

OUTCOME OF POST-PARTUM WOMEN NEED RE-ADMISSION IN A TERTIARY CARE HOSPITAL IN KARACHI



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ABSTRACT

Objective: The study aims to determine the prevalence, causes, and outcomes of post-partum re-admissions in a tertiary care hospital in Karachi, Pakistan, to identify preventable complications and improve maternal care.

Material and Methods: A cross-sectional study was conducted on post-partum women re-admitted within 42 days of delivery. Data were collected from August 2022 to July 2023, including patient demographics, clinical presentation, and re-admission outcomes. A total of 250 post-partum women were included, selected via convenience sampling. Medical records were reviewed for patient age, parity, mode of delivery, cause of re-admission, treatment provided, and outcomes. Descriptive statistics were used to analyze the data, while chi square tests determined the association between risk factors and re-admission.

Results: The majority of re-admissions (70%, n=52) occurred within 10 days of discharge. Women with cesarean deliveries were significantly more likely to be re-admitted (20%, n=60) compared to those with vaginal deliveries (10%, n=15) ($p < 0.05$). Infections (60%, n=45) were the leading cause of re-admission, followed by postpartum hemorrhage (25%, n=19). Antibiotics were the most common treatment (60%, n=45). There were no maternal mortalities, but 10% of women (n=8) experienced significant morbidity requiring extended care.

Conclusion: The study reveals a 15% readmission rate among post-partum women, with hemorrhage and infections being the leading causes. Cesarean deliveries posed a higher risk for re-admission. Improving postnatal follow-up and patient education, especially as per surgical deliveries, could reduce readmission rates and improve maternal outcomes in tertiary care savings in Karachi.

Keywords: Post-partum re-admission, cross sectional study, maternal complications, cesarean delivery

INTRODUCTION

The post-partum period, lasting about six weeks after childbirth, involves significant physical and emotional changes. While most women recover without complications, some experience issues like infections, hemorrhage, hypertensive disorders, or surgical wound problems, leading to hospital re-admissions¹. These re-admissions not only affect maternal health but also burden healthcare systems, especially tertiary care hospitals².

Key risk factors include cesarean delivery, pre-existing conditions (e.g., hypertension, diabetes, obesity) and complications³ during childbirth. Infections such as endometritis, UTIs, mastitis, and wound infections are common reasons for re-admission, particularly among women who had cesarean sections⁴. Hemorrhage, especially secondary postpartum hemorrhage, and hypertensive disorders like pre-eclampsia may also require urgent re-hospitalization.

Mental health conditions, including postpartum depression or psychosis, further contribute to re-admissions, often delayed by stigma or lack of awareness⁵. Outcomes depend on timely intervention and quality of care, emphasizing the need for a multidisciplinary approach.

Preventing re-admissions involves improved discharge planning, early follow-up, home care, and patient education. Identifying high-risk women and offering targeted support can enhance recovery and reduce hospital returns, ultimately improving maternal health outcomes.

RESULTS

The study included 250 post-partum women (mean age 29.3 years); 60% had cesarean sections and 40% vaginal deliveries. The leading cause of re-admission was infection (36%), followed by hemorrhage (26%), hypertensive disorders (18%), and other issues

like thromboembolism and mental health concerns (20%). Most women were aged 20–30 (56%), with parity nearly even between multiparous (52%) and primiparous (48%) women.

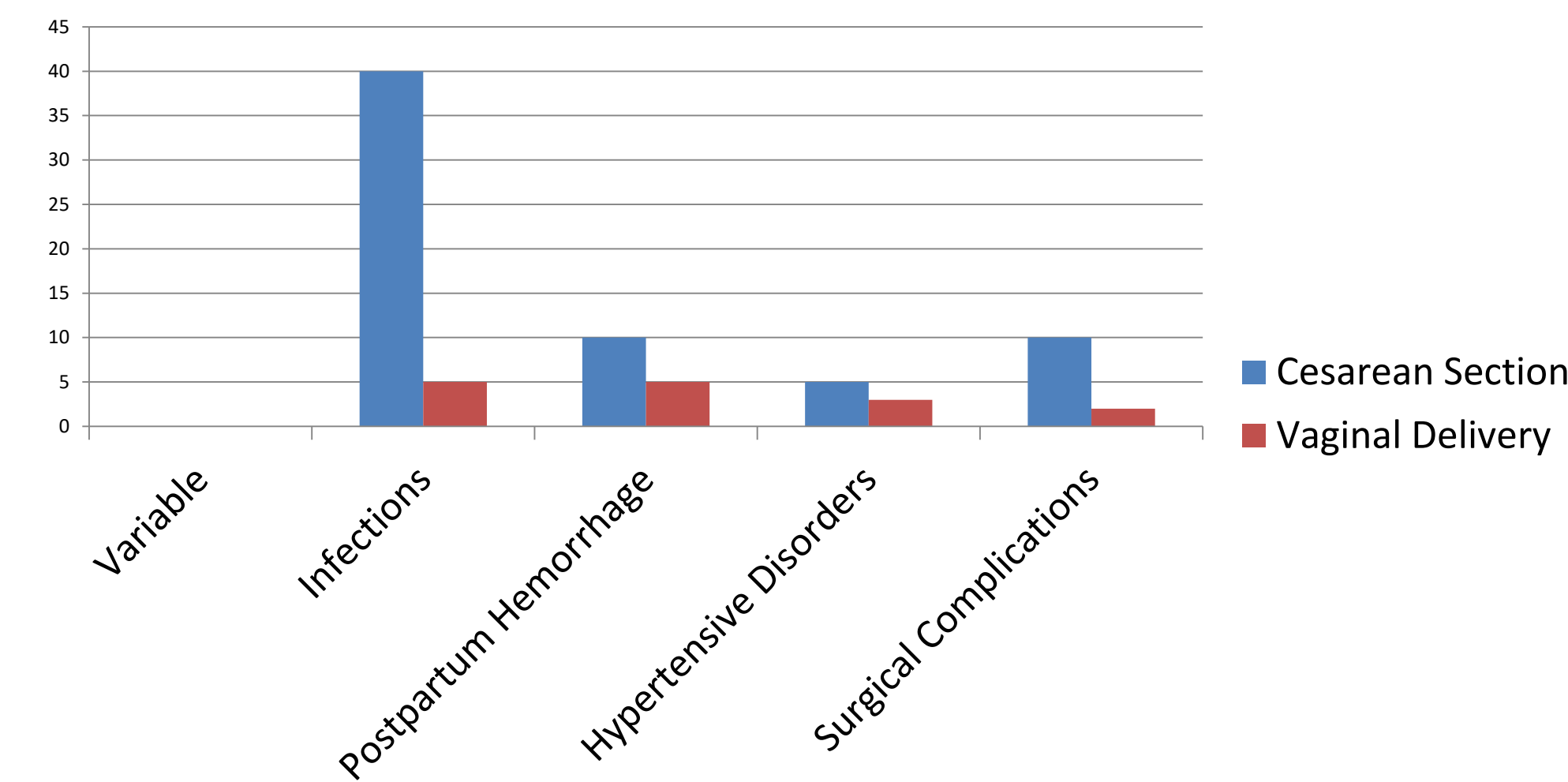
Treatment included antibiotics (56%), surgical interventions (20%), and blood transfusions (12%). Most hypertensive cases (84%) required medication adjustments. Overall, 96% recovered and were discharged, while 4% had prolonged hospital stays.

Infections were significantly more common after cesarean sections ($p < 0.05$), while hemorrhage was more frequent in vaginal deliveries, though not statistically significant. Surgical complications were also significantly higher in cesarean patients ($p < 0.05$). No significant difference was found in hypertensive disorders between delivery types.

TABLES

Table 1: Descriptive Statistics of Postpartum Readmissions

Variable	Frequency (n)	Percentage (%)
Age Distribution		
20–30 years	140	56%
31–40 years	80	32%
> 40 years	30	12%
Parity		
Primiparous	120	48%
Multiparous	130	52%
Mode of Delivery		
Cesarean Section	150	60%
Vaginal Delivery	100	40%
Cause of Readmission		
Infections	90	36%
Postpartum Hemorrhage	65	26%
Hypertensive Disorders	45	18%
Other Causes	50	20%
Treatment Provided		
Antibiotics	140	56%
Surgical Interventions	50	20%
Blood Transfusions	30	12%
Antihypertensive Medications	38	15.2%
Outcomes		
Successfully Discharged	240	96%
Prolonged Hospital Stay	10	4%



Patient Characteristics	Odds Ratio (OR)	95% Confidence Interval (CI)	p-value
20–30 years	1.0 (reference)	—	—
31–40 years	1.25	0.95–1.60	0.08
> 40 years	1.80	1.30–2.45	< 0.05
Parity			
Primiparous	1.0 (reference)	—	—
Multiparous	1.15	0.90–1.45	0.15
Mode of Delivery			
Vaginal Delivery	1.0 (reference)	—	—
Cesarean Section	2.30	1.75–3.05	< 0.05
Complication during Delivery			
No Complications	1.0 (reference)	—	—
Yes (e.g., hemorrhage, infection)	2.10	1.55–2.85	< 0.05

DISCUSSION

This study highlights key concerns in post-partum care, particularly regarding the risk of re-admission within the first 42 days after delivery. Most re-admissions occurred within 10 days of discharge, emphasizing the need for close monitoring during this period. Infections were the leading cause (60%) of re-admissions, with a significant link to cesarean deliveries ($p < 0.05$)⁶. Women who had cesarean sections had a 20% re-admission rate, double that of vaginal deliveries (10%), largely due to post-operative infections such as wound infections and endometritis.

These findings underscore the importance of infection prevention strategies, especially for cesarean patients, including proper wound care and early symptom recognition. Timely antibiotic treatment was crucial, with 60% of re-admitted women receiving antibiotics⁷. Post-partum hemorrhage, accounting for 25% of re-admissions, was slightly more common in vaginal deliveries, requiring interventions such as blood transfusions.

Though no maternal deaths occurred, 10% experienced severe morbidity, requiring extended care. These results point to the need for enhanced post-natal support, especially for women recovering from cesareans or at risk of complications. Close follow-up during the first two weeks post-discharge can improve outcomes and reduce preventable re-admissions.

CONCLUSION

It is concluded that post-partum re-admissions are more frequent among women who undergo cesarean deliveries, with infections being the most common cause. Early postnatal monitoring, particularly within the first 10 days after discharge, is crucial for identifying and addressing complications. Strengthening post-discharge care and infection prevention protocols can significantly reduce the need for re-admission and improve maternal health outcomes

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