

# Management of Secondary Post Partum Haemorrhage:

## Experience in a tertiary obstetric emergency department

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### Introduction

Secondary Post-Partum Haemorrhage (PPH) is a poorly defined entity. Despite complicating 0.2-2% of pregnancies<sup>1</sup>, there is no high-quality evidence available to guide best management of secondary PPH. The aims of this review are to assess the magnitude of the problem for our health service, and to guide development of a management guideline.

### Methods

A retrospective review of all women presenting to a tertiary women's hospital emergency with abnormal postpartum bleeding between July 2016 – October 2018. Women were identified searching appropriate codes in the emergency triage database. Clinical histories were reviewed. Data was summarized by median [25<sup>th</sup> - 75<sup>th</sup> percentile], number (%) and associated 95% confidence interval. Logistic and quantile regression were used to association with variables.

### Results

Between July 2016 and October 2018, 101 women presented with secondary PPH, most within one month post-partum (Figure 1). One woman presented with haemorrhagic shock and 3 women were febrile.

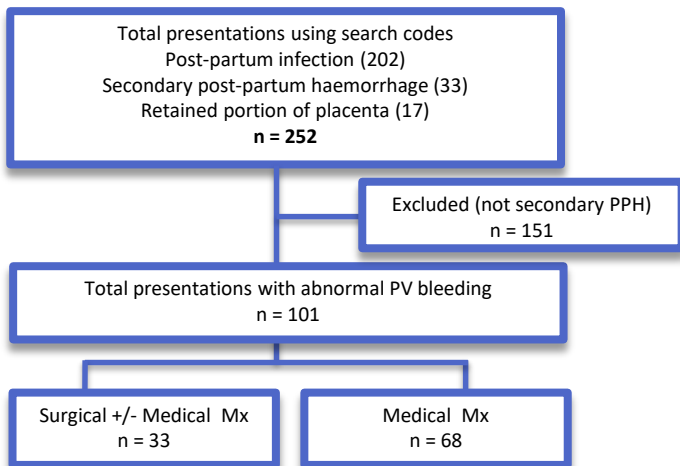


Figure 1. Study cohort

Antenatal, intrapartum, postpartum and ultrasound variables are presented in table 1. Clinical presentations were highly variable. Of the 75 women who underwent at least one pelvic ultrasound, diagnostic features were highly variable. Management included antibiotics, tranexamic acid, uterotonics, pack red cell transfusion, and surgical evacuation. Antibiotic regimes were not standardized (Figure 2). Antenatal and intrapartum variables had no association with surgical management. Compared to those with avascular intrauterine findings, mothers with vascularity demonstrated on ultrasound had higher odds (OR 5.6 [95%CI 1.9 to 16.0, p = 0.001]) of surgical management. Half the cohort required inpatient care. 41 women were seen in the emergency

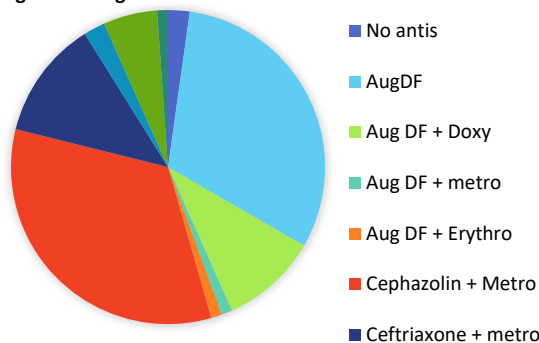
1. Babarinsa IA et al. 2011. Secondary post-partum haemorrhage: challenges in evidence-based causes and management. European Journal of Obstetrics & Gynecology and Reproductive Biology 159:255–260

Table 1: Variables of interest (n=101)\*

Maternal age, years	32 (5.2)
Parity, median [25 <sup>th</sup> -75 <sup>th</sup> percentile]	2 [1-2]
Twins or higher multiple	3
Gestation at delivery, weeks	39.1 [38.2-40.1]
Antepartum bleeding (Threatened miscarriage, APH)	20
Pre-labour premature rupture of membranes (PPROM)	5
Duration of ruptured membranes, hours	5.1 [0.25 – 10.3]
GBS status	
Positive	19
Negative	69
Unknown	13
Chorioamnionitis	2
Mode of delivery	
Caesarean section	27
Intrapartum and/or after membranes ruptured	11
Vaginal delivery	74
Instrumental delivery*, n(%)	13(17.6)
Antibiotics in labour*, n(%)	48(56.5)
Placental delivery mode	
Controlled cord traction, birth suite	97
Manual removal of placenta, operating suit	4
Estimated blood loss (EBL) at delivery, mL	400 [300-600]
Primary PPH	40
Duration from delivery to primary ED presentation, days	15 [10-31]

\* Data presented as mean(SD), median [25<sup>th</sup>-75<sup>th</sup> percentile, number. Given n=101, approximate percentage unless otherwise indicated.

Figure 2. Range of antibiotics



department more than once. The median management duration until discharge from follow-up was 2 [0-15] days, with 25% requiring follow up for more than 2 weeks.

### Discussion

Management of secondary PPH is highly variable and not guided by evidence-based protocols. Our study is limited by its retrospective nature and small numbers – we suspect the majority of women with abnormal postpartum bleeding present to their general practitioner. This retrospective audit has assisted the design of our institutional instruction for the management of secondary PPH. A prospective assessment of our guideline is planned.