Aspirin Use Following Preeclampsia to Prevent Future Adverse Cardiovascular Outcomes

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Introduction

Approximately 3-7% of pregnancies are affected by preeclampsia (Sarma, et al, 2016). These pregnancies are higher risk due to the hypertensive effects on the mother and fetus. There are recommendations for pregnant women to take 81 mg aspirin, daily, for prevention of negative fetal and maternal outcomes. Hypertension leads to increased cardiovascular morbidity and mortality (Sutters, 2018). Currently, there is a lack of evidence for treatment beyond the post-partum period. This review investigates if aspirin therapy helps to reduce future cardiovascular morbidity and mortality in women who were diagnosed with preeclampsia during their pregnancy.

Statement of the Problem

Preeclampsia involves a hypertensive state, which increases the shear against the endothelium of blood vessels. This predisposes these women to thrombotic and ischemic events. This problem is two-fold. One, we must understand if this group is at increased future risk of cardiovascular morbidity and mortality. Two, is there a treatment that decreases this risk. This knowledge holds the potential of revealing a population in which we can intervene to produce better cardiovascular outcomes.

Research Questions

1. Do women who had preeclampsia during pregnancy have increased future cardiovascular morbidity and mortality?
2. Does continued aspirin use in postpartum women, who had preeclampsia during pregnancy, decrease future cardiovascular morbidity and mortality outcomes?

Literature Review

Aspirin use for secondary prevention shows 14% decrease in all cardiovascular events (16), 1509 Decreased endothelial shear and platelet response. Aspirin, Preeclampsia, Effect on endothelium, post-partum, future cardiovascular risk

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Application to Clinical Practice

The clinical implications of this is important as there may be a subset that is at increased risk that could benefit from preventative measures. Understanding comes two fold in this investigation. First, determining if this population is at increased future risk and second, if aspirin is the appropriate preventative therapy for this population. The longevity required in a study of this nature does create many ethical challenges which will stem results. However, this information is important as there is potential to decrease burden on the healthcare system and potentially decrease morbidity and mortality by preventing major cardiovascular events if this population has been undertreated.

Current research remains inconclusive at this time. More studies are required to provide good evidence upon which to base clinical recommendations. Determining the answers to these questions allows us as healthcare providers to better serve these patients. Not only will this knowledge and further understanding benefit the health of the patient, it has potential to decrease healthcare dollars and the burden placed on the healthcare system by preventing major cardiovascular events.

References


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