



CODEN [USA]: IAJPB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.2561390>Available online at: <http://www.iajps.com>

Research Article

**ASPIRIN AS A PROPHYLAXIS IN PRE-ECLAMPSIA AND
ITS COMPLICATIONS IN MEDINA, SAUDI ARABIA**Tameem Jayousi ¹, Afnan Eid Alharbi ², Shifaa Saud Ghazi Alamri ², Nuha Salah
Alsuheyami ², Alaa Ibrahim Iskandar alhendi ².¹Obstetricians and Gynecology Consultant, Taibah University, Madina, KSA., ²Medical Interns,
College of Medicine, Taibah University, Madina, KSA.**Abstract:**

Background: Low-dose aspirin has been used during pregnancy most commonly to prevent or delay the onset of pre-eclampsia. World Health Organization guideline recommended that low-dose aspirin (75 mg/day) be initiated before 20 weeks of gestation for women at high risk of preeclampsia

Objective: to investigate the effectiveness of aspirin prescription in the prophylaxis of pre-eclampsia and its complications among Saudi women in almadinah region

Method: we sought to examine the influence of compliance on the beneficial effect of aspirin in prevention of preeclampsia in the Aspirin for Evidence-Based Preeclampsia Prevention trial. A cross sectional study was carried out at Al-Madinah Al-Monawarah, Kingdom of Saudi Arabia, including medina city urban and rural area. The study was done at general population at madinah, kingdom of Saudi Arabia. Using an electronic questionnaire that was distributed to population online through different types of social media (e mail, whatsapp and twitter) . The sample size is 700. Data was collected by a semi structured questionnaire prepared by the researchers

Result: We found that it was effective in 32.1% in the reduction of severity or complication while 49.3% not effective.

Conclusion: We found that the use of low-dose aspirin wasn't effective as a prophylaxis of pre-eclampsia and its complications. We recommend doing this study all over the kingdom for more cases and more accurate results.

Key words: Pre-eclampsia, Saudi Arabia, Medina, hypertension, diabetes mellitus.

Corresponding author:**Shifaa Saud Ghazi Alamri**

Medical Interns, College of Medicine, Taibah University

Madina, KSA. Shifaa.saud@gmail.com.

QR code



Please cite this article in press Tameem Jayousi et al., *Aspirin As A Prophylaxis In Pre-Eclampsia And Its Complications In Medina, Saudi Arabia.*, Indo Am. J. P. Sci, 2019; 06(02).

INTRODUCTION:

Aspirin is a cyclooxygenase inhibitor with inflammatory and antiplatelet properties. Low-dose aspirin has been used during pregnancy most commonly to prevent or delay the onset of preeclampsia. World Health Organization guideline recommended that low-dose aspirin (75 mg/day) be initiated before 20 weeks of gestation for women at high risk of preeclampsia; eg, women with a history of preeclampsia, diabetes, chronic hypertension, renal disease, autoimmune disease, and multiple gestations to prevent complication (1). The National Institute of Health and Care Excellence published a quality statement, Antenatal Assessment of Preeclampsia Risk, in July 2013 asked health care providers to prescribe low-dose aspirin (75 mg/day) to pregnant women at increased risk of preeclampsia at the first prenatal visit, to be taken daily from 12 weeks of gestation until birth (2). The majority of systematic reviews of randomized controlled trials have found no increase in hemorrhagic complications associated with low-dose aspirin during pregnancy (3–4). A USPSTF report on low-dose aspirin for prevention of preeclampsia identified no increased risk of placental abruption, postpartum haemorrhage, or mean blood loss. Several systematic reviews of trials using low-dose aspirin for prevention of preeclampsia have shown no increased risk of congenital anomalies (3–4).

In July 2018 ACOG Committee on Obstetric Practice Society for Maternal–Fetal Medicine recommend Low-dose aspirin (81 mg/day) prophylaxis in women at high risk of preeclampsia started between 12 weeks and 28 weeks of gestation (optimally before 16 weeks) and continued daily until delivery. Also for women with more than one of several moderate risk factors for preeclampsia. in the absence of risk factors for preeclampsia aspirin prophylaxis is not recommended for ladies with prior unexplained stillbirth, fetal growth restriction, spontaneous preterm birth, and early pregnancy loss (5)

METHODOLOGY:

We sought to examine the influence of compliance on the beneficial effect of aspirin in prevention of preeclampsia. A cross sectional study was carried out at Al-Madinah Al-Monawarah, Kingdom of Saudi Arabia, including medina city urban and rural area. The study was done at general population at madinah, kingdom of Saudi Arabia. Using an electronic questionnaire that was distributed to population online through different types of social media (e mail, whatsapp and twitter) The sample size is 700. Data was collected by a semi structured questionnaire

prepared by the researchers which includes questions on socio-demographic information as age, average income, educational level, question to the presence of risk factors for preeclampsia in the female participants, other questions were focusing on aspirin if it was given for the participant in here pregnancy as a prophylaxes and to decrease the risk and or complication of. Before the start of the study, the semi-structured questionnaires were pre-tested on 10 students to explore if there is any ambiguity or items leading to misunderstanding in the questionnaire in order to reach to its current final form. These 10 students are not included in the main survey. The items in the questionnaire was obtained from numbers of validated questionnaires and validity was completed by reviewing it by 3 experts. The questionnaire was re-administered after a week to the same sample of the pilot study to check test-retest reliability. Statistical Analysis was used. Data was coded, entered, and analyzed using the Medcalc . Official permissions were obtained from the scientific ethical committee of the college. Informed consent was obtained from all the participants after describing the aim of the study. Privacy and confidentiality were assured. This research is funded totally by the authors.

RESULT:

Total of 700 female from almadinah involved in our study the average age of the female was (20-40) years 78.9% .

Regarding number of children 50.9% have more than 3 children and 50.0% were house wives

12.7 of participate have received aspirin as prophylaxis . response to aspirin prophylaxis as collected from participate from patient 49.3% not effective while 32.1% say is affective in reduction of severity or complication

According to pre eclampsia risk factors :

Regarding Family history we found 14 from 70 so 20% have family history of preeclampsia and develop preeclampsia in other hand we found 545 from 674 so 80.86% don't have family history of preeclampsia and develop preeclampsia .

P= 0.0004

P = 0.0654

Regarding history of DM, 7 from 48 so 14.58% was found with history of DM and develop preeclampsia .while patient with no HX of DM was found 54 from 696 so 7.76 % and they develop preeclampsia

P = .2307

P = 0.8662

Regarding HTN we found 57 from 709 so 8.04 % they are not HTN and develop preeclampsia in other

hand we found 4 from 35 so 11.43% have HTN and develop preeclampsia

P = .4039

P = 0.1040

Regarding history of IUGR we found 19 from 169 so 11.24% have history and develop preeclampsia while 38 from 551 so 6.9% have no HX of IUGR and develop preeclampsia .

P = 0.1658

P < 0.0001

According to renal Disease 4 from 38 so 10.53% have history of renal disease and develop preeclampsia while 57 from 706 so 8.07% have no HX of renal Disease and develop preeclampsia.

P = 0.5772

P = 0.0895

Regarding SLE 5 from 59 so 8.5% have HX of SLE and developed pre-eclampsia in other hand 54 from 59 so 91.53% no HX of SLE and developed preeclampsia.

P = 0.8621

P = 0.2822

Regarding smoking 8 from 61 so 13.11% they are smoker and develop preeclampsia while nonsmokers were 54 from 61 so 88.52 % develop preeclampsia.

P = 0.0251

P = 0.0725

Regarding African race 7 from 61 so 11.5% was African and develop preeclampsia in other hand while 54 from 61 so 88.52% non African and develop preeclampsia .

P = 0.2008

P = 0.6630

DISCUSSION:

In this study, we aimed to investigate the effect of aspirin in the prevention of pre-eclampsia. We found that it was effective in 32.1% in the reduction of severity or complication while 49.3% not effective. The effect of aspirin in prophylaxis appears to be a low compared to a study that was conducted by Professor Kyros Nicolaidis (9) and his team in 2017 in 13 different hospitals around the world including united kingdom, Spain, Italy, Belgium, Greece, and Palestine, where pre-eclampsia occurred in only 1.6% in the aspirin group, compared to 4.3% in the group that didn't take aspirin. We believe that these differences are due to the lack of knowledge of the importance of aspirin use as a prophylaxis in pre-eclampsia among medical practitioners in Medina city as well as the patients themselves.

Limitations:

There were some limitations faced while conducting this study such as the Low sample size and data being taken from one center (Maternity and Child Hospital at medina) and limited to Medina city.

CONCLUSION:

We found that the use of low-dose aspirin wasn't effective as a prophylaxis of pre-eclampsia and its complications. We recommend to do this study all over the kingdom for more cases and more accurate results.

List of abbreviations

DM: diabetes mellitus

HTN: Hypertension

IUGR: Intrauterine growth restrictions

ACOG: The American College of Obstetricians and Gynecologists

United States Preventive Services Task Force

SLE: systemic lupus erythematosus

Acknowledgments

We thank Shahad Ateeq Alriheeli , Meead Rifai Aljabri, Ameera Rzeeq Alhusaini, Alaa abdelmohi boghdadi. Raghad Osama Alhilali, Reem Emad Kurdi, Ghadi Abdulghani Algash, Afnan Natheer Almuhamadi, Enas Mahmood, Omama Eid Alahmadi and Khawlah sultan alhussayen for their efforts in data collection.

REFERENCES:

1. World Health Organization. WHO recommendations for prevention and treatment of pre-eclampsia and eclampsia. Geneva (Switzerland)
2. National Institute for Health and Care Excellence. Hyper- tension in pregnancy: quality standard. Manchester (United Kingdom):
3. Duley L, Henderson-Smart DJ, Meher S, King JF. Antiplatelet agents for preventing pre-eclampsia and its complications. Cochrane Database of Systematic Reviews 2007, Issue 2.
4. Henderson JT, Whitlock EP, O'Connor E, Senger CA, Thompson JH, Rowland MG. Low-dose aspirin for prevention of morbidity and mortality from preeclampsia: a systematic evidence review for the U.S. Preventive Services Task Force.
5. This Committee Opinion was developed by the Committee on Obstetric Practice in collaboration with committee member T. Flint Porter, MD, and the Society for Maternal-Fetal Medicine in collaboration with members Cynthia Gyamfi-Bannerman, MD, MS, and Tracy Manuck, MD.
6. Magdi M. Hussein, Jacob M.V. Mooij, Haysam Roujouleh Hypertension in Pregnancy: Presentation, Management and Outcome – A Retrospective Analysis of 135 Cases
7. Saeed M.G. Al-Ghamdi, FRCPC, FACP; Ali S. Al-Harbi, ABIM; Abdulla Khalil, ABIM; Abdul-

Rahman El-Yahyia, FRCSC

8. A. A. SOBANDE¹, M. ESKANDAR¹, A. BAHAR¹ & A. ABUSHAM² College of Medicine, King Khalid University and ²Abha General Hospital, Abha, Saudi Arabia Severe pre-eclampsia and eclampsia in Abha, the south west region of Saudi Arabia.
9. Professor Kypros Nicolaides, Aspirin reduces risk of pre-eclampsia in pregnant women.