

Incidence and Risk Factors of Primary Postpartum Hemorrhage after Vaginal Delivery in Kasr Al Ainy University Hospital: a Cross-sectional Study

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Abstract

Background: Approximately 15% of all pregnant women (about 20 million women) suffer from acute severe obstetric complications ⁷⁻¹⁸, and the first 24 hours postpartum and the first week after labor represent the main periods with the highest chances of mortality. The most evident complication of which is hemorrhage; solely accounting for 27% of all maternal deaths that occur worldwide ¹⁴⁻¹⁷, and it being postpartum accounts for 73% of all the hemorrhage cases. ¹⁷. Primary Post-partum hemorrhage is formally defined as the loss of at least 500 ml of blood after a vaginal birth or the loss of at least 1,000 ml of blood after a cesarean section within 24 hours of delivery. ¹⁷ Aim: In light of this, this cross-sectional study aims to evaluate the incidence and determine risk factors of PPH after vaginal delivery in Kasr Alainy University Hospital in Cairo, Egypt. Methodology: The study is a multivariate cross-sectional study. Single population proportion formula was used to determine the sample size in accordance with inclusion and exclusion criteria. Data was collected via assisted questionnaires and results were statistically interpreted with a confidence interval of 95% to gather the odds ratio of different statistically significant risk factors of PPH. Results: PPH incidence in Kasr AlAiny in the period of our study was 8.1%. Atonic factors were implicated in 67% of all PPH after vaginal delivery in the study. Most evident risk factors were prolonged labor (odds ratio= 5.1), then history of previous PPH (odds ratio= 4.25), followed by hypertension (odds ratio 2.53) and lastly advanced age ≥35 years (odds ratio= 2.29) Conclusion: Our research concluded that most cases of PPH were mainly of atonic causes and primarily with prolonged labor being the most evident risk factor.

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Figure (1)

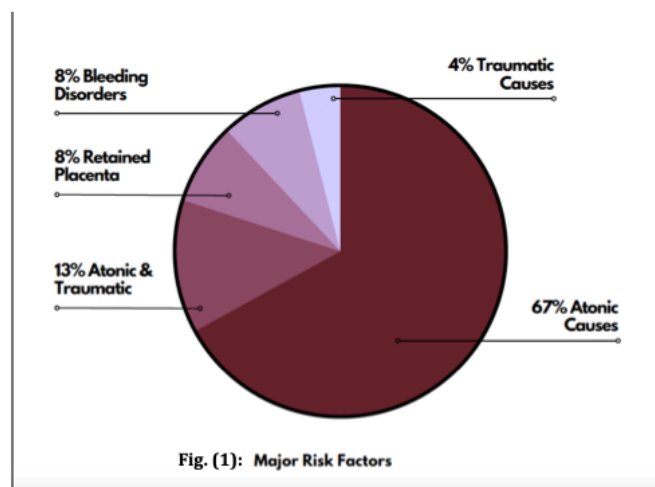


Fig. (1) Major PPH causes identified in our study. Atonic causes were implicated in 67% of the cases studied. Next in line were both atonic and traumatic compromising 13%. Retained placenta and bleeding disorders compromised 8% each. Solely traumatic causes came out 4% of the causes of PPH.

Figure (2)

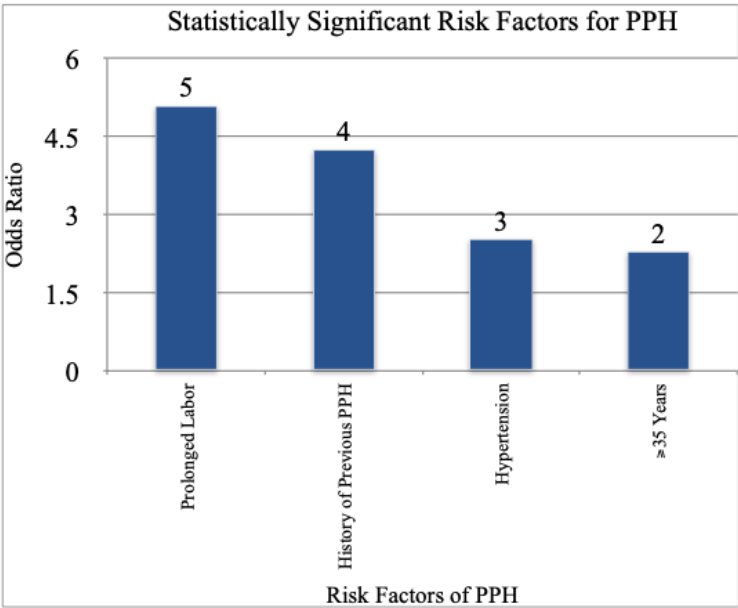


Fig. (2) Out of all the risk factors, the most statistically significant risk factors of PPH ($p < 0.05$) were all atonic causes. Primarily prolonged labor (odds ratio= 5.1), then history of previous PPH (odds ratio= 4.25), followed by hypertension (odds ratio 2.53) and lastly advanced age ≥ 35 years (odds ratio= 2.29)

Table 1

Table (1) Population characteristics	
Total Number of patients surveyed	554 (sample size calculated n=153)
Mean maternal age (± SD)	26.6 years (± 6.3)
Gestational age	82.6% at term
Neonatal birth weight	87.8% between 2.5 & 4 KG

Population Characteristics of our study