

**Risk Factors Of Pregnancy
Induced Hypertension In
AL_Mukalla Maternity Child
Health Hospital (MCH)**

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Abstract

Background :Hypertensive disorders are among the most common and yet serious conditions seen in obstetrics as well as general medicine. Analysis of risk factors of hypertension during pregnancy and to identify whether these factors are related to age, gestational age, gravidity and other medical diseases were done in our study.

Objective: to find out the risk factors that predispose to hypertension in pregnancy.

Patients and methods: it is a descriptive case series study done in the period first of Feb 2005- 31 May 2005 in maternity hospital in Mukalla city in Yemen. Questionnaire was designed to collect data . Data entry and analysis was done by using frequency and percentages.

Results: a total number of 83 cases were collected in Al-Mukalla MCH . Sixty cases(72.29%) their age was ranging between 20-35 years with mean age of 27.5. while nine cases (10.84%) were under 20 years old and 14 cases (16.87%) above 35 . In primigravida; hypertension was observed in 50 cases (60.24%) and in multigravida 33 cases(39.76%) . Regarding gestational age, 16 cases were found in those of less than 20 weeks gestational age (19.28%) while most of them (80.72%) had gestational age of more than 20 weeks. Chronic hypertension was found in 10 cases(12.05%) while 20 cases (24.1%) had family

history of hypertension in pregnancy and 33 cases (39.76%) had hypertension in previous pregnancy. Diabetes Mellitus (DM) was found only in 8 cases (9.64%).

Conclusion: in Al-Mukalla MCH the pregnancy induced hypertension was common at the age of 20-35 years (72.29%), it is more frequent in more than 20 weeks gestational age . it had more frequent in primigravida than multigravida . the majority of cases had no history of chronic hypertension . some cases with pregnancy induced hypertension had a history of hypertension in previous pregnancy (39.76%) while only 19.64% had DM.

Introduction

Hypertensive disorders are among the most common and yet serious conditions seen in obstetric and non-obstetric conditions. The clinical criteria for the diagnosis of hypertension in pregnancy merit some discussion^(2,6). There is uniform agreement that an absolute blood pressure of 140\90mmHg is abnormal, because the normal resting arterial pressure is lower in pregnant than in non-pregnant subject⁽⁷⁾.

In USA a similar research revealed that chronic hypertension occurs in up to 22% of women of child bearing age, with the prevalence varying according to age, race , and body mass index⁽⁴⁾. Chronic hypertension complicates 1-5%

of pregnancies, preeclampsia complicates about 5% of all pregnancies, 10% of first pregnancy and at least 20% of pregnancies in women with a history of chronic hypertension^(1,3,5). Risk factors of hypertension during pregnancy include: the age, hypertension in pregnancy is more common in women at the extremes of maternal age (<18 or 35 year).the increased prevalence of chronic hypertension in women older than 35 years can explain the increased frequency of preeclampsia among older gravida^(3,8,9) .

Gestational age: .hypertension prior to 20 weeks, gestation usually is due to chronic hypertension, preeclampsia is rare prior to the second trimester ^(9,10,11) . New onset or worsening hypertension after 20 weeks, gestation should lead to careful evaluation for manifestation of preeclampsia^(2,4,13) .

Women diagnosed with severe or early preeclampsia have a higher prevalence of thrombophilias, but no studies today have demonstrated that administering anti- coagulants in subsequent pregnancies decreases the risk of recurrent preeclampsia^(4,14) .

Objective: to find out the risk factors that predispose to hypertension in pregnancy.

Patients and Methods:

it is a descriptive case series study done in the period first of Feb 2005- 31 May 2005 in maternity hospital in Mukalla city in Yemen. Medical files of 83 cases of hypertension in pregnancy were studied The data was collected according to (age , parity , gestational age, previous history of pregnancy , family history of hypertension and medical disorder). Data entry and analysis was done by using frequency and percentages.

Results

A total numbers of (83) cases with hypertension in pregnancy were collected from Mukalla MCH Hospital, we found that 60 cases (72.29%) their age was ranging from 20 to 35 years with mean age of 27.5.years while 9 cases (10.84%) under 20 years old and 14 cases (16.87%) above 35 years old (Tab1) . Pregnancy induced hypertension was found in 50 cases (60.24%) in primigravida while 33cases (39.76%) was in multigravida (Tab.1). Regarding duration of pregnancy 16 cases(19.28%) were less than 20 weeks and 76 cases(80.72%) were more than 20 weeks . (Tab1) .

Chronic hypertension was found in 10 cases (12.05%) and 73 cases (87.95%) had no elevated blood pressure (Tab 2). Twenty cases (24.1%) had family history of hypertension .while 63 cases (75.9%) had no history (Tab 2) but history of hypertension in previous pregnancy were found in 33

cases (39.76%) and 50 cases (60.24%) had no history (Tab.2). Only 8 cases have diabetes mellitus (9.64%) while 75 cases were not diabetic (90.63%).

Table No 1: Demographic and obstetric characteristics of the 83 pregnant women have pregnancy- induced hypertension

Characteristics	No. of cases	%
Maternal age:		
Less than 20 years	9	14.84%
20 - <35 years	60	72.29%
30 - >35 years	14	16.87%
Total	83	100%
Gravida:		
Primigravida	50	60.24%
Multigravida	33	39.76%
Total	83	100%
Gestational age:		
<20 weeks	16	19.28%
≥ 20 weeks	67	80.72%
Total	83	100%

Table No 2: Family history and medical disorders associated with pregnancy induced hypertension

Medical history/problems	No. of cases	%
Family history of hypertension:		
Yes	20	24.1%
No	63	75.9%
Total	83	100%
Chronic hypertension:		
Yes	10	12.05%
No	73	87.95%
Total	83	100%
History of hypertension in previous pregnancy:		
Yes	33	39.76%
No	50	60.24%
Total	83	100%
Diabetes Mellitus:		
Yes	75	90.36%
No	8	9.64%
Total	83	100%

Discussion

This research was compared with a similar research applied in UK (a case — control study involved 86 cases to evaluate the risk factors of preeclampsia on May 1992) and according to our results through a 83 cases studied , the mean affected age pregnancy-induced hypertension in Mukalla MCH was 27.5 years old, this may be due to early marriage in our society, similar result was found in UK research where the mean age affected was 26.5 ^(1,14). Regarding the gestational age where pregnancy induced hypertension is more likely to occur, we found that

pregnancy induced hypertension is more frequently occurred in a mean 33 weeks. As it is recommended during the gestational age of 20 weeks and afterwards^(3,9). There is physiological increment in hormonal and metabolic states which with accompanied familial and environmental factors may contribute more greatly in inducing hypertension during pregnancy^(6,8). A nearly same result was found in UK research where the mean gestational age of occurrence was 37 weeks. Gravity is a strong risk factor of pregnancy induced hypertension as most references talked about, our research was very agreed in this fact and it proved that primigravida women were more likely to develop pregnancy induced hypertension (60.29%), similar finding is clarified in UK research (54.70%) this is supposed to go with the theory that during first pregnancy there is an aberrant immune reaction to foreign paternally derived antigens which responsible for the disease⁽⁹⁾.

Concerning family history as a risk factor of pregnancy induced hypertension we were contraversed with the usual suspect, where we found that from 83 cases only 20 cases with positive family history and 63 cases not^(7,8). This reflects one or more of three suspicions, whether only these cases are truly negative for family history; so we need more researches may be through a wide population, or it is really true that this society is negative for family history, and also we need further research.

Regarding hypertension (HTN) in previous pregnancy

(3,4) our research applied that many cases have no previous history of HTN during previous pregnancies(60.24%) this can be concluded by the fact that this society is trapped with early marriage as discussed earlier.

In other medical conditions where pregnancy induced hypertension is associated with DM and chronic HTN^(3,4,5) conversely our research admitted that a little cases were associated with DM and chronic HTN, this may be has two explanations:

*First: these conditions are not very common in female of this society

*Second explanation is that they are related to older multigraved women where pregnancy induced hypertension is less likely as it can concluded from the research ,we think we need more researches about this point.

Conclusion:

in AlMukalla MCH the pregnancy induced hypertension was common at the age of 20-35 years (72.29%), it is more frequent in more than 20 weeks of gestational age . It had more frequent in primigravida than multigravida . the majority of cases had no history of chronic hypertension but some cases with pregnancy induced hypertension had a history of hypertension in previous pregnancy (39.76%) while only 9.64% had DM.

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