

# Implementation rate of low-dose aspirin for pre-eclampsia prevention in high-risk pregnancies: A study in Kelantan

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## ABSTRACT

**Introduction:** Aspirin use in high-risk pregnancies has proven benefits in pre-eclampsia prevention. However, inconsistencies in aspirin prescription have been observed, whereby some patients with high-risk profiles or combinations of moderate-risk factors continue to be overlooked. **Objectives:** To study the implementation rate of low-dose aspirin 150 mg in high-risk pregnancies for pre-eclampsia prevention. **Materials and Methods:** A prospective cohort study was conducted in HPUSM from September 2023 till September 2024 for a 1-year duration. All postnatal patients were screened for the presence of  $\geq 1$  high-risk factor or  $\geq 2$  moderate-risk factors for pre-eclampsia using their antenatal books. Eligible women who, antenatally, received 150 mg of aspirin daily were labelled the ASPIRIN group. High-risk individuals who were not prescribed aspirin were considered the control group, labelled the NON-ASPIRIN group. Characteristics and outcomes of these groups were analysed. The implementation rate of aspirin in these high-risk pregnancies was determined. **Results:** Of 774 eligible patients, only 464 (60%) received aspirin. Among patients with  $\geq 1$  high-risk factor, 149 out of 476 (31.3%) were missed. Notably, 54% (161/298) of patients with combined moderate-risk factors were neglected, exposing lapses in guideline adherence. This under-utilisation highlights a critical gap and inconsistencies in practice, despite strong evidence demonstrated by this study supporting aspirin's effectiveness in preventing pre-eclampsia, preterm birth, gestational hypertension, and IUGR ( $p < 0.001$ ,  $p = 0.002$ ,  $p < 0.001$ ,  $p = 0.003$ , respectively). **Conclusion:** These findings highlight the need for further evaluation of guideline implementation. Greater efforts should be made to ensure timely aspirin initiation for all high-risk pregnancies. The benefit of aspirin in these pregnancies remains undebatable.