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Review Article

Non-emergent obstetric complications and their management in primary care

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ABSTRACT

Maternal mortality is a significant challenge faced worldwide. Reduction in maternal mortality is one of the integral goals of Millennium development goal and sustainable development goal. Obstetric complications are the leading cause of maternal mortality. Untreated non-emergent obstetric complications can also lead to severe implications and complications thus assessment, early detection and management of such complications is critical especially at primary healthcare level since it is the immediate contact. The purpose of this research is to review the available information about non-emergent obstetric complications and their management in primary care. During pregnancy, women often visit their primary care providers because of common ailments which may be caused or exacerbated during pregnancy, also may require special attention for healthy maternal and fetal outcomes. Primary care physicians should be familiar with the distinct diagnosis of obstetric complications and in case of emergency provide timely referrals. Primary care physicians by their effective intervention and management of non-emergent obstetric complications can efficiently reduce health risk of serious complications including routine screening for anaemia, pre-eclampsia and gestational diabetes to avoid significant morbidity. Primary care physicians can also reduce the burden of antenatal depression by providing psychological counselling at primary centres. Primary healthcare services have critical role in assessment and management of non-emergent obstetric complications however the available literature is quite limited and scarce in this aspect and further research can only be beneficial in highlighting its role.

Keywords: Non-emergent, Obstetric, Complication, Primary, Health care

INTRODUCTION

Maternal mortality is a significant global public health issue. However, most affected are the low-income and middle-income countries, where maternal mortality rates are 100 times greater than the high-income nations. The Millennium Development Goal of reducing maternal mortality by three-quarters by 2015 was not met. Countries must expedite their plans in order to meet the Sustainable development goal of lowering the global maternal death rate to less than 70 per 100,000 live births by 2030.[1] According to a WHO systematic analysis, haemorrhage and complications stemming from hypertensive disorders of pregnancy, including pre-eclampsia, account for approximately 27% and 14% of all maternal deaths, respectively. Preterm birth, birth asphyxia, and infections are the leading causes of neonatal mortality. Evidence from literature states that the first day of birth has the highest mortality risk for both mothers and their babies. If the principal causes of death are addressed timely and properly, it is anticipated that 16-33% of maternal mortality can be avoided.[2]

Preventing and managing high-risk diseases and early pregnancy problems and complications begins from conception and continues throughout the pregnancy. As per the WHO 2015 criteria for improving the quality of prenatal care for a good pregnancy experience emphasis should be laid on fundamental preventative and promotive antenatal care, as well as early screening for high-risk cases and pregnancy complications These guidelines are for primary level health care, whether in a facility or in the community, and are intended to guide clinical decisions. Another WHO guideline updated in 2017 outlines the district-level management of obstetric complications and mentions these in relation to the gestation period. Health personnel in such settings who are unable to manage complications should be highly skilled in prevention, risk assessment, stabilization of severe cases, and coordinating transfer and care at higher functional levels.[3]

Preventive care is provided by primary healthcare, while curative care is provided by secondary and tertiary healthcare. The treatment of obstetric complications is intended to take place at all three levels. Primary healthcare facilities must provide basic obstetric and new-born care, whereas secondary and tertiary healthcare facilities must provide basic emergency obstetric and new-born care as well as comprehensive emergency obstetric and new-born care. Based on their ability to implement the obstetric and neonatal care signal functions, healthcare facilities are characterized as either basic or comprehensive obstetric and neonatal healthcare facilities.[4]

Approximately 74% of the patients visit a primary healthcare centre when they are sick. However, there is some evidence that patients of reproductive age are more likely to identify obstetricians and gynaecologists as their primary care physicians and seek preventative treatment from them. Furthermore, evidence suggests that, as compared to obstetricians and gynaecologists, primary care physicians are more likely to screen for chronic disease and offer lifestyle advice during well-patient visits. Closer continuity with primary care physicians who treat chronic disease during the preconception and postpartum periods, as advocated by maternal mortality review committees and national organizations focusing on reproductive health, provides a framework to ensure optimal interconception and obstetric care.[5]

All medical disciplines are interested in primary care in recent times. This level of medical care emphasizes the management of disorders that are widespread among the people served. According to studies of problems and complications presented to general practitioners and family physicians, obstetric and gynaecologic issues account for a large share of the most common issues. Family medicine and obstetrics and gynaecology departments might use these issues to focus their mutual training efforts. The objective of providing high-quality treatment to obstetric and gynaecologic patients is a shared one that can be realized by combining the efforts of physicians in these two specialties.[6] Primary health care system is of critical importance especially in identification and management of non-emergent obstetric complications since it is the first line of contact also is vital in early detection and assessment of complications. The purpose of this research is to review the available information about non-emergent obstetric complications and their management in primary care.

METHODS

This study was based on a comprehensive literature search conducted on 14th June 2022, in the Medline and Cochrane databases, utilizing the medical topic headings (MeSH) and a combination of all available related terms, according to the database. To prevent missing any possible research, a manual search for publications was conducted through Google Scholar, using the reference lists of the previously listed papers as a starting point. We looked for valuable information in papers that discussed the information about non-emergent obstetric complications and their management in primary care. There were no restrictions on date, language, participant age, or type of publication.

DISCUSSION

During pregnancy, women frequently visit their primary care providers for common acute diseases. These diseases may be caused or exacerbated by pregnancy, or they may necessitate special attention during pregnancy due to maternal or fetal concerns. Primary care physicians should be familiar with the distinct diagnosis of common ailments of pregnancy as well as the other important observations such as stress and anxiety. Many non-obstetric complications can be diagnosed and treated by a family doctor, but obstetric issues should be referred to the primary obstetrician. The phased approach provides high

quality treatment and collaborative decision-making between a family physician and a pregnant patient, which includes regular monitoring of the underlying red flag signs and symptoms while raising awareness of considered pregnancy time and outcome. When it comes to treating the common causes of nausea and epigastric pain and gastroesophageal reflux, lifestyle modification is the safest and most effective, followed by low-risk medications that are well-established such as vitamin B6 and doxylamine for nausea and antacids without salicylates. Other low-risk therapeutic strategies include the use of antihistamines or topical steroids for rash, first-generation cephalosporins or amoxicillin for cystitis, and physical therapy and acetaminophen for low back and head pain during pregnancy.[7]

Primary care management of non-emergent obstetric complications

Because of the physical stress caused by increased lordosis and loosening of the soft tissues, low back pain is common during pregnancy. Urologic and neurologic red flags, on the other hand, should be considered and treated. If a history of trauma, vaginal bleeding, severe abdominal pain, loss of fluid, uterine contractions, inflammation of the uterus, changes in fetal movement, or symptoms of urinary tract, severe low back pain should be carefully evaluated. These tests in conjunction should include regular monitoring of uterine contractions and fetal heart rate, as well as fetal ultrasound, to avoid traumatic birth defects, such as miscarriage. Exercise and physical therapy are used to treat back pain in pregnant women by relieving musculoskeletal tension.[8] Additional treatment may be needed, including acetaminophen, acupuncture, support tools, warm baths, or epidural steroids. During pregnancy, osteopathic manipulative treatment may improve function and reduce pelvic girdle and lower back pain.[9]

Gastroesophageal reflux disorders are a common issue in pregnancy and are caused by progesterone-mediated release of the lower oesophageal sphincter, making gastric reflux more common and more severe. Peptic ulcer disease, preeclampsia, cholecystitis, and fatty liver during pregnancy are some of the diseases that can cause symptoms such as heartburn during pregnancy.[10] Low-risk lifestyle strategies such as eating a small diet and avoiding smoking, caffeine, peppermint, and chocolate are among the first treatments for treating gastroesophageal reflux during pregnancy. Over-the-counter antacids other than salicylates and cimetidine, famotidine, or over-the-counter ranitidine are the following options. Because of the precautions suggested during pregnancy, proton pump inhibitors should only be explored in collaboration with a primary maternity care practitioner for severe or refractory cases.[11-13]

Bawahab stated that antenatal depression refers to a depressive episode that commences during pregnancy and is a strong predictor of postpartum depression if left untreated. Depressed mothers are unable to function properly, and they are more likely to experience negative repercussions such as noncompliance with prenatal care clinic attendance, a lack of concern for her overall health, a reduction in the quantity of their nutrition, irregular or reduced sleep, and pre-eclampsia. They may also experience irritation, premature birth, and severe postpartum bleeding, and their symptoms may be severe enough for them to attempt suicide. Antenatal depression can affect fetal outcomes including low birth weight or small-for-gestational-age babies, lower head circumference, stillbirth, and birth asphyxia. Antenatal depression is on the rise around the world, and early detection and treatment are critical for avoiding major problems like postpartum depression and psychosis. Primary healthcare centres should provide the essential psychological care for pregnant women, particularly those with risk factors for prenatal depression.[14]

In obstetrics and perinatal care, anaemia is a prevalent condition. True anaemia is defined as a haemoglobin level of less than 10.5 g/dl, regardless of gestational age. Iron deficiency is the most common cause of anaemia in obstetrics, with a worldwide frequency of 20% to 80% among predominantly female population. Intrauterine growth retardation, preterm, fetoplacental miss ratio, and a higher chance of peripartum blood transfusion are all concerns for both the mother and the fetus during pregnancy. Aside from the need of iron deficiency prophylaxis, oral iron and intravenous iron preparations are the main therapeutic choices for pregnant anaemia.[15] Findings of a Saudi Arabian cross-sectional study reported a prevalence rate of 41.3% for anaemia in pregnancy, which is very high and reflects the nutritional health of pregnant Saudi Arabian women who visit primary healthcare centres.

Primary healthcare centres routinely provide pregnant women 60 mg of preventive elemental iron per day and up to 180 mg per day in cases of anaemia. Despite the fact that appropriate supplies of iron medicine were readily available in all of the health centres enrolled in the study, more than a third of the pregnant women in the study sub-sample in the second and third trimesters were either not using or were irregular regarding iron supplements. Lack of desire and misinformation were the major deterrents to taking medication which may be due to lack of proper counselling by the health-care practitioners. Iron supplementation is critical, especially in the second and third trimesters of pregnancy, because dietary sources do not provide the daily need for iron throughout pregnancy. Several studies in the literature report an increased incidence of anaemia in expectant mothers who took iron tablets irregularly or not at all.[16]

Warren suggests that for the diagnosis and management of pre-eclampsia at a primary health care facility following parameters shall be included, the provision of quality services, encouraging people to seek medical attention early for high blood pressure. Raise awareness of indications and symptoms, as well as what women can

expect and ask during antenatal and postnatal visits at healthcare centres. Pre-eclampsia diagnosis and treatment equipment and materials shall be available and used. Ensure a steady supply of medications. Inform women and their families about the danger signs and symptoms of pregnancy on a regular basis for which individual visits or group counselling could be used. To detect pre-eclampsia early, check blood pressure and urine albumin on a regular basis. If a high blood pressure or pulse rate is detected, keep a careful eye on the patient and administer antihypertensives as needed. Stable with antihypertensive, loading capacity of magnesium sulphate and refer to the appropriate centre if blood pressure is uncontrollable or severe pre-eclampsia occurs.[17] Model for the management of pre-eclampsia at primary healthcare centre is illustrated in (Figure 1).

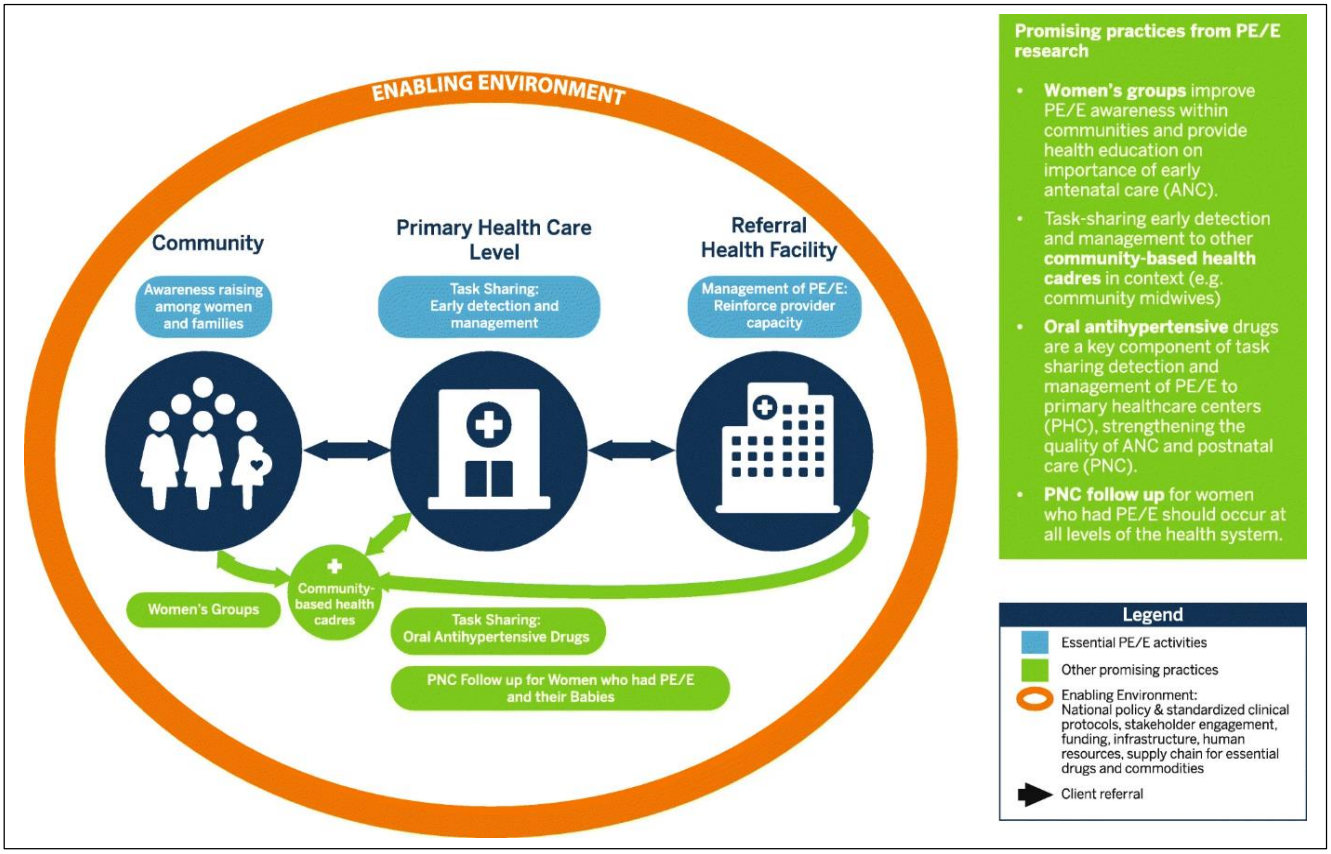

Figure 1: Model for the management of pre-eclampsia at primary healthcare centre.[17]

Gestational diabetes improves neonatal outcomes, such as lower birth-weights and fewer incidences of macrosomia, as well as maternal weight gain, glucose balance, and pregnancy outcomes, when administered at the basic level of care. Early detection and treatment of gestational diabetes are critical for interrupting the effects of maternal hyperglycaemia on fetal development and reducing the unfavourable immediate and long-term implications of fetal hyperinsulinemia.

Furthermore, screening during pregnancy provides an extra opportunity to avoid future diabetes in mothers and their children, particularly in areas where antenatal care is often women's only contact with the health-care system. Gestational diabetes screening and management at the primary care level may have influenced neonatal birth weight and mother weight growth in a favourable way.[18]

Despite the importance of primary health care in managing and identification of non-emergent obstetric complications literature is very scarce and limited studies available discuss the role of primary care in management of obstetric complications at primary healthcare level in future more studies can aid not only in contribution to literature but also signify the importance of primary care.

CONCLUSION

Primary healthcare has a significant role in management of obstetric complications especially non-emergent since it is the immediate contact however there is a need that health systems should improve obstetric care by standardizing services at all levels of care and focusing more on prompt care for non-emergent obstetric complications, especially at primary health care level. Future research can be helpful in highlighting the impact of primary care in management of non-emergent obstetric complications.

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