing health and control education in the surgical or midwifery clinic. Post-operative care measures that need to be considered are surgical wound care on the third day after surgery must be in accordance with standard operating procedures (SPO), clean environment, preparatory health education about nutrition, control of the seventh day surgical wound and maintain personal hygiene including hygienic hands (Arfiana, 2012).

Severe post-operative wound infections can lead to morbidity and mortality, as a result of these infections also cause losses suffered by posien due to nosocomial infections in the form of material losses, longer healing times, reduced productivity, and hospital losses in the quality of services (Achmad, 2007). Many factors influence the infection of surgical wounds, namely the cause is often associated with microbial flora and patients such as age, nutritional status, comorbidities and personal hygiene, surgical staff, surgical techniques and the environment. Therefore, the researchers were interested in conducting a study of the Risk Factors for HAIs Occurrence of Surgical Wound Infection on Patients in the Inpatient Room of Umbu Rara Meha Waingapu Hospital in 2017.

2. METHODS

Type of research was quantitative analytic with design cross sectional. The research was conducted on August 2017 in Umbu Rara Meha Waingapu Hospital, East Sumba District. The sample were 35 SC patients who met the inclusion and exclusion criteria. The sampling technique was incidental sampling. The independent variables in this study were patient characteristics (age and education), pre-operative care measures and post-operative wound care. The dependent variable in this study was the incidence of HAIs of surgical wound infection. The instruments used were observation sheets, interview sheets, and medical records of patients. Data analysis was done by univariate and bivariate to see the relationship between variables.

3. RESULTS

Characteristic of Respondents

Table 1. Distribution of Respondent Characteristics

Number	Variables	Frequency	Percentage
1	Age (Years)		
	20-35	22	62.9
	> 35	13	37.1
	Total	35	100.0
2	Higher		
	Education (Senior high school-College)	17	48.6
	Low (Elementary school-Junior high school)	18	51.4
	Total	35	100.0

Based on Table 1 showed that from 35 cases of SC surgery, the respondents were at most 20-35 years old (62.9%) and there were 37.1% of patients aged > 35 years. Most patients with low education (Elementary school-Junior high school) were 51.4% and high educated patients (Senior high school-College) were 48.6%.

Table 2. Distribution of Pre-operative Preparations, Post-Operations and HAIs Incidence of Surgical Wound Infection on Patients

Number	Variables	Frequency	Percentage
1	Pre Operation		
	Good	21	60.0
	Less Good	14	40.0
	Total	35	100.0
2	Post Operations		
	Good	12	34.3
	Less Good	23	65.7
	Total	35	100.0
3	Infection of Surgical Wounds		
	Not Infected	23	65.7
	Infection	12	34.3
	Total	35	100.0

Based on Table 2 showed that good pre-operative care which was 60.0% and less good as 40.0%. In post-operative care the good category was actually 34.3% and the less well was 65.7%. Analysis results also showed that patients who experienced no infection were 65.7%. And those who experienced surgical wound infections were 34.3%.

Table 3. Analysis of Post-operative with HAIs Incidence of Surgical wound infections on patients

Variables	Incidence of HAIs				PR	95% CI	p-value		
	Infection		Non infection					Total	
	n	%	n	%				n	%
Post-Operative									
Good	12	100	0	0	12	100	2.091 1.364- 3.204 0.002		
Less Good	11	47.8	12	52.2	23	100			
Total	23	65.7	12	34.3	35	100			

The results of the chi-square test of post-operative show the relationship of post-treatment surgery with HAIs Incidence of surgical wound infection was obtained by PR = 2.091; 95% CI = 1.364-3.204 which means that good post-operative care measures are associated twice with no occurrence of HAIs in surgical wound infections in patients of East Sumba. This relationship is statistically significant as indicated by the p value of 0.002 (p-value <0.05).

4. DISCUSSION

Correlation of post-operative preparation to the HAIs incidence: Surgical wound infection in patients of East Sumba

Analysis showed that 52.2% of patients infected with surgical wounds in the poor post-operative care group with PR = 2.091; 95% CI = 1.364-3.204; p value = 0.002, which means that post-operative care that was not good affects 2 times the incidence of surgical

wound infection in patients at Umbu Rara Meha Waingapu Hospital. This relationship is statistically significant as indicated by the p-value <0.05. This is in line with studies previous which showed a significant relationship between the level of adherence to the implementation of post SC wound care and the incidence of post wound infection section caesarea in Melati Ward West Nusa Tenggara Province General Hospital (Bahtiar, 2013) and according to research in the Rose Room I of RSUD DR. Moewardi Surakarta, who found a significant (significant) relationship between the level of adherence to the implementation of wound care procedures and the incidence of post wound infection section caesarean (Himatusujanah, 2008).

The results of more detailed analysis show that the most treatment measures not performed correctly in post-operative care measures are the act of using clean gloves when removing the dressing (51.4%), the act of removing clean gloves and dirty tweezers (54.3%) and actions to provide health education about wound care, hand hygiene and patient nutrition (37.1%). Hospital institutions are expected to improve the compliance of nurses and midwives in post-operative wound care in accordance with the SOP.

Rondhianto (2008) states, there were 4 general principles of operating room aseptic techniques that must be maintained to reduce surgical wound infections, namely the principle of room asepsis, personnel asepsis principle, the principle of patient asepsis, and the principle of asepsis instrument. In this study the principle of patient asepsis was still not maximal where patients who were going to undergo surgery had to be perceived. The point is to do a variety of procedures that are used to make sterile field operations. The procedures include cleaning the patient, disinfection of the operating field and the act of draping. Therefore, the health service provider in order to reduce surgical wound infections can improve the cleanliness of patients before performing surgery.

5. CONCLUSIONS

There was a significant correlation between post-operatives with HAIs Incidence of Surgical wound infections on patients in the inpatient room. Post-operative care affects 2.091 times the HAIs incidence of surgical wound infection of Umbu Rara Hospital Meha Waingapu, East Sumba 2017.

Expected can improve compliance and discipline of nurses and midwives in performing preoperative care and post-operative wound care preparation in accordance with the SOP so that it can suppress the number of HAIs: surgical wound infections and improve compliance and discipline in carrying out each nursing action and provide information and education about operations and about wound care, hand hygiene and nutrition to patients.

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