

Assessment of the Complications of Pregnancy Induced Hypertension among Pregnant Women in AL-Basra Maternity and Children Hospital

تقييم مضاعفات ارتفاع ضغط الدم الناجم عن الحمل لدى النساء الحوامل في مستشفى البصرة للنسائية والأطفال

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الخلاصة:

خلفية البحث: يتطور ارتفاع ضغط الدم الناجم من الحمل بعد 20 اسبوع من الحمل لدى النساء اللاتي لم يكن لديهن ارتفاع ضغط دم بالأصل، إذ إن المضاعفات الناتجة عن ارتفاع ضغط الدم الناجم عن الحمل تؤثر على الأم وجنينها.

الاهداف: تهدف الدراسة إلى تقييم مضاعفات ارتفاع ضغط الدم الناجم عن الحمل. ولتحديد العلاقة بين مضاعفات ارتفاع ضغط الدم الناجم عن الحمل مع خصائص النساء الحوامل الديموغرافية.

المنهجية: أجريت دراسة وصفية لتقييم مضاعفات ارتفاع ضغط الدم الناجم عن الحمل لدى النساء الحوامل. بدأت الدراسة في الفترة من 26 / ايلول / 2020 إلى 20 / أيار / 2021. اختيرت عينة غير احتمالية (غرضية) مكونة من 100 امرأة حامل. شملت استمارة الدراسة الاستبانة على قسمين من البيانات وهي البيانات الديموغرافية وأهم مضاعفات ارتفاع ضغط الدم أثناء الحمل، والتي شملت "المضاعفات التي تم تشخيصها على الأم الحامل؛ والمضاعفات التي تم تشخيصها على الجنين. حددت ثبات استمارة الاستبانة من خلال إجراء الدراسة المصغرة (الاستدلالية) وحددت مصداقيتها من خلال مجموعة من الخبراء من ذوي الاختصاص حيث بلغ عددهم (12) خبير، وجمعت البيانات من خلال الاستبانة، استخدم الإحصاء الوصفي لتحليل البيانات.

النتائج: أوضحت النتائج أن هناك متوسط درجات منخفض في جميع بنود التقييم المتعلقة بمضاعفات ارتفاع ضغط الدم الناتج عن الحمل لدى النساء الحوامل، ومستوى متوسط من التقييم فيما يتعلق بالمضاعفات التي تم تشخيصها على الجنين. وقد أشارت النتائج إلى أن نوع المهنة والعمل اليومي وطبيعته لها علاقة بالمضاعفات الناجمة عن ارتفاع ضغط الدم.

الاستنتاج: هناك علاقة معنوية بين مضاعفات الحمل المسببة لارتفاع ضغط الدم لدى المرأة الحامل وعمرها، والوضع المهني، طبيعة العمل، وساعات العمل اليومية وكذلك، معظم المضاعفات (نقص السوائل المحيطة بالجنين، الولادة المبكرة، تسمم الحمل، الفشل الكلوي، فقدان الوعي) لها علاقة كبيرة بارتفاع ضغط الدم الناجم عن الحمل.

التوصيات: إنشاء عيادة استشارية خاصة لعلاج مضاعفات ارتفاع ضغط دم الحمل أثناء فترة الحمل، إذ إن الوعي الكافي يمكن أن يساعد في الحد من مضاعفات الحمل، إضافة إلى عمل منشورات وكتيبات إرشادية خاصة للنساء الحوامل وللأسرة بصورة عامة تهتم بالأمر الحامل وتقلل من التأثيرات السلبية التي قد تنتج عن الحمل على الأم نفسها وعلى جنينها.

الكلمات المفتاحية: التقييم، المضاعفات، ارتفاع ضغط الدم، المرأة الحامل.

ABSTRACT:

Background: Pregnancy-induced hypertension (PIH) develops after 20 week of pregnancy in women who originally had no blood pressure. The complication arising from PIH may possibly affect both the mother and her fetus.

Aims of the study: This study aims to assess the complications of pregnancy-induced hypertension; and to determine the relationship between complications of pregnancy inducing hypertension of pregnant women with their demographic characteristics.

Methodology: A descriptive study was done for assessing complications of pregnancy-induced hypertension for pregnant women. The study started from the period of September 26th, 2020 to May, 20th, 2021. A non-probability (Purposive) sample of 100 pregnant women were attending the Al Basra Maternity and Children Hospital in AL-Basra Governorate. A questionnaire consists of two part include demographic data and complications of pregnancy, which are include "complications diagnosed for the pregnant mother; and complications diagnosed on fetus which composed (17) complications". The reliability of the questionnaire was determined through a pilot study and the validity through a panel of experts. The data were collected by questionnaire and interview. The data were described statistically and analyzed using descriptive and inferential statistical analysis procedures.

Results: The results illustrated that there are low mean of score in all items of assessment related to complications of pregnancy inducing hypertension for pregnant women, a moderate level of mean of score for assessment concerning diagnosed complications on the fetus. The occupation, daily work and its nature were significantly relationship with their complications.

Conclusion: There was a significant relationship between complications of pregnancy inducing hypertension of pregnant women and their age, occupational status, nature of work, and daily working hours, also, most of the complications (Lack of fluids surrounding the fetus, preterm labor, pre-eclampsia, renal failure, Loss of consciousness) have a significant relationship of pregnancy-induced hypertension.

Recommendations: Adequate awareness regarding the reduction of pregnancy complications can also help to reduce the chances of malpractice as well as, manual booklet of complications of pregnancy and how to manage it should be write in simple words and use attractive pictures given to the women and family which indeed decreased pregnancy complications.

Keywords: Assessment, Complication, Pregnancy Induced Hypertension, Pregnant Women.

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INTRODUCTION

Pregnancy-related hypertension, such as developing hypertension at 20 weeks or more of pregnancy, with or without proteinuria ⁽¹⁾, a persistent systolic BP of 140 mmHg or diastolic BP of 90 mmHg is considered hypertension during pregnancy ⁽²⁾. Pregnancy-induced hypertension is a major public health concern in both industrialized and developing countries, contributing to high rates of maternal and neonatal morbidity and mortality ⁽³⁾. According to a systematic analysis conducted by the World Health Organization, hypertensive disorders of pregnancy account for 14 percent of maternal mortality and are the second leading cause of maternal death in Sub-Saharan, Africa, after hemorrhage, which accounts for 16.0 percent of maternal mortality ⁽⁴⁾.

Studies conducted on the global impact of preeclampsia and Eclampsia showed that preeclampsia was associated with higher rates of preterm delivery, small for gestational age babies, stillbirth and low birth weight ⁽⁵⁾. Preeclampsia causes a significant rise in fatal morbidity and mortality, and it is one of the primary causes of stillbirths and new-born fatalities ⁽⁶⁾. Pregnancy-induced hypertension affects anywhere from 2.2 percent to 18.3 percent of Ethiopian women. In Ethiopia, hypertensive disorders during pregnancy are one of the top five causes of maternal death, accounting for 19% of all deaths ⁽⁷⁾.

Furthermore, studies have shown that women who are well-informed about pregnancy-induced hypertension are more likely to report symptoms and seek medical help sooner ⁽⁸⁾.

AIMS OF THE STUDY

This study aims to assess the complications of pregnancy-induced hypertension; and to determine the relationship between complications of pregnancy inducing hypertension of pregnant women with their demographic characteristics.

METHODOLOGY

- Study Design

A descriptive study was done for assessing the complications of pregnancy-induced hypertension for pregnant women. The study started from the period of September, 26th 2020 to May, 20th 2021 and aimed to assess complications of pregnancy-induced hypertension; and to determine the relationship between complications of pregnancy inducing hypertension of pregnant women and their socio-demographic data.

- Study Sample

A non-probability "purposive sample" of (100) pregnant women who are attending the Al Basra Maternity and Children Hospital in AL-Basra Governorate were the sample.

- The Study Instruments

A questionnaire format is constructed for the purpose of the study throughout a review of relevant literature and consultation from panel of experts and related studies. It is composed of two parts:

- **Part I: Demographic Characteristics:** This part includes women age, residents, level of education, occupation, daily working hours, nature of work and monthly.

- **Part II: Complication Related Pregnancy:** This part includes (2) domains deals with complications of pregnancy, which are include "Complications diagnosed for the pregnant mother; and complications diagnosed on fetus which composed of (17) complications".

- **Validity of the study**

To make the instrument more valid, it was presented to a panel of (15) experts which have more than (10) years' experience in their field. Those experts were asked to review the instruments of the study.

- **Reliability of the study**

Acceptable reliability of structured questionnaire format depending on the value of the Cronbach's Alpha was (0.7632).

- **Rating and Scoring**

The responses for these questions are rated and scored on (2 level type Likert scale) as; Yes present complication =2 and no present complication=1. Evaluation intervals of mean: [low complication (1.00-1.33)]; [moderate complication (1.34-1.67)]; [high complication (1.68-2.00)].

- **Data collection**

Data were obtained through face to face interview techniques as a method of data collection. Each pregnant woman interview on individual bases and each interview takes (15-20) minutes.

- **Data Analysis**

Descriptive and inferential statistics were used to analyze the results of the study under application of the statistical package (SPSS) ver. (20).

- **Ethical Considerations**

The Institutional Review Board (IRB) at the University of Baghdad, College of Nursing approved the study to be conducted. The study protocol meets both the global & the Committee on Publication Ethics (COPE) standards of respecting human's subjects' rights.

RESULTS

Table (1): Distribution of the socio-demographic characteristics for pregnant women in Al-Basra maternity and children hospital

Variables	Groups (n=100)	Frequency	Percent
Age (years)	15-19years	18	18.0
	20-24yaers	20	20.0
	25-29years	16	16.0
	30-34years	14	14.0
	35-39years	18	18.0
	40 -44years	14	14.0
Residency	Rural	41	41.0
	Urban	59	59.0
Level of Education	Illiterate	12	12.0
	Read &write	3	3.0
	Primary school graduate	23	23.0
	Intermediate school graduate	12	12.0
	Secondary school graduate	18	18.0
	Institute graduate	10	10.0
	College graduate	19	19.0
	Higher Education	3	3.0

Occupational Status	Housewife	70	70.0
	Student	9	9.0
	Employee	12	12.0
	Private jobs	9	9.0
Daily working hours	6 hours / day	9	9.0
	8 hours / day	19	19.0
	10 hours / day	43	43.0
	12 hours / day	29	29.0
	Total	100	100.0
Nature of work	In the seating	10	10.0
	little muscle effort	3	3.0
	Moderate muscle effort	28	28.0
	High muscular effort	59	59.0
Monthly Family Income	Enough	13	13.0
	Fair enough	21	21.0
	Not enough	66	66.0

This table indicate that the (20%) of study participants aged 20-24 years old. Regarding residents, urban residents were more than half of the study sample (59%). Education related findings, (23%) were primary school graduated. It is obvious from the findings that (70%) were housewife. A thirty-four percent work 10 hours per day. Concerning nature of work, (59%) expressed a high muscular effort. Finally, in this table, (66%) of women make not enough monthly income.

Table (2): Distribution and assessment of the complications of pregnancy inducing hypertension for pregnant women

No.	Items	Yes		No		M. S.	S. D.	Ass.
		F	%	F	%			
A. Complications diagnosed for the pregnant mother								
1	Fit	21	21.0	79	79.0	1.21	0.409	L
2	Shock	2	2.0	98	98.0	1.02	0.141	L
3	Renal failure	39	39.0	61	61.0	1.39	0.490	M
4	Liver problems	7	7.0	93	93.0	1.07	0.256	L
5	Problems with blood clotting	12	12.0	88	88.0	1.12	0.327	L
6	Pre-Eclampsia	49	49.0	51	51.0	1.49	0.502	M
7	Eclampsia	19	19.0	81	81.0	1.19	0.394	L
8	Loss of consciousness	35	35.0	65	65.0	1.35	0.479	M
9	Bleeding during pregnancy as a result of the placenta separation	31	31.0	69	69.0	1.31	0.465	L
10	HELLP syndrome	19	19.0	81	81.0	1.19	0.394	L
11	Lack of fluids surrounding the fetus	81	81.0	19	19.0	1.81	0.394	H
B. Diagnosed complications on the fetus								
12	Premature birth	34	34.0	66	66.0	1.34	0.476	M
13	Low fetal weight at birth	9	9.0	91	91.0	1.09	0.288	L
14	Intrauterine growth restriction (intrauterine growth retardation)	5	5.0	95	95.0	1.05	0.219	L
15	Asphyxia of the fetus	2	2.0	98	98.0	1.02	0.141	L
16	Fetal death	25	25.0	75	75.0	1.25	0.435	L

17	Congenital anomaly	6	6.0	94	94.0	1.06	0.239	L
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"F= Frequency; %= Percentages; M, S.= Mean of Score; S.D.= Standard Deviation"

Table 2 shows the mean of score, it is indicate that the women expressed a high level of complication related to mothers ($M \pm SD = 1.28 \pm 0.223$), and high level of complication related to fetus ($M \pm SD = 1.13 \pm 0.129$).

Table (3): Relationship between the complications of pregnancy inducing hypertension of pregnant women and their demographic data

Demographic Data	χ^2 Value	D.f	P-Value
Age (years)	17.200	5	0.004 NS
Residency	0.037	1	0.848 NS
Level of Education	9.587	7	0.213 NS
Occupational Status	10.272	3	0.016 S
Daily working hours	18.613	3	0.000 HS
Nature of work	10.676	3	0.014 S
Monthly Family Income	2.106	2	0.349 NS

" $\chi^2_{obs.}$ = chi-square, d.f= degree of freedom, p = probability value, $P > 0.05$ =Non- significant"

This table indicate there were no significant relationship between complications of pregnancy induced hypertension and mothers socio-demographic characteristics such as (residents, education level and monthly income of family) at p-value > 0.05 . As well as, there were significant relationship between these complications and mothers age, occupation, daily work hours and nature of work at p-value < 0.05 .

DISCUSSION

- Socio-demographic characteristics for pregnant women in Al-Basra maternity and children hospital (Table 1)

One of the most common age groups in the study population, according to the findings, Due to the age of production, 20 (20.0 percent) of pregnant women are in the age group (20-24 years). Because the concerned hospital is located in an urban region, the majority of pregnant women live in urban areas (59.0%). In terms of educational attainment, most participants in the study sample were primary school graduates 23 (23.0%), owing to the fact that the majority of pregnant women were housewives 70 (70.0%). In terms of daily working hours, the majority of pregnant women had 10 hours per day 43 (43.0%), which was considered homework. While the nature of employment indicates that more than half of the pregnant women in the sample demand a lot of muscular exertion, the ratio has risen to 59 percent (59.0 percent). In terms of the family's monthly income, it appears that more than two-thirds of the participants in the study sample did not have enough money to meet their demands on a monthly basis. 66. (66.0 percent),

The above conclusions are based on a study conducted at the AL-Dewaniya Maternity and Child Teaching Hospital in Al-Dewaniya. The age range of the (100) moms who participated in this study was (21-25) years old, and they made up 30% of the total number of people living in urban areas. Twenty-one percent of couples couldn't read and write. Those wives, on the other hand, are not like their husbands; they are postgraduates who made up (25%) of the overall sample of (100). In terms of occupation, the majority of moms (72%) are housewives, whereas their husbands (32%) work for the government and earn enough to meet their needs on a monthly basis. The entire participants did not smoke, and their husbands (55 percent) did not smoke, as evidenced by the data. As far as spouses' relationships go, 52% of moms were not related to their husbands ⁽⁹⁾.

When she gives a birth to a child the dominant of study sample at age group with (20-24) accounted for 44 (38.6%). This result agrees with study mention that the dominant age

group of study sample is with in age group (20-34) years old and accounted for (75.7%) ⁽¹¹⁾. The care of the mother during pregnancy is of great importance in maintaining the health and health of her fetus by providing health conditions for walking and reduce the proportion of complications that accompany pregnancy, which affect the health of mother and child, the body of women is undergoing major changes in the various organs and these changes are to provide the best conditions For the growth and development of the fetus, and may appear many complications during pregnancy.

- Assessment of the complications of pregnancy inducing hypertension for pregnant women Table (2)

The findings revealed that all elements of assessment related to pregnancy problems that cause hypertension in pregnant women have a low mean score. Most pregnant women with gestational hypertension have healthy pregnancies and new-born. High blood pressure during pregnancy, on the other hand, can be an indication of other, far more dangerous illnesses. Women have a reduced risk of complications because they see their doctor early and regularly, which is critical for keeping their baby healthy ⁽¹⁰⁾.

Pregnancy-induced hypertension was found to be present in 7.9% of women who attended a delivery service. Prevalence of pregnancy-induced hypertension was predicted by having a family history of the condition, chronic renal disease, and gestational age ⁽¹¹⁾.

Pregnancy-induced hypertension disorders are a serious public health concern in the obstetric community since they are one of the leading causes of maternal and perinatal morbidity and mortality. According to the World Health Organization, at least one woman dies every seven minutes as a result of pregnancy-related hypertension illnesses. The importance of demographic factors in dealing with those issues, the results show that there was no significant link between complications of pregnancy-induced hypertension and demographic features of pregnant women at p-value >0.05, except for women's age, employment, daily work hours, and nature of work at p-value 0.05. Women age play an importance role in complications of pregnancy, as well as, occupations and daily activates put pregnancy at risks.

- Relationship between the complications of pregnancy inducing hypertension of pregnant women and their demographic data Table (3)

There was a strong association between women's age and pregnancy problems, as the odds of having a pregnancy complication were higher in older women than in younger ones ⁽¹²⁾. Placental abruption was more common in housewives (P=0.02), and there was a strong link between work status and moving heavy objects, which was more common in housewives (P=0.01). Only lower amniotic fluid (P=0.001) and low birth weight (P=0.01) were associated with lifting heavy objects during pregnancy. Preterm labor was more common among housewives than among employed women, but not considerably so. The type of birth was associated to work, with working mothers having more cesarean births (P=0.0001), and the consequences of pregnancy-induced hypertension were also associated to occupation (P=0.0001) ⁽¹³⁾.

There was a link between pregnancy-related hazards and physical activity among pregnant women. Physical activity and exercise during pregnancy can help you stay fit and prevent you from gaining too much weight during your pregnancy. Preeclampsia, gestational diabetes, and cesarean birth can all be reduced with exercise ^(14, 15).

CONCLUSION

There was a significant relationship between complications of pregnancy inducing hypertension of pregnant women and their age, occupational status, nature of work, and daily working hours, also, most of the complications (Lack of fluids surrounding the fetus, preterm

labor, pre-eclampsia, renal failure, Loss of consciousness) have a significant relationship of pregnancy-induced hypertension.

RECOMMENDATIONS

Adequate awareness regarding the reduction of pregnancy complications can also help to reduce the chances of malpractice as well as, manual booklet of complications of pregnancy and how to manage it should be written in simple words and use attractive pictures given to the women and family which indeed decreased pregnancy complications.

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