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**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.3585308>Available online at: <http://www.iajps.com>**Research Article****ANALYSIS OF RISK FACTORS OF SURGICAL INFECTION IN
OBSTETRICS AMONG FEMALES POPULATION IN PAKISTAN**Mohammad Salim¹, Ahmar Saleem², Muhammad Shahan Haider¹¹Bahawalpur Victoria Hospital²Basic Health Unit Burj Kalan, District Kasur**Abstract:**

The main objective of the study is to analysis of associated risk factors of surgical infection in obstetrics among females in Pakistan. This cross sectional study was conducted in BVH, Bahawalpur during March 2019 to October 2019. The data include all those women who delivered baby through C-section or by normal delivery. The socio-demographic values of the patients indicated that these are dependent factors and SSI are also depend upon these values. Socio demographic variable had no significant association with SSIs except age, those women age less than nineteen years were three times risk of developing surgical site infection as compare to those age range 20–34. It is concluded that surgical site infection rate become high among young age women as compared to old age women. Duration of surgery and wound healing are not a dependent factor these are independent factors because it is not related to SSI.

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INTRODUCTION:

Pregnant women are at risk of infection during labor and delivery; most infections of the female pelvic organs occur when normal flora of the female genital or gastrointestinal tract contaminate the normally sterile amniotic fluid and uterus. Infection in obstetrics accounts for the second most common cause of maternal mortality next to post-partum hemorrhage¹. 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 because of competitive metabolism, toxins, intracellular replication or antigen-antibody response.¹ 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. 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

According to previous report, maternal morbidity related to infections after cesarean section was eight-fold higher than that of vaginal delivery⁵. Knowing the prevalence of the problem and associated risk factors would help to undertake optimal precautions and standard surgical techniques to reduce SSI which poses increased hospital cost and total hospital stay of the patients⁶.

Objectives of the study

The main objective of the study is to analysis of associated risk factors of surgical infection in obstetrics among females in Pakistan.

METHODOLOGY OF THE STUDY:

This cross sectional study was conducted in BVH, Bahawalpur during March 2019 to October 2019. The data include all those women who delivered baby through C-section or by normal delivery. Facility based retrospective observational study design was carried out purposively to assess the prevalence of surgical site infections and associated risk factors among mothers who had delivery related surgery at obstetric ward of hospital from the calculated sample size.

Statistical analysis

The collected data were analyzed using SPSS software (version 17). 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:

The socio-demographic values of the patients indicated that these are dependent factors and SSI are also depend upon these values. Socio demographic variable had no significant association with SSIs except age, those women age less than nineteen years were three times risk of developing surgical site infection as compare to those age range 20–34.

Table 01: analysis of socio-demographic characteristics of SSI among women having obstetrics surgery

Variable	Category	SSI		Crude OR(95%CI)
		Yes Number (%)	No Number (%)	
Age	≤ 19	5(13.9%)	18(52%)	3.453(1.18–10.00)
	20–34	23(63.9%)	286(82.2%)	1
	≥35	8(22.2%)	44(12.6%)	2.26(0.95–5.37)
Residence	Urban	17(47.2%)	149(42.8%)	1
	Rural	19(52.8%)	199(57.2%)	0.837(0.437–1.66)
	Other	1(2.8%)	10(2.9%)	0.979(0.120–7.981)
Occupation	House Wife	26(72.2%)	199(57.2%)	2.047(0.815–5.14)
	Civil Servant	6(16.7%)	94(27%)	1
	Teacher	0	3(0.9%)	0.000(0.000)
	Business lady	4(11.1%)	52(14.9%)	1.205(0.325–4.465)
Education Status	Illiterate	10(27.8%)	67(19.3%)	1.727(0.64–4.783)
	Read and Write only	2(5.6%)	51(14.7%)	0.454(0.091–2.270)
	Grade 1–8	7(19.4%)	61(17.5%)	1.328(0.442–3.985)
	Grade 9–12	10(27.8%)	88(25.3%)	1.315(0.478–3.617)
	Above Grade 12	7(19.4%)	81(23.3%)	1
Month Income	≤ 1000	17(47.2%)	158(45.4%)	0.890(0.400–1.983)
	1001–3999	8(22.2%)	99(28.4%)	0.669(0.257–1.736)
	≥4000	11(30.6%)	91(26.1%)	1

In our study, there was a statistically significant association between gestation age and SSIs, preterm gestation age mothers were four times more likely to develop SSIs as compared to those mothers gestation age was term. Table 02 shows the gestational age and duration of labor of patients. This data represents the common population of Pakistan.

Table 02: Association of surgical site infection and obstetric variable among women having obstetric surgery

Variable	Category	SSI		Crude OR(95%CI)
		Yes number (%)	No number (%)	
Gestation Age	Preterm	4(11.1%)	10(2.9%)	4.225(1.254–14.238)
	Term	32(88.9%)	338(97.1%)	1
Duration of Labor	≤ 24 h	24(66.7%)	284(81.6%)	1
	≥25 h	12(33.3%)	64(18.4%)	2.219(1.054–4.670)
Duration Rupture of Membrane	≤12 h	23(63.9%)	318(91.4%)	1
	≥12 h	13(36.1%)	30(8.6%)	5.991(2.757–13.022)
Chorioamnionitis	Yes	6(16.7%)	7(2%)	9.743(3.077–30.848)
	No	30(83.3%)	341(98%)	1
Meconium	Grade III	12(33.3%)	83(23.9%)	1.596(0.765–3.33)
	No	24(66.7%)	265(76.1%)	1
	Total	36	348	

DISCUSSION:

SSIs represent a burden to the health care system and patient, mainly attributable to the extended length of stay in hospital and additional treatment required. Consequently, strategies and intervention aimed at reducing the incidence of SSIs could provide cost-saving and improve the efficiency of the health care system⁷. The rate of SSIs were lower when we compared our finding with different studies conducted in African countries but still higher than the studies conducted in developed countries⁸.

A large portion of the SSIs found in our investigation were superficial SSI. This is like different examinations from asset compelled settings. In USA additionally around 66% of the SSI are shallow and staying profound⁹. In USA the assessed frequency of SSIs in hysterectomy is around 1.7%. Be that as it may, as indicated by the creators this is by all accounts a think little of the same number of hospitals do not have the assets to track SSI happening outside of the hospital¹⁰⁻¹².

CONCLUSION:

It is concluded that surgical site infection rate become high among young age women as compared to old age women. Duration of surgery and wound healing are not a dependent factor these are independent factors because it is not related to SSI.

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