

Hypertensive Disorders of Pregnancy

Assessing the Knowledge of Hospital Staff Workers on the Diagnostic Criteria and Management of Hypertension in Pregnancy

Nakyda Dean
GE/NMF Scholar
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Introduction

- Hypertensive disorders of pregnancy are leading causes of maternal morbidity and mortality in Ghana.
- Optimizing health care to prevent and effectively treat women with hypertensive disorders of pregnancy is necessary to reduce mortality.
- Therefore, it is important that hospital staff workers are competent about the management of diseases with deadly complications.

Purpose

- The purpose of this study was to investigate the knowledge of hospital staff workers in the maternity ward on the diagnosis and management of hypertensive disorders of pregnancy

Objectives

- To investigate the current protocol for diagnosis and management of hypertensive disorders in pregnancy.
- To assess the level of knowledge of hypertensive disorders in pregnancy among hospital staff workers
- To compare the clinical practice of the diagnosis and management of hypertensive disorders in pregnancy of hospital staff workers to the national protocol
- To assess providers understanding of management of hypertension postpartum
- To make recommendations to improve the recognition and treatment of hypertensive disorders of pregnancy

Methods

- Quantitative cross-sectional study
- 19 Hospital staff workers, which include 1 Doctors, 1 Medical Assistants, 8 Midwives, 3 Nurses and 6 Midwifery students were recruited from Axim Government Hospital to participate in a questionnaire and training workshop on hypertensive disorders of pregnancy
- Comprehensive questionnaire with closed-end questions was used for data collection to assess knowledge of health care providers.
- Participants were given questionnaire before and after a training intervention.

Methods - Questionnaire tool

- Divided into 6 sessions
 - Session I: Socio-demographic
 - Session II: Assessment of formal training provided by hospital
 - Session III: Knowledge of diagnostic criteria of hypertensive disorders of pregnancy
 - Session IV: Knowledge of management of Hypertensive disorders of pregnancy
 - Session V: Clinical Scenarios
 - Session VI: Assessment of hospital staff perspective

Background:
 Please complete this questionnaire to assess your knowledge of hypertensive disorders of pregnancy.

Thank you for your time and participation in this project.

Section I: Basic demographic factors

- How old are you? _____
- What is your gender? _____
- What is your current role at the hospital? _____
- How many years of experience do you have in the role? _____
- How many years have you worked at your current role at the hospital? _____

Section II: Assessment of formal teaching of hypertensive disorders of pregnancy available in hospital setting

- Are medical residents regular lecturers, workshops, and/or seminars for the topic available at your hospital? _____
- Are medical students regular lecturers, workshops, and/or seminars for the topic available at your hospital? _____
- Are midwives regular lecturers, workshops, and/or seminars for the topic available at your hospital? _____

Section III: Knowledge of diagnostic criteria of hypertensive disorders of pregnancy

Please use the following codes to indicate the degree of your knowledge of the diagnostic criteria of hypertensive disorders of pregnancy based on the following table (for each column select one, 1 = multiple answers chosen to accurately define each disorder)

Disorder	Pre-Test	Post-Test	Stratified
1. Gestational Hypertension	1	1	1
2. Preeclampsia	1	1	1
3. Eclampsia	1	1	1
4. Chronic Hypertension	1	1	1
5. Hypertensive Disorders of Pregnancy	1	1	1

Section IV: Knowledge of management of hypertensive disorders of pregnancy (Circle the most appropriate answer)

- At a patient presenting with hypertension in pregnancy, I would start with antihypertensive medication when:
 1. Systolic BP is 160 mmHg or higher
 2. Diastolic BP is 110 mmHg or higher
 3. Systolic BP is 140 mmHg or higher
 4. Diastolic BP is 90 mmHg or higher
- After discharge, postpartum patients with hypertensive disorders during pregnancy should be followed up with the team:
 1. 2 weeks
 2. 4 weeks
 3. 6 weeks
 4. 8 weeks
- Should IPR occur at 10 weeks weeks postpartum?
 1. 1 week
 2. 2 weeks
 3. 4 weeks
 4. 6 weeks
 5. 12 weeks
- Patients with mild preeclampsia who present with symptoms up to _____
 1. 1 week postpartum
 2. 2 weeks postpartum
 3. 4 weeks postpartum
 4. 6 weeks postpartum
 5. 12 weeks postpartum
- Usually, how often should patients with mild preeclampsia have their blood pressure monitored at "home"?
 1. Once a week
 2. Once a month
 3. Once a year
 4. Once a year
- A woman diagnosed with PE during her pregnancy should be reassessed at _____
 1. 1 week
 2. 2 weeks
 3. 4 weeks
 4. 6 weeks

Section V: Assessment of hospital staff perceptions

Circle the following code and enter the number which best represents your opinion:

- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Agree
- 4 - Strongly Agree

Statement	1	2	3	4
1. There is not staff knowledge about diagnosing hypertensive disorders of pregnancy				
2. The management of hypertensive disorders of pregnancy				
3. The management of hypertensive disorders of pregnancy				

Methods

- The Intervention
 - 30 minute training lecture addressing the updated national protocol on the diagnosis and management of hypertensive spectrum of disease in pregnancy
 - Content covered
 - Spectrum of hypertensive disorder of pregnancy
 - Diagnosis criteria
 - Assessment of disease
 - Appropriate management supported by Standard Treatment Guide.

Results - Demographics

	Pre	Post	Stratified
# Participants	14	7	3
Age			
20-24	3	5	2
25-29	7	2	1
30-39	1	0	0
40+	3	0	0
Gender			
Female	12	7	3
Male	2	0	0
Role			
Doctor/MA/PA	2	0	0
Midwife	7	3	2
Nurse	2	1	0
Midwifery Student	3	3	1
Experience			
< 1 year	1	3	0
1-2 years	6	2	2
3-5 years	6	2	1
5+ years	1	0	0

Results -

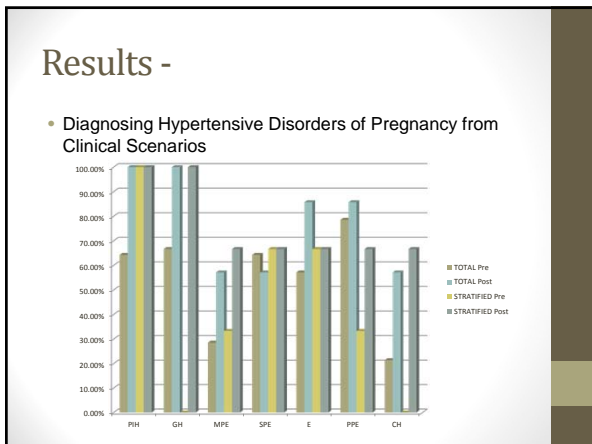
- Averages from Pre and Post intervention

	Pre-Test	Post-Test
# of participants	14	7
Total	44%	50%
Stratified n=3	36%	56%

Results

- Assessing knowledge of diagnostic criteria of hypertensive disorders of pregnancy

topic	TOTAL		STRATIFIED	
	Pre	Post	Pre	Post
Gestation Age	71.43%	85.71%	71.43%	85.71%
Postpartum	14.29%	14.29%	14.29%	28.57%
Systolic BP	42.86%	71.43%	57.14%	71.43%
Diastolic BP	57.14%	71.43%	42.86%	71.43%
Proteinuria	28.57%	57.14%	57.14%	57.14%
Symptoms	42.86%	42.86%	42.86%	57.14%



Analysis/Discussion

- The intervention showed improvement in knowledge
 - In comparison to the general group, the stratified group, participant who participated in both the pretest and post-test, showed the highest acquisition of knowledge, assessed by the questionnaires
 - In general the Average score was highest among those who participated in the intervention lecture.
 - Of the six variables used to define hypertensive disorders of pregnancy, Systolic and Diastolic BP showed the biggest improve pre and post intervention.

Results

- Impaired knowledge
 - Participant seem to have limited understanding of Postpartum diagnosis. After intervention only 15-30% responded to question correctly
 - Participants selected answer choices leading to over medicating patients for hypertension
 - Based on results, understanding of less emergent disorders like Transient HTN, Gestational HTN, and Mild Pre-Eclampsia is still limited

Chart Review

- Quantitative Chart review of Diagnosis and Management of Hypertensive Disorders from Jan 2014 – April 2014.
- Rough Analysis
 - Inconsistency in diagnosis of patient among record books
 - Inappropriate management of patient
 - Over medicating hypertensive patient
 - Postpartum Eclampsia
 - Not following current guidelines for management of patient with hypertensive disorder in pregnancy

Limitations

- Many participant in the pre-test group were lost to follow-up. Therefore, the sample size that participated in both the pre-test and post-test was small
- The delivery of the intervention
 - Timing
 - Equipment

Conclusion

- What Axim is doing well
 - Emergency packs for hypertensive emergency available
 - Continuous communication between midwives and Doctors/PAs with difficult cases
 - Support education of midwives
- Training sessions can increase the knowledge of hospital staff workers on the diagnosis and management of hypertensive disorders of pregnancy.
- The knowledge gained can improve the outcome of hypertensive obstetrics emergencies and decrease maternal morbidity and mortality
- It's important to stay up to date with national guideline

Recommendations

- The Maternity Ward are currently use Ghana National SM guideline of 2007 for management of hypertensive disorder of pregnancy
 - Therefore recommend incorporating up to date information from the Standard Treatment Guide of Ghana from 2010
- Provide Continue Workshops/Lectures to educate staff workers
- Encourage midwives to invest in the knowledge and teaching of midwifery students and nurses
 - Assigned senior midwife in charged of education
- Improvement of data capture