Adpebi International Journal of Multidisciplinary Sciences

https://journal.adpebi.com/index.php/AIJMS

Vol.1, No.1, 2022
ISSN 2829-8217

Financial Impact of Surgical Wound Infection Post Elective Sectio Caesaria in Hospital

Noveyla Hardhaning Tyas[1], Mafizatun Nurhayati[2]
[1,2,]Doctoral Program in Management, Mercu Buana University, Indonesia
E-mail:[1]noveylahardhaningtyas.dr@gmail.com,mafizatun.nurhayati@mercubuana.ac.id

https://doi.org/10.54099/aijms.v1i1.180

ARTICLE INFO

Research Paper

Article history:
Received: 5 July 2022
Revised:12 July 2022
Accepted: 8 August 2022

Keywords: Surgical Wound Infection, Patient Safety, Financial Impact

ABSTRACT

Purpose –The hospital is responsible for patient safety during the treatment period. Surgical wound infection is part of the main problem in midwifery services because it can hinder surgical wound healing, increase treatment time and increase treatment costs. As well as increasing the morbidity and mortality rates in obstetric services. The aim of this study was to determine the effect of surgical wound infection on patient care costs.
Methodology/approach –The research method used by the researcher is a qualitative approach with a descriptive method. The results showed that post-cesarean surgical wound infection had an impact on finances, namely the high cost of hospital care. This is in accordance with the results of interviews and documentation conducted by researchers.
Findings –It was concluded that postoperative wound infection elective caesarean section increased hospital costs. Large annual cost savings can be achieved by reducing the incidence of surgical site infections.

INTRODUCTION

Patient safety is an issue that is of global concern because of the globalization of information technology, public knowledge about health services and patient safety issues are growing rapidly(Fanaroff & Goldsmith, 2019; Halihan et al., 2019; Hercules, 2010; Ismainar, 2015; Kiss, 2020; Nursalam, 2014). Hospital patient safety is a system where the hospital makes patient care safer which includes risk assessment, identification and management of matters relating to patient risk, incident reporting and analysis, the ability to learn from incidents and their follow-up and implementation of solutions to minimize risks and prevent injury caused by mistakes as a result of carrying out an Action or not taking the action that should have been taken(Cahyono, 2015; Clancy, 2011; Pagala et al., 2017). A patient safety incident is any unintentional event and condition that results in or has the potential to result in preventable injury to a patient(Aiken et al., 2018; Farokhzadian et al., 2018; Liu et al., 2019).

Patient safety has six patient safety goals, namely the accuracy of patient identification, increasing effective communication, increasing the safety of drugs that need to be monitored, ensuring the right location, correct procedure, right patient surgery, reducing the risk of infection related to health services and reducing the risk of falling patients.(Efitra & Reflita, 2021; Fenita, 2019; Neri et al., 2018; Pambudi et al., 2018). The fifth patient safety target related to patient safety measures is

surgical wound infection (ILO) which is the main complication experienced by inpatients and is one of the indicators of patient safety.(Aditya, 2018; Kartikasari & Apriningrum, 2020; Munandar, 2018). One of the indicators of patient safety related to medical procedures, surgical wound infection is the main complication experienced by inpatients(Andrianello et al., 2021; Karkkola et al., 2020; Tee et al., 2021; Zhang et al., 2022).

The incidence of surgical wound infections ranges from 3% - 15% in the world(Ismiyati, 2021; Kartikasari & Apriningrum, 2020; Simanjuntak, 2019; WHO, 2018). The World Health Organization (WHO) through the World Alliance for Patient Safety reported that of 27 million surgical patients, 2-5% of the ILO surgery occurred annually and 25% of the number of infections occurred in health care facilities.(Intan, 2021; Kartikasari & Apriningrum, 2020; Ndukwu et al., 2022; WHO, 2021). Surgical wound infection is part of the main problem in midwifery services because it can hinder surgical wound healing, increase treatment time and increase treatment costs. As well as increasing morbidity and mortality rates in obstetric services(Ministry of Health, 2017; Rivai et al., 2013; Schweizer et al., 2014; Shepard et al., 2013). In addition, in Germany, surgical wound infections increase the length of patient's stay and the cost of treatment is quite large. In the United States the cost of treating surgical site infections varies from $10,443 to $25,546 per infection. Surgical wound infection after the procedure will have an impact on the cost of treatment and the length of patient care(Benenson et al., 2020; Gillespie et al., 2021; Pancho Kaslam et al., 2021; Strobel et al., 2020).

Based on the results of a preliminary study conducted by researchers at Harapan Bunda Hospital, there were 155 mothers who gave birth by elective Sectio Caesaria and of them there were 2 patients who had surgical wound infections. Based on data from the Infection Prevention and Control Committee at Harapan Bunda Hospital in 2020 and 2021 there were no incidences of surgical wound infections. Surgical wound infection is a complication that is often encountered in surgery, especially after caesarean section(Oktavino et al., 2020; Wiyono et al., 2021). However, data on the impact on increasing treatment costs and patient length of stay are still rarely analyzed. Therefore, a study entitled the financial impact of surgical wound infection after elective caesarean section in a hospital needs to be carried out. Researchers hope that this research can contribute to policy makers related to improving patient safety regulations that are more accurate, and centralized. This is part of the solution to patient safety problems through scientific studies of surgical wound infection medical procedures.

LITERATURE REVIEW

Sectio Caesaria is an artificial birth surgery technique in which the fetus is born through the abdominal wall into the uterine wall intact and the fetal weight is above 500 grams.(Ameliah et al., 2022; Aprina & Puri, 2016; Fanny, 2015). Sectio Caesaria is divided into two types, namely those that are carried out electively or planned and those that are carried out on a citi or immediate basis(Alam et al., 2020; Diema Konlan et al., 2019; Shehata et al., 2019). Elective section casearia is a caesarean section surgery that is carried out on a scheduled basis with preparation according to standards, not for life saving purposes and is carried out on patients who are not in an emergency condition.(Volpato et al., 2022). While the Caesarean section cito surgery is a caesarean section surgery that is carried out immediately with the aim of saving life where at that time the patient was an emergency.(Lubis, 2018; Pragholapati, 2020). A woman who performs caesarean section has a 5 to 20 times greater risk of infection than normal delivery(Muttaqien et al., 2016; Conscience & Andriani, 2021).

Signs of surgical wound infection can be found in the presence of pus or purulent, increased wound fluid, pain, redness and swelling around the surgical wound (PURBA, 2018; Purwaningsih & Linggardini, 2021). It is also characterized by an increase in body temperature or fever and an increase in white blood cells. The risk of surgical wound infection in caesarean section surgery can be

reduced by giving prophylactic antibiotics by reducing the incidence of ILO by 30%-60%.(Anggraeni et al., 2019; Kartikasari & Apriningrum, 2020; Strobel et al., 2020, 2022).

There are two factors that influence the incidence of surgical wound infection, namely 1) endogenous factors are factors that exist in the patient such as age, gender, predisposing disease to surgical wound infection and previous surgery history 2) exogenous factors are factors outside the patient such as the length of time the patient is treated at home illness, level of wound hygiene, regular use of antibiotics, duration of antibiotics post-casearia section, duration of operation and number of personnel in the operating room (Alverdy et al., 2020; Chen et al., 2019; Kolasiński, 2018; Rivai et al., 2013).

Treatment of surgical wound infections often includes long-term and high-grade antibiotics, prolonged physical therapy, readmission or patient readmission. Return to the treatment room and reoperation or debridement.(Erdani et al., 2021; Fanani et al., 2022; Hopkins et al., 2021; Mou et al., 2022; Müller et al., 2019).

METHOD

The research method used in this study is a qualitative method with a descriptive design as a data analysis technique.The qualitative method with a descriptive design means that the research carried out by the researcher is by providing a detailed description (description) of the research data obtained by using this technique.interview and study documentation(Arikunto, 2011; Moleong, 2018; Sugiyono, 2017). The documentation study was carried out on secondary data based on the medical records of patients with elective caesarean sections from January 2022 to May 2022, totaling 155 patients with 2 patients experiencing surgical wound infections at Harapan Bunda Hospital. While the interview technique was carried out by researchers in order to get answers and descriptive pictures related to the financial impact of surgical wound infection patients after an elective caesarean section at the hospital. The data analysis method used in this study uses interactive analysis with 4 main steps, namely data collection, data condensation, and drawing conclusions(Miles et al., 2020; Rukajat, 2018).

RESULTS AND DISCUSSION

The results of the study on the medical records of patients with elective cesarean sections in the period January 2022 to May 2022 stated very clearly that the overall cost of hospitalization for patients with elective cesarean sections with surgical wound infections increased compared to the costs of cesarean sections without surgical wound infections. Based on the data that the researchers managed to get, it can be seen that the number of days of treatment for elective caesarean section patients with surgical wound infections ranged from 5 to 6 days. The number of days increased significantly when compared to post-cesarean patient care, which the average number of days only reached a maximum of 3 days.

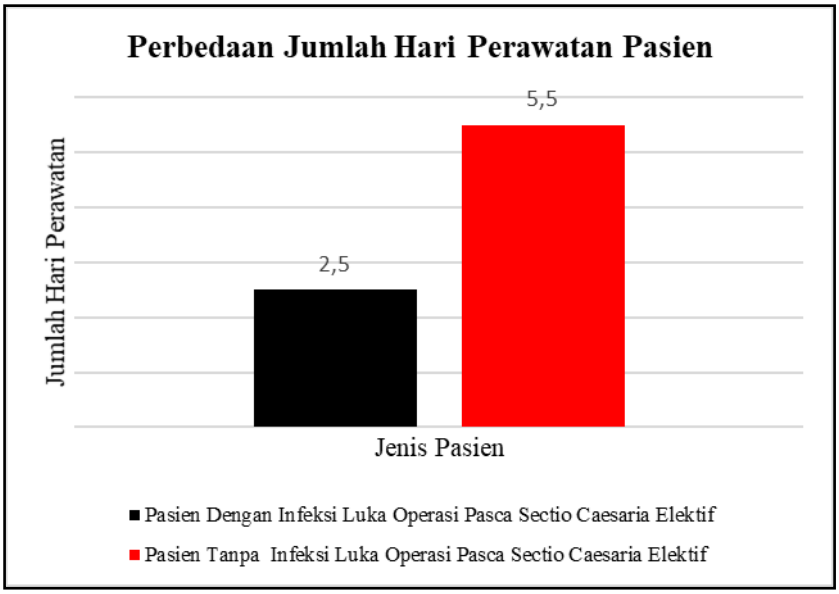

Figure 1. Differences in the number of days of treatment for patients with surgical wound infection after elective caesarean section and patients without surgical wound infection after elective caesarean section

Figure 1 above illustrates that patients who experience surgical wound infections after elective caesarean section have an increase in the length of treatment days more than 2 times compared to patients who do not experience surgical wound infections after elective caesarean section. This is commensurate with what was conveyed by a research informant who said that "based on a study in the USA in 2012, the number of surgical wound infections was in the highest order of HAIs (Healthcrae Associated Infections) reaching 30% of cases with a mortality rate of 3%".

In addition, according to other informants confirmed this and said more specifically that there are many factors that influence the occurrence of surgical wound infection, namely "there are two factors that influence surgical wound infection, namely internal factors (patients have obesity, patients have uncontrolled diabetes mellitus, patients with malnutrition, immunosuppressed patients and patient hygiene) and extrinsic factors (hygiene of medical staff in hospitals, surgical techniques, environmental and instrument sterilization). The impact on hospital days becomes longer, hospital costs increase, affects the reputation of the hospital".

The informants that the researchers met explained that an increase in the length of treatment days had a significant impact on increasing the costs borne by the hospital, so that it could indirectly affect the reputation of the hospital. Therefore, based on the data obtained using the documentation study technique, in the form of medical records of patients with elective caesarean sections in the period January 2022 to May 2022, it can be seen that the number of days of care in patients with surgical wound infections after elective caesarean section increased to 2 times when compared with patients who did not experience surgical wound infection after elective caesarean section.

This is in line with and justified by another informant who the researcher met who stated that "hospitals experience losses with surgical wound infection cases because apart from high costs the hospital is also responsible for the costs incurred."

Therefore, based on the research data that the researcher obtained through the study of documentation and in-depth interviews, the researcher can conclude that the results of the research that the researcher has stated above provide the findings that patients with post-sectional elective caesarean surgery have an impact in the form of increased treatment costs and length of patient care. significantly to the finances of the Hospital. Therefore, patient education can be carried out as part of implementing good procedures in an effort to reduce the incidence of post-cesarean surgical wound infection and its financial impact on hospitals.

CONCLUSION

Based on the results and discussion that the researchers described above, the researchers concluded that surgical wound infection after an elective caesarean section significantly increased hospital costs. This can be seen in the increase in the number of days of care for patients who experience surgical wound infections after elective caesarean section. Therefore, an increase in the length of treatment days can automatically increase the cost of treatment as well as the depletion of hospital resources due to the length of time the patient is in hospital.

This research finding is an important point for regulations regarding the prevention of postoperative wound infections. This finding provides an important warning that hospitals are obliged to improve services and prioritize patient safety, especially for patients who experience surgical wound infections after elective cesarean section.

The researcher acknowledges that the weakness in this study is the limited number and time of sampling which gives the possibility of influencing the low incidence of post-cesarean surgical wound infection in this study. In addition, the researcher also expresses gratitude to all parties who have supported this research, especially to the academic community of the Doctor of Management Program, Mercu Buana University, Indonesia who have facilitated this research to completion.

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