



Sultan Qaboos University

Postpartum Haemorrhage: Prevalence, Risk Factors, Causes, Management and Complications in Sultan Qaboos University Hospital from November 1st 2015 to October 31st 2016.

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Aim & Rationale

Aim:

The objective of this study was to determine the prevalence, risk factors, causes, management and complications of PPH at SQUH from November 1st 2015 to October 31st 2016 and compare patients in terms of mode of delivery (vaginal and caesarean section).

Rationale:

There are no previous published studies done in Oman evaluating prevalence of PPH, so this study will help in shedding light on this condition in Oman.

Introduction

PPH is defined as loss of more than 0.5L of blood after vaginal delivery or more than 1L after caesarean delivery. It is classified based on duration and severity of bleeding into primary or early PPH which occurs within the first 24 hours of delivery and secondary or late PPH when it is more than 24 hours of delivery up to 12 weeks. The severity of haemorrhage can be classified to minor; between 0.5L to 1L, and major; more than 1L. The most common cause of PPH is uterine atony followed by products retention and then trauma in genital tract. PPH lead to severe complication especially if not treated immediately it result in death. It can lead to hypovolemia which result in shock and organ failure. Morbidity of PPH is manifested in many syndromes such as Sheehan syndrome, abdominal compartment syndrome and Asherman syndrome. To prevent the occurrence of PPH, active management of third stage of delivery should be applied for all women. The next step is to ensure that the uterus is well contracted, if not; contraction can be achieved by bimanual compression. If uterus is well contracted, lower genital tract should be examined if there are any laceration or incision must be repaired. Initial therapy is followed by pharmacological treatment which include medications cause uterine contraction and correct coagulation abnormalities. Hysterectomy is done only in severe stages of haemorrhage.

Results

- Total number of deliveries was 4600; 3822 were vaginal and 778 were C/S.
- The prevalence** of primary PPH in SQUH was 3.6% (166/4600); among vaginal deliveries was 3.3 (126/3822) and among C/S deliveries was 5.1% (40/778).
- Risk factors** : 1. History of C/S found in 18.7% of studied sample. 2. Prolonged labor occurred in 6.6% of studied sample.
- Causes:** About 80.7% of cases were caused by uterine atony and 23.5% of cases caused by product retention.
- Management** approach which followed in SQUH was administration of uterogenic medications for all patients. Uterine massage was done for cases complicated by atony and for cases caused by product retention, they managed through manual removal of retained products.
- Complication:** The most frequent complication was major PPH, it occurred in 35.5% of studied sample. There were few cases complicated by fever, hysterectomy and ICU admission.

Methods

•Study design and sample selection

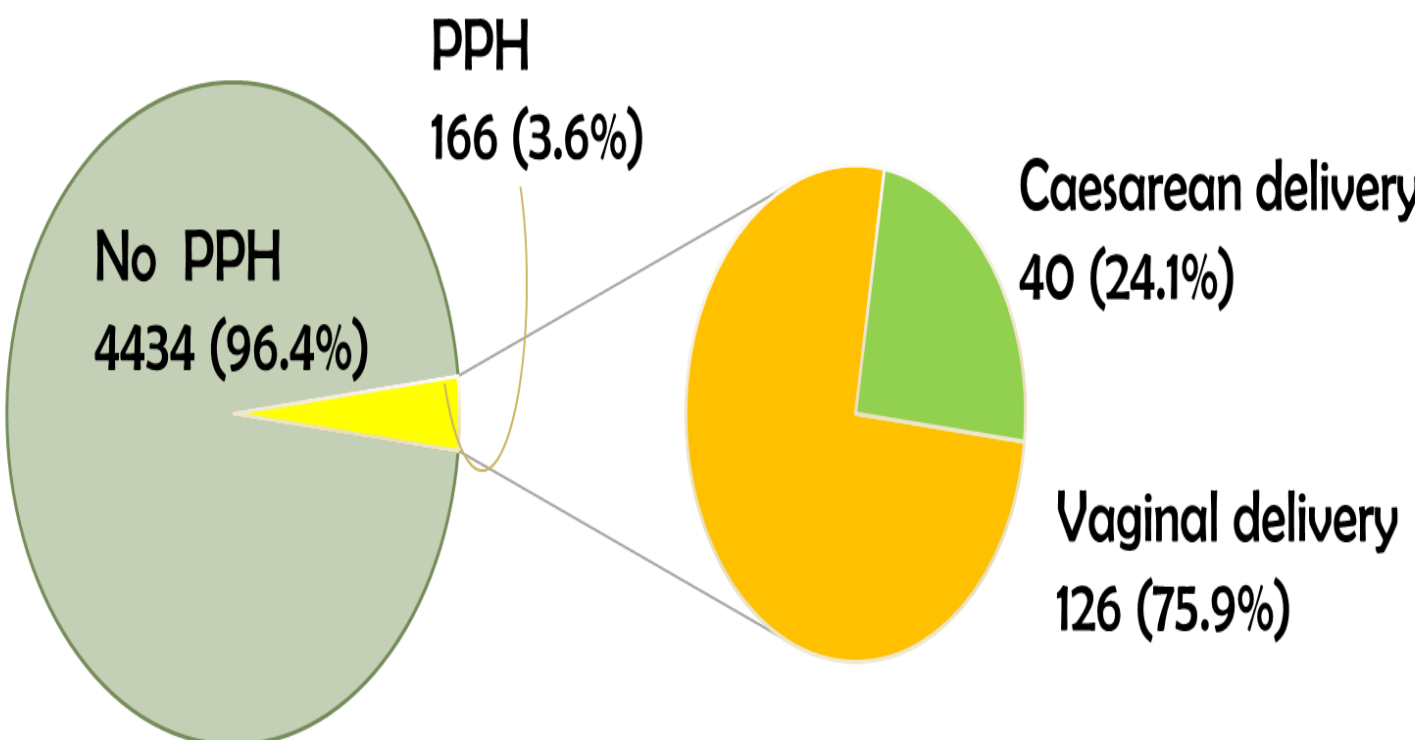
This study was a cross sectional, retrospective chart review study. It included all patients who delivered at SQUH from November 1st 2015 to October 31st 2016. Patients diagnosed with primary PPH were included in the detailed chart review.

•Data collection

Data were collected manually from delivery register in delivery ward and from hospital information system (HIS)

•Data analysis

Data entered in SPSS software version 23. Cross tabulation was used to get the frequencies and percentages based on mode of delivery for demographical data, risk factors, causes, management and complications. Statistical significance value was obtained by using two tests; chi-square and Mann-Whitney U test (2 independent samples).



Prevalence of primary PPH at SQUH patients from Nov 1st 2015 to Oct 31st 2016.

Representation for frequency of risk factors, causes, management and complications in studied population based on mode of delivery				
	Total cases of PPH 166 (%)	Vaginal delivery cases with PPH 126 (%)	Caesarean delivery cases with PPH 40 (%)	P-value
<u>Risk factors</u>				
History of caesarean delivery	31 (18.7%)	19 (15.1%)	12 (30%)	0.061
Blood disorders	18 (10.8%)	16 (12.9%)	2 (5.1%)	0.178
Prolonged labour	11 (6.6%)	11 (9.9%)	0	0.038
<u>Causes</u>				
Uterine atony	134 (80.7%)	98 (77.8%)	36 (90%)	0.004
Product retention	39 (23.5%)	30 (23.8%)	9 (22.5%)	
Lacerations	21 (12.7%)	21(16.7%)	0	
<u>Management</u>				
Blood transfusion(Tx)	47 (28.3%)	27 (21.4%)	20 (50%)	0.001
<u>Complications</u>				
Major PPH	59 (35.5%)	44 (34.9%)	15 (37.5%)	0.009
Fever	8 (4.8%)	6 (4.8%)	2 (5%)	
ICU admission	3 (1.8%)	0	3 (7.5%)	
Hysterectomy	1 (0.6%)	0	1 (2.5%)	

The prevalence of PPH in our setting was low and there were adequate management provided to patients. Our findings indicated that C/S rise the risk of PPH and its complications.

Main References

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- Selo-Ojeme, D. (2002). Primary postpartum haemorrhage. *Journal of Obstetrics and Gynaecology*, 22(5), pp.463-469.