

ANTEPARTUM HEMORRHAGE A THREAT TO MATERNAL AND CHILDBIRTH OUTCOMES: COMMENTARY.

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Introduction

Antepartum hemorrhage (APH) is defined as genital tract bleeding from 24+0 weeks of gestation and complicates 3-5% of pregnancies (Mukhopadhyaya, 2021). It is among the leading causes of maternal and prenatal deaths worldwide. The three most important causes of APH are placenta praevia, placental abruption, and vasa praevia, and these result in high morbidity and mortality for both mother and baby. Other causes of APH include lower genital tract sources such as cervical polyps, vaginitis, and cervicitis (Bethan S, 2021). The main aim of this commentary was to explore the life-threatening causes, diagnosis, and management of APH.

The life-threatening Causes of APH

There are three life-threatening causes of APH that need to be quickly identified and managed; abruption placenta, placenta praevia, and ruptured membrane. Other causes may include vasa praevia, genital tract infection (GTI) (Abu-Rustum, 2019), tumors of the vulva/vagina/cervix, polyps, cervical erosion, and urethral caruncle, among others. These additional conditions are to be considered after the exclusion of the first three major causes. In this article the author mainly looks at the three life-threatening causes and how they are diagnosed and managed in brief;

1. **Placenta praevia.** Placenta praevia occurs when the placenta lies in the lower uterine segment and can cover the internal cervical partially or completely. It affects 0.3-0.5% of pregnancies and is associated with an increased risk of maternal and fetal morbidity and mortality. The risk factors for placenta praevia include
2. **Placental abruption.** Placental abruption affects 0.5-1% of pregnancies. It is associated with an increased risk of maternal and fetal morbidity and mortality. The risk factors for placental abruption include previous placental abruption, hypertension, preeclampsia, trauma, smoking, cocaine use, and premature rupture of membranes (Bączkowska et al., 2022). A similar study looked at the data of 2210 births that happened in 2015 at a hospital in Peru and found that placental abruption occurred in

previous cesarean section, previous termination of pregnancy, multiparity, advanced maternal age, multiple pregnancies, smoking, deficient endometrium, and assisted conception (Bohilțea et al., 2022).

Diagnosis and management of placenta praevia

The diagnosis of placenta praevia is usually made by ultrasound scan, which can classify the degree of placental coverage of the internal cervical os. Jauniaux and others recommend a transvaginal ultrasound scan as the preferred method for diagnosing and grading placenta praevia, as it has higher accuracy and a lower false-positive rate than a trans-abdominal ultrasound scan (Jauniaux et al., 2019). Reem Abu-Rustum and others recommend that women with suspected placenta praevia should have a transvaginal ultrasound scan at 32-34 weeks of gestation to confirm the diagnosis and plan the mode of delivery (Abu-Rustum, 2019).

The management of placenta praevia depends on the gestational age, degree of placental coverage, amount of bleeding, and maternal and fetal condition. It's recommended by Jain and others that women with placenta praevia should be offered individualized counseling and informed consent regarding the risks and benefits of different management options (Jain et al., 2020). The ACOG recommends that women with placenta praevia should be managed by a multidisciplinary team that includes an obstetrician, an anesthetist, a neonatologist, a blood bank specialist, and a social worker (Kilpatrick et al., 2019)

0.7% of them. They also identified some risk factors and complications of PA for the mother and the baby, such as high blood pressure, bleeding, low birth weight, and death.

Diagnosis and management of placental abruption

The diagnosis of placental abruption, according to Schmidt et al 2022, is mainly based on the clinical presentation, history, examination, and investigations, and the main signs and

symptoms of placental abruption include vaginal bleeding, abdominal pain, uterine tenderness or rigidity, uterine contractions, fetal distress, and shock (Schmidt et al., 2022). The Royal College of Obstetricians and Gynecologists (RCOG), recommends that women with suspected placental abruption should have a full blood count, coagulation profile, Kleihauer test, and blood grouping and cross-matching (RCOG, 2011). The American College of Obstetricians and Gynecologists [ACOG], recommends that women with suspected placental abruption should have a complete blood count, coagulation studies, fibrinogen level, blood group, and Rh status.

The management of placental abruption depends on the gestational age, severity of bleeding, and maternal and fetal condition (Bączkowska et al., 2022). The main principles of management include resuscitation, stabilization, delivery, and prevention of complications, and it is recommended that women with placental abruption should be managed in a hospital with facilities for emergency cesarean section, blood transfusion, and neonatal intensive care. The ACOG recommends that women with placental abruption should be managed in a hospital with a level III or higher neonatal intensive care unit.

3. **Vasa praevia.** Vasa praevia is a rare condition that affects 0.03-0.06% of pregnancies and is associated with a high risk of fetal mortality and morbidity, and the risk factors for vasa praevia include velamentous cord insertion, succenturiate lobe, low-lying placenta, multiple pregnancies, and assisted conception (Matsuzaki et al., 2022).

Diagnosis and management of Vasa praevia

The diagnosis of vasa praevia is usually made by ultrasound scan, which can detect the presence of fetal blood vessels crossing the internal cervical os. Matsuzaki and colleagues recommend that women with risk factors for vasa praevia should be offered transvaginal color Doppler ultrasound scan at 20-24 weeks of gestation to screen for vasa praevia and that women with risk factors for vasa praevia should be offered transvaginal color Doppler ultrasound scan at 28-32 weeks of gestation to screen for vasa praevia (Matsuzaki et al., 2022).

The management of vasa praevia depends on the gestational age, presence of bleeding, and maternal and fetal condition. The main principles of management include prophylactic hospitalization, elective cesarean section, and emergency cesarean section. The RCOG recommends that women with diagnosed vasa praevia should be offered prophylactic hospitalization from 30-34 weeks of gestation until delivery (RCOG, 2011). The ACOG recommends that women with diagnosed vasa praevia should be offered prophylactic hospitalization from 32-34 weeks of gestation until delivery.

Conclusion

APH still poses a serious threat to mothers and foetus despite advancement in maternal child health medicine. APH is a common and serious complication of pregnancy that can affect both maternal and fetal outcomes. The life-threatening causes, diagnosis, and management of APH during pregnancy vary depending on the underlying condition and the clinical scenario. The main causes of APH are placenta praevia, placental abruption, and vasa praevia, each of which has its risk factors, signs and symptoms, investigations, and treatment options. The health practitioners should also be aware of the social history, cultural norms, and economic status of the mother especially experiences of domestic violence, income status, smoking, and drug abuse among others. These factors may also precipitate APH. The main principles of management of APH include resuscitation, stabilization, delivery, and prevention of complications. The main challenges and controversies in the management of APH include the optimal timing and mode of delivery, the use of prophylactic interventions, and the balance between maternal and fetal risks and benefits. In all the reviewed literatures, APH is managed in a hospital setting and health centers with specialized multidisciplinary health team, with both basic (BEmONC) and comprehensive maternal and newborn care (CEmONC). In Uganda, lower health centers refer APH cases to higher level health facilities and therefore policy implication of this research is the need by ministry of health to procure ambulances at least to all health center 111s for timely referral in order to save life. This calls for deployment of highly skilled human resources like doctors, graduate midwives, imaging technologists, at lower health facilities of Uganda especially health center 111s. Ministry of health should ensure diagnostics like ultrasound scan at lower health centers of Uganda and health staffs like graduate midwives trained on how to use them. There is need for more research on psychosocial effects of APH on pregnant mothers.

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Author Biography;

Ogwang Francis was born from a remote district of Amolatar in the center of Uganda, he attended primary school at Abarikori, secondary school at St. Paul, and later Aputi secondary school all in Amolatar district. He then enrolled for comprehensive nursing training at International institute of Health Sciences Jinja, a diploma in clinical medicine and community health (DCMCH) at Kyabazinga School of Clinical Officers, and many other certificates of training including a certificate in proposal development and grant writing, Certificate in medical circumcision clinical skills course, Certificate in HIV /AIDS prevention strategies and counseling, certificate in management of obstetrical emergencies in primary care setting among others. He is currently working as a Clinical Officer with Jinja District Local Government. He is also a part-time clinical instructor at Kyabazinga School of Clinical Officers teaching research methods, microbiology,

anatomy, and physiology. He is also a Ministry of Health district mentor for TB and HIV activities.

Since then, he has also worked with many organizations like University Research Co. (URC), LLC SUSTAIN project as a Clinical Officer for VMMC, The Aids Support Organization (TASO), Management Sciences for Health (MSH) STAR- E program as assistant surgeon SMC and Nile Breweries Limited company Jinja plant as Company Clinician.

In advancing his career path, he is currently a fourth-year student of Bachelor of Medicine and Surgery at King Ceasor University and He is also passionate about research. He enrolled for a King Ceasor University research fellowship where he is the president to date. The fellowship helps university students with skills in research proposal development and grant writing.


His ultimate goal is to be a professor of medicine and a researcher. By the end of the year 2023, he submitted three manuscripts to different journals with positive feedback indicating his work would be published.

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