

## Pregnant women at high risk of preeclampsia and prophylactic aspirin in low resource settings

Owusu Gyanteh Y, Adu-Takyi C, Dassah E T, Owusu-Bempah A, Peprah A  
Komfo Anokye Teaching Hospital, Kumasi, Ghana

### Objective

Pre-eclampsia/eclampsia remain top causes of maternal and perinatal morbidity and mortality globally with most deaths occurring in low- and middle-income countries like Ghana. This is mainly as a result of a higher incidence of the disease in black populations and lack of resources to manage the condition. Prophylactic low dose aspirin initiated before 16 weeks' gestation in high-risk women identified using screening tools offers an effective opportunity to avert the high disease-associated morbidity and mortality in these low resource areas. Anecdotal evidence suggests that it is not common to find patients admitted with preeclampsia/eclampsia who were historically at high risk not receiving prophylactic low dose aspirin in the study setting. This study determined the proportions and factors associated with low dose aspirin use among women admitted with preeclampsia, who were historically at high risk of developing the condition, at Komfo Anokye Teaching Hospital, Kumasi.

### Methods

An analytical cross-sectional study was conducted among women admitted with preeclampsia/eclampsia to Komfo Anokye Teaching Hospital from December 1, 2021 to March 31, 2022. Data was collected on their socio-demographic and antenatal characteristics using a pretested structured questionnaire and a review of their obstetric records at the time of discharge. High risk pregnant women were identified using a combination of maternal factors based on the National Institute for Health and Care Excellence (NICE) guidelines. Data was analyzed using IBM SPSS version 26.0. Categorical variables were assessed using Chi square test.  $P < 0.05$  was considered statistically significant.

### Results

Altogether, 271 women with preeclampsia/eclampsia were studied. The mean age was 31.4(SD 6.0) years with a minimum age of 18years and a maximum age of 47 years. The highest occurring moderate risk factor in our women was nulliparity (27.3%), multiple pregnancy (1.1%), first degree family history of preeclampsia (11.1% ), BMI at first visit  $\geq 30\text{kg/m}^2$  (10%), maternal age  $\geq 40$  years (7.7%) and interpregnancy interval of more than 10 years being the least (2.2%). The highest occurring major risk factor was a history of hypertensive disease in previous pregnancy (37.3%), chronic hypertension (25.2%), Diabetes Mellitus (4.4%), chronic renal disease (3.0%) with autoimmune disease such as antiphospholipid syndrome (APS) and systemic lupus erythematosus (SLE) seen in very few of our women (0.7%). More than half (59%) of the women were at high risk of developing preeclampsia at the beginning of the pregnancy, but only about a quarter (26.9%) received prophylactic low dose aspirin. Significant factors associated with LDA prophylaxis initiation among high-risk women were early antenatal care booking ( $p = 0.0050$ ), antenatal care in a tertiary hospital ( $p < 0.0001$ ) and being attended to by a doctor especially obstetrician with maternal and fetal medicine training ( $p < 0.0001$ ).

### Conclusion

Most pregnant women at high-risk of developing preeclampsia did not receive prophylactic low dose aspirin. Strategies to increase prophylactic low dose aspirin in the study setting could significantly reduce the burden of the disease.