



Assessment of Knowledge, Attitude and Practice in Patients with Hypertensive Disorders in Pregnancy

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Article History:

Received on: 12 Jul 2020
Revised on: 13 Aug 2020
Accepted on: 21 Aug 2020

Keywords:

Gestational Hypertension, Hypertensive Disorders, KAP, Pregnancy

ABSTRACT



Hypertensive disorders in pregnancy (HDP) cause unfavourable perinatal as well as maternal complications in 5-10% of all gestations. Pregnancies entangled with hypertension stays as a vital issue and complicate obstetric practice in developing countries like India. Majority of these complications can be prevented by early identification and legitimate treatment. Our study was aimed to comprehend the Knowledge, Attitude, and Practice of pregnant women regarding HDP as it is significantly affecting overall pregnancy outcome. One hundred four subjects with a mean age of 26.07 ± 3.27 years were recruited for the study and were assessed for their knowledge attitude and practice related to hypertension in pregnancy. Relevant data were collected, questionnaires were administered, and appropriate descriptive and inferential statistics were performed. Our findings demonstrated that there is a moderate correlation between the level of knowledge with the practice towards HDP among the participants. The current study indicated that the majority of the participants had a moderate level of knowledge but showed the right attitude and practice towards HDP. This implies the need to expand knowledge and public awareness regarding the disease. Involving the study subjects with clinical activities such as patient counselling, medication review, and pharmaceutical care program helps to increase the subject's Knowledge, Attitude, and Practice about the disease condition.

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ISSN: 0975-7538

DOI: <https://doi.org/10.26452/ijrps.v11iSPL4.4264>

Production and Hosted by

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nancy with systolic BP > 140mmHg and diastolic BP > 90mmHg (Cunningham *et al.*, 2014). As indicated by the American College of Obstetricians and Gynecologists (ACOG), HDP can be of the following types: Gestational Hypertension, Chronic Hypertension, Preeclampsia/ Eclampsia, and Preeclampsia superimposed on Chronic Hypertension (Zamorski and Green, 2001). HDP occurs in approximately 3-8% of pregnancies around the world, and the incidence has expanded over time. It causes an immense burden on pregnant women and is among the main reason for maternal and perinatal morbidity and mortality (Xiong *et al.*, 2020).

INTRODUCTION

Hypertension during pregnancy is portrayed as the condition wherein there is raised BP during preg-

nancies entangled with hypertension stays as a vital issue and complicate obstetric practice in developing countries like India. In Indian hospital

practice, the prevalence of eclampsia is about 1.5%, and preeclampsia is 5-15% (Nobis and Hajong, 2016). HDP remains as one of the main contributors to maternal death in India, suggesting that the Knowledge, Attitude, and Practice on HDP among pregnant women in India is still unclear. India is known for its age-old beliefs and misconceptions related to their pregnancy and antenatal care. The majority of the expectant women are submerged in fear and anxiety related to their pregnancy, along with difficulty in communicating their concerns regarding parturition with health care professionals. These factors might hinder the maternal and perinatal outcome. The Knowledge and Attitude on HDP among pregnant women are vital for further investigations as it will help to manage concomitant complications, further to avert maternal death (Gatrad, 2004).

The present study is anticipated to understand Knowledge, Attitude, and Practice of pregnant women regarding HDP which can be done before delivery, thus helping them to curtail adverse maternal and neonatal outcomes and to promote their overall health.

MATERIALS AND METHODS

Study Ethics

Ethical approval was obtained from the Institutional Ethics Committee (IEC) of ESIC Medical College & PGIMS and Model Hospital, Rajajinagar, Bengaluru.

Subject Recruitment and Study Population

Patients aged 18-40 years with Period of Gestation (POG) more than 30 weeks admitted to the in-patient wards of Department of Obstetrics and Gynecology and having BP \geq 140/90 mmHg were included. Patients with comorbidities like Gestational Diabetes or fundamentally sick or unconscious patients who cannot give data were excluded. Informed consent was taken from patients who were incorporated and consented to partake in the study.

Study Tool

A 15 item self-administered questionnaire was utilized to evaluate the Knowledge, Attitude, and Practice of patients towards HDP. It was developed in English and local language using patient information leaflets, fact sheets, and previous KAP studies (Gandeh et al., 1999). The questionnaire was divided into 4 sections: Section A [Patient Demographic Data], Section B [Knowledge on HDP], Section C [Attitude on HDP], Section D [Practice on HDP Management]. Section A consisted of Patient demographic data

like age, diagnosis, gestational age, gravidity, parity, etc. In Section B, participants were asked about the knowledge regarding HDP. This domain consisted of 5 categories which are definition, complication, risk factor, impact, and treatment of HDP. For each question, participants were given yes or no options. For Section C, questions were asked on the attitude towards HDP among participants. Likert-scale was utilized for scoring attitude domain, and it consisted of 6 statements. For Section D, participants were asked about the practice of HDP management with yes or no options. The knowledge and practice domain was scored using a Simple Binary Scoring System (SBSS). The questionnaire mainly focused on various pregnancy-related aspects during HDP and antihypertensive therapy in pregnant women.

The initial questionnaire was validated by experts in the field [gynaecologist, statistician, faculty members] using the face and content validation method. The questionnaire was analyzed for accuracy, use of jargon, appropriateness, and double-ended questions. The modified questionnaire was then evaluated for reliability using a pilot study with 25 random subjects and was amended based on the feedback received.

Data analysis

Information gathered for this study were recorded in a spreadsheet, and statistical analysis was performed using online mathematical calculators. All statistics were considered significant if the p-value was less than 0.05.

RESULTS AND DISCUSSION

The study incorporated 104 patients with a mean age of 26.07 ± 3.27 years. Most of the patient's fit the 25-30 years' age group, representing 58 (55.76%) of the total population. Gestational hypertension was found to be the widely recognized diagnosis 80 (76.92%), trailed by Pre-eclampsia 12 (11.53%), Chronic Hypertension 6 (5.76%), Pre-eclampsia superimposed on Chronic Hypertension 4 (3.84%) and Eclampsia 2 (1.92%). The majority of the patients were multiparous (Parity:1-3) 92 (88.46%) and multigravida (Gravidity:2-4) (60.57%).

The knowledge possessed by the patient is indicative of their understanding of the disease, and it enormously impacts their approach to disease condition and its management. Although most of the patients (71.15%) knew the average level of Blood Pressure, only half of them (58.65%) were aware of the complications of Hypertensive Disorders during pregnancy. Majority of the patients (67.30%) knew

Table 1: Distribution of Scores Obtained to KAP Questionnaire

Domain	Minimum Score	Maximum Score	Mean \pm SD
Knowledge	0	5	2.82 \pm 1.45
Attitude	3	20	15.61 \pm 3.18
Practice	0	4	2.72 \pm 3.18
Overall KAP	8	27	21.14 \pm 3.85

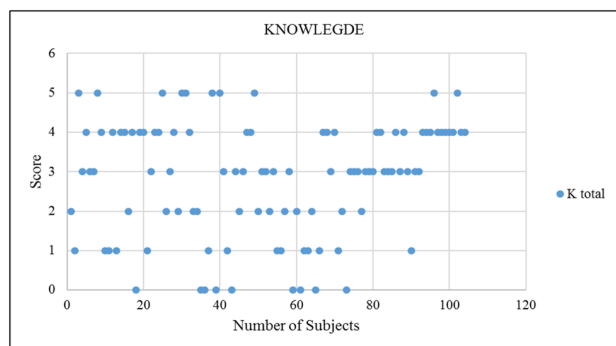


Figure 1: Distribution of knowledge score in respondents

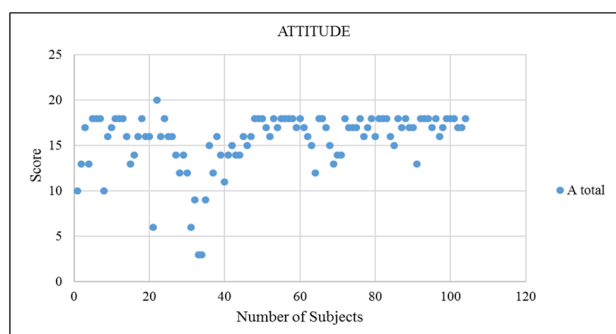


Figure 2: Distribution of attitude score in respondents

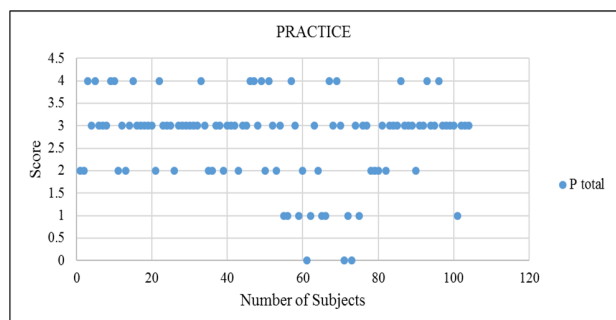


Figure 3: Distribution of practice score in respondents

that pregnancy could cause hypertension, but only a few (37.50%) subjects knew the name of the anti-hypertensive drug they were taking. About half of them (48.07%) knew that unnecessary medications taken by the pregnant mother could show adverse effects on the health of the mother and fetus. The average knowledge score was found to be 2.82 ± 1.45 (maximum =5), which showed that the study patients had only common knowledge about the disease and its management, as shown in Figure 1.

Lack of knowledge of the disease may influence the attitude and practice towards the disease-causing adverse maternal and neonatal outcomes. Assessment of attitude of the hypertensive mothers towards the disease and its management revealed that most of the patients (79.8%) knew regular checking of BP is essential. Majority of them (83.65%) agreed that regular medications will improve the disease condition, as well as salt reduction, can control hypertension (80.76%). Most of the patients (74.03%) disagreed that hypertension should not be treated in pregnancy due to fear of risk to the baby. In contrast, only half of them (48.07) disagreed that emotional stress doesn't have any role in causing hypertension during pregnancy.

Most of the patients (70.19%) were sure that OTC medications should not be taken during pregnancy. The average attitude score was found to be 15.61 ± 3.18 (maximum = 24). As seen in Figure 2, majority of the patients had a positive attitude towards the disease and its management which will indirectly benefit the obstetric and neonatal outcome as well as the well-being of the patient during pregnancy.

Knowledge of correct practice and its implementation is crucial for better therapeutic and obstetric outcomes. Assessment of practice showed that the majority 88 (84.61%) had undergone regular follow up. On the contrary, majority of the patients 56 (53.84%) did not find out whether the medications (OTC or prescribed) taken by them were safe during pregnancy. Majority of the patients 89 (85.57%) avoided extra added salt in their daily food intake while only half of the subjects 60 (57.69%) followed the instructions regarding proper medicine use. The mean practice score was 2.72 ± 0.93 (maximum =

4). Figure 3 shows that study patients had overall moderate practice in hypertension management, causing persistent elevation of BP and elevated complications of HDP.

The overall score of KAP was found to range between eight and twenty-seven (mean 21.14 ± 3.85), while the maximum score was 33. Table 1 represents the detailed distribution of KAP score.

Hypertension in pregnancy is viewed as a significant medical issue giving rise to an extended danger of maternal and neonatal death. Age significantly influences HDP. Mean age of the patients recruited was 26.07 ± 3.27 years and more than half of the patients belonged to the 25-32 years' age group (55.76%) which was similar to the study done by Yousuf S et al., where a majority of the patients were seen in the 19-30 years (55%) age group (Yousuf et al., 2019).

Our results noted that the patients had a moderate perception of the disease. The majority of the patients had average knowledge about HDP, whereas, remaining lack the knowledge of the disease, which may alter the attitude and practice towards disease management. In our study, knowledge regarding the average level of blood pressure and risk factors of HDP was relatively high. This was contrasting with the study done by Yousuf S et al. where only 8% of mothers were aware of the normal level of blood pressure (Yousuf et al., 2019).

In our study, knowledge regarding treatment, complications, and drug use during pregnancy was insufficient. It was comparable with the study done by Yousuf et al. (Yousuf et al., 2019).

Most of the patients had a positive attitude towards Hypertensive disorders in pregnancy which also improves their practice and knowledge. Attitude towards salt reduction, regular BP checking, and regular antihypertensive treatment for BP reduction was comparatively high except for the question regarding the role of emotional stress in causing hypertension. This shows that proper understating of the disease condition is required for hypertensive mothers.

Knowledge of correct practice and its implementation is crucial for better therapeutic outcomes and for reducing fetomaternal complications. In our study, most of the patients had undergone regular follow-up whereas in the study by Yousuf et al., only half of the patients were attending antenatal clinics regularly (Yousuf et al., 2019). Most of the patients had undergone regular BP monitoring and has avoided extra salt in their daily food intake in our study. The present study also showed that the

majority of the patient did not find out whether the medications taken by them were safe during pregnancy and half of them did not follow the instructions regarding proper medicine use. These findings were supported by the study conducted by Yousuf et al. (Yousuf et al., 2019). Knowledge of the patients showed a positive linear correlation with practice. It can be influenced by providing appropriate patient counselling. From this, we can conclude that knowledge and practice are dependent and directly proportional to each other. Overall evaluation of KAP subsequently ends up being valuable to comprehend the predominant misguided judgment and deficient obstetric consideration to pregnant women with HDP.

CONCLUSIONS

The study showed that most of the participants had a moderate level of knowledge but showed the right attitude and practice towards HDP. Our findings also demonstrated that there is a moderate correlation between the level of knowledge with the practice towards HDP among the participants.

The above correlations feature the need for enhancing knowledge in subjects to improve their Attitude and Practice, which will aid in the overall maternal and fetal outcome. Involving the study subjects with clinical activities such as patient counselling, medication review, and pharmaceutical care program helps to increase the subject's Knowledge, Attitude, and Practice about the disease condition.

ACKNOWLEDGEMENT

We are grateful to Dr Gangaboraiah A, Professor of Statistics, Department of Community Medicine, Kempegowda Institute of Medical Science, Bengaluru, for his contribution to the statistical analysis of our study. We also stretch out our most profound appreciation to Mr Binai K Sankar, HOD of Pharmacy Practice Departement for his significant direction and steady help.

Conflict of interest

The authors declare that they have no conflict of interest for this study.

Funding Support

The authors declare that they have no funding support for this study.

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