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Research Article

**ANALYSIS OF RISK FACTORS OF SURGICAL SITE  
INFECTION AMONG FEMALE PATIENTS UNDERGOING  
CESAREAN SECTION**<sup>1</sup>Dr Huma Siddique, <sup>2</sup>Dr Sara Zahid, <sup>3</sup>Shafaq Batool

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**Abstract:**

**Introduction:** Infection is defined as an invasion and multiplication of microorganisms in body cells and tissues, which may be clinically unapparent or result in local cellular injury.

**Objectives of the study:** The basic theme of the study was to analyse the risk factors of surgical site infection among female patients undergoing cesarean section.

**Material and methods:** This cross sectional study was conducted in Health department Punjab during 2018 to 2019. The data was collected on the basis of demographic factor and social factors of the patients. We collected all the information related to medical record, body mass index, age, number of child's, anesthesia techniques during surgery, blood loss due to surgery and incidence of infection.

**Results:** We collect the data of 200 females from the hospital and these all females undergo C-section for delivery. Some of them get spinal anesthesia and some get general anesthesia. They belong to different sociological background. The mean age of selected sample size was 20 to 45 years and mean weight was 40 to 120kg. According to analysis of result almost 7% received general anesthesia and 3.25% received epidural and spinal anesthesia.

**Conclusion:** It is concluded that significant independent risk factors for SSI were as follows: higher BMI, increase in the amount of blood loss during surgery, breech baby presentation, intrathecal analgesia, spinal anesthesia, and the duration of hospital stay.

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**INTRODUCTION:**

Surgical site infection (SSI) show up in the postoperative period that happens inside 30 or 90 days of post-agent procedure on account of metallic embed addition. Infection has dependably been an element of human life and sepsis in present day surgery keeps on being a critical issue for medicinal services experts over the globe [1]. It isn't just a vital reason for horribleness and mortality yet additionally cause extreme financial weight all through the world by causing torment, expanding the danger of hospital readmission and making rehashed procedures more probable. [2]

Surgical site infection (SSI) is the second most regular irresistible entanglement after urinary tract infection following cesarean section (CS) delivery. Surgical site infection after cesarean section is related with expanded maternal bleakness, delayed hospital stay, and expanded therapeutic expenses.[3] The gainful impact of anti-toxin prophylaxis in decreasing events of infection related with elective or crisis cesarean section is as of now settled. In numerous organizations, the anti-infection organization is performed after the umbilical rope has been braced, defended by the neonatal effect of antimicrobial utilize.[4] Albeit antimicrobial prophylaxis decreases the danger of endometritis and incisional SSI when controlled accurately, much has been examined about its genuine effect because of the modest number of studies and their constraints.[5]

**Objectives of the study:**

The basic theme of the study was to analyse the risk factors of surgical site infection among female patients undergoing cesarean section.

**MATERIAL AND METHODS:**

This cross sectional study was conducted in Health department Punjab during 2018 to 2019. The data was collected on the basis of demographic factor and social factors of the patients. We collected all the information related to medical record, body mass index, age, number of child's, anesthesia techniques during surgery, blood loss due to surgery and incidence of infection.

**Statistical analysis:**

The collected data were analyzed using SPSS software (version 19). The results are presented as a mean with 95% confidence interval limits or standard deviations. The significant value for  $P < .05$  was accepted as statistically significant.

**RESULTS:**

We collect the data of 200 females from the hospital and these all females undergo C-section for delivery. Some of them get spinal anesthesia and some get general anesthesia. They belong to different sociological background. The mean age of selected sample size was 20 to 45 years and mean weight was 40 to 120kg. According to analysis of result almost 7% received general anesthesia and 3.25% received epidural and spinal anesthesia.

**Table 01:** Types of antibiotics which were used by patients

Type of antibiotic	Dose (mg)	%age
Cefuroxime (oral)	250	4.3
Metronidazole (oral)	500	3.3
Unasyn oral (ampicillin sodium/sulbactam sodium)	375	41
Ampicillin IV	1000	7.5
Cloxacillin (oral)	1000	2.5
Metronidazole	500	3.5
Cefuroxime IV	750	1.3

Table 02 represents the risk factors which are associated with surgical site infections. These results shows that there is a statistical significant relationship in reasons of C-section and types of anesthesia used for surgery. However there is no link of SSI with age,

time of surgery and types of C-section. It means infection does not depend upon age and time of surgery but it depends upon type of anesthesia used and blood loss during surgery

**Table 02:** Associated risk factors of surgical site infection (SSI) in females of Mayo hospital Lahore.

Demographic characteristics		SSI (%)		P value
		With infection	Without infection	
Age	≤25	56.1	61.5	0.345
	>31	44.0	38.5	
Body mass index	≤30	52.2	42.3	0.13*
	>30	47.8	57.7	
Operation time in minutes	≤60	44.0	42.8	0.876
	>60	56.0	57.2	
Reason of C-section	Fetal distress	25.34	28.3	0.012*
	Previous CS	22.7	26.5	
	Breech presentation	5.6	14.2	
	Poor progress	2.7	13.6	
	Twin babies	2.7	2.5	
	Severe preeclampsia	1.3	2.70.	
Types of anesthesia	General	13.3	5.5	0.001*
	Epidural	9.3	1.8	
	spinal	77.3	92.6	
Type of C-section	Emergency	32.0	37.8	0.344
	Elective	68.0	63.2	

**DISCUSSION:**

Caesarean section being performed with increased frequency, there's the perception to regard it as an uncomplicated and straight forward procedure but complications do occur causing significant morbidity and mortality. SSI is the second most normal irresistible intricacy after UTI following cesarean delivery. [8] For the dominant part of obstetric patients, it once in a while speaks to a danger to life. Be that as it may, there are broad dismalness and financial results for the social insurance administrations. Accomplishment of task relies on an appropriate preoperative care. Hazard lessening is the objective of very much composed arrangement for preoperative administration and care of patient experiencing obstetric surgery. To be best, the arranging starts with a suitable preoperative assessment and proceeds with ideal intra-agent basic leadership and system and care amid post-agent periods. These care designs are especially critical for patients with rehash cesarean section. [9]

**CONCLUSION:**

It is concluded that significant independent risk factors for SSI were as follows: higher BMI, increase in the amount of blood loss during surgery, breech baby presentation, intrathecal analgesia, spinal anesthesia, and the duration of hospital stay. The risk factors identified in this study are important in terms of the potential review of practice and subsequent reduction in SSI.

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