

Lessons From an Audit of 12 Months of Admissions With Antepartum Haemorrhage in a Tertiary Obstetric Unit

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Introduction:

Antepartum haemorrhage (APH), defined as bleeding in the genital tract occurring after 24 weeks pregnancy, complicates 3-5% of pregnancies. It is associated with significant maternal and neonatal morbidity and mortality, including cerebral palsy and maternal death, and therefore is an important presentation in our health services. It remains the leading cause of maternal death world-wide. APH often requires admission, intervention and use of resources. This is not without risk and cost. At our tertiary level unit we audited admissions with APH over 12 months.

Aims:

We audited all admissions with APH between July 2020 and June 2021 with the aim to refine our units processes. Electronic records were reviewed to collect demographic, investigation, intervention and delivery data. We analysed trends and compared them to our department guideline, as well as international literature including the RCOG Greentop Guidelines.

Results:

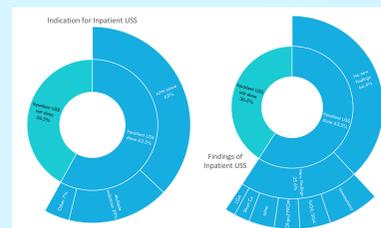
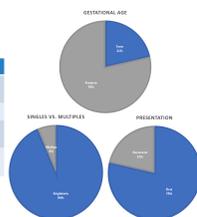
There were 140 relevant admissions in the audit period. 79% were preterm, with average gestation of 31+5 weeks. The average length of admission was 2.49 days. 21% of the presentations were for a recurrent episode of bleeding. None of the women with recurrent presentation had cervical screening performed during their admission.

78% had blood grouping performed. Of these, only 30% delivered in that presentation, and none had transfusions. 63% had a Kleihauer performed, but only 23% were done in accordance with local department protocols. This states a Kleihauer should only be taken if the presentation is... 63.5% had a formal inpatient ultrasound performed. Of these 35.6% found pathology that was not previously known. Only 34% of women who were discharged had follow up ultrasounds.

Of those that were term, 90% delivered that admission. Of those that were induced for their APH, 72% achieved vaginal birth. Of those that were preterm, 28% were given antenatal corticosteroids, but 83% of those did not deliver within 10 days.

DEMOGRAPHICS

	Average	Range
Age	32.9yrs	19.42-47.92yrs
Parity	1.15	0-5
Gestational age	31.7weeks	20.2-41 weeks
Length of stay	2.49 days	1-16



Discussion

This audit provided valuable lessons on the management of a common antenatal complaint. Cost analysis showed that the department spend >\$6000 on group and hold and Kleihauer blood tests that ultimately did not aid management.

Literature differs on recommendations for ultrasound in the setting of acute APH. A recent literature review, Batulla et al. (2021) commented that ultrasound is not a useful test as the sensitivity for APH is only 25%. The Greentop guidelines suggest that though 75% of abruptions will be missed on ultrasound, when an abruption is detected on an ultrasound, the likelihood that this is the diagnosis is extremely high. Though our local guidelines do not recommend inpatient ultrasound if bleeding has ceased, over 60% of women had one performed regardless, and of these, 60% were done only for the indication of APH, with no other pre-existing reason for a scan. Interestingly, we found that over a third of ultrasounds found new pathology. The most common finding was retroplacental haematoma, but other findings included shortened cervix, growth restriction, and large for gestational age fetus. It is difficult to know if a third of all pregnancy ultrasound scans would yield a findings, or if the presenting APH increases the chances of finding pathology requiring follow up. Further research is needed to determine this but certainly this finding should encourage us to review our use of ultrasound scans in the acute investigation and management of APH.

Our audit reiterated the difficulties in predicting preterm birth in the context of APH, with over 80% of babies not being delivered within 10 days of the presentation. This highlights the consequent risk of over treating with corticosteroids. Evidence suggests that use of antenatal corticosteroid in babies who go on to deliver at term is associated with both short and long term adverse outcomes. These include growth restriction, NICU admission, and increased rates of audiology, visual and neurocognitive testing in their first 5 years of life. Careful consideration and senior input should be taken before initiating such interventions.

References:

Battula SP, Mohammed NH, Datta S. Antepartum haemorrhage. *Obstetrics, Gynaecology & Reproductive Medicine*. 2021 Apr 1;31(4):117-23.
Royal College of Obstetricians and Gynaecologists. Antepartum Haemorrhage. Greentop Guideline No. 63. Nov 2011. (Cited 2 Aug 2022) Available from https://www.rcog.org.uk/media/pwd11tef/gtg_63.pdf.