



A study to assess the knowledge of risk factors about pregnancy induced hypertension and the availability of supplies among health care workers in the selected health care facilities in Sebha, Libya

Darling B. Jiji^{1*}, Marlyn Lumitap Cabading², Bazil Alfred Benjamin³

¹Lecturer, College of Nursing, Sebha University, Sebha, Libya

²Asst. Lecturer, College of Nursing, Sebha University, Sebha, Libya

³Radiographer, Ministry of Health, Brack, Shathi, Libya

*Corresponding author email: jijinjin2000@gmail.com

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Abstract

Pre-eclampsia and eclampsia are the hypertensive disorders of pregnancy that affect 5-10% of all pregnancies. Pre-eclampsia remains one of the leading causes for maternal and foetal/ neonatal mortality and morbidity affecting 2-5% of all pregnancies in the occidental world, but up to 10% in developing countries. The aim of the study was to assess the knowledge of health care workers about pregnancy induced hypertension; find out the risk factors and availability of supplies in the selected health care facilities. A descriptive study was conducted to assess the knowledge, risk factors about pregnancy induced hypertension and the availability of supplies among health care workers in the selected health care facilities in Sebha, Libya. Purposive sampling technique was employed to select sample and it consisted of 138 health care workers. Data was collected using structured interview schedule. Findings of the study showed that majority 76 (55.1%) had adequate knowledge about pregnancy induced hypertension and 62 (44.9%) had inadequate knowledge about pregnancy induced hypertension. Almost all health workers (99%) knew methyldopa is the drug used to control raised blood pressure. To control and prevent eclampsia, 95% of health care workers given magnesium sulphate. Finding of the study indicated the need to conduct frequent assessment

of knowledge and risk factors of pregnancy induced hypertension among health care workers. Awareness programmes should be conducted among the health care workers to promote their knowledge about pregnancy induced hypertension.

Key words

Pregnancy induced hypertension, Healthcare workers, Pre-eclampsia, Eclampsia.

Introduction

Pre-eclampsia has been defined as a disease of first pregnancies. The association between primi parity and pre-eclampsia is so widely accepted that is at the core of several patho-physiological theories [1]. Eclampsia is associated with high case fatality rate and a major contributor to maternal deaths [2]. Hypertension in pregnancy is one of the major causes of prenatal mortality and morbidity. In both the developed and developing world, pre-eclampsia and eclampsia are the leading cause of maternal and peri-natal mortality and extensive morbidity [3].

Elevated blood pressure (BP) at early or mid-pregnancy is a risk factor for pregnancy induced hypertension (PIH). However, the association between BP changes during the first half of pregnancy and subsequent PIH development is unknown. The risk of pre-eclampsia was 4.1% in the first pregnancy and 1.7% in later pregnancies. However, the risk was 14.7% in the second pregnancy for women who had pre-eclampsia in their first pregnancy and 31.9% for women who had pre-eclampsia in the previous two pregnancies [4, 5].

Pre-eclampsia is one of the most feared pregnancy complications with a risk of maternal and foetal death and with no ideal therapy readily available. Having pre-eclampsia in one pregnancy is a poor predictor subsequent pregnancy, but a strong predictor for recurrence of pre-eclampsia in future gestation [6]. The definitive treatment of the pre-eclampsia/

eclampsia is delivery to prevent development of maternal or foetal complications from disease progression [7]. In 2002, there were over 4 million cases of pre-eclampsia and eclampsia globally, of which 63,000 result in a maternal death [6, 8].

Pre-eclampsia is unpredictable in its onset and the only cure is delivery of the baby. The most crucial step in identifying pre-eclampsia is the early detection of elevated blood pressure [8]. Maternal mortality in PIH is primarily due to low standard of care and delay in referral services. One of the most important functions of antenatal care (ANC) is to detect high risk pregnancies and to give them the necessary care. Early detection of pre-eclampsia and eclampsia are important in reducing the maternal and neonatal morbidity and mortality. The ultimate cure for pre-eclampsia is delivery of the baby.

Objectives

1. To assess the knowledge about pregnancy induced hypertension.
2. To find out the risk factors pregnancy induced hypertension.
3. To find out the availability of supplies in the selected health care facilities.

Material and methods

To achieve the objectives a descriptive research design was adopted. Purposive sampling technique was used to obtain sample and it

consisted of 138 health care workers. The study was conducted at selected hospital of Sebha, Libya. Data was collected using structured interview schedule. It consisted of four parts, viz. Part –I that helped to collect the demographic data of health care workers; Part – II was aimed at assessing the risk factors of pregnancy induced hypertension; Part – III was aimed at assessing the availability of supplies in the selected health care facilities and Part – IV was aimed at assessing the healthcare workers with knowledge in managing patients with pre-eclampsia/ eclampsia.

Results

The study sample consisted of 138 health care workers. Maximum 84 (60.9%) healthcare workers belongs to the age group of 31 to 40 years; 22 (15.9%) were in the age group and 32 (23.2%) were belongs to above 41 years as per **Table - 1**. Regarding cadre, majority 84 (60.9%) were nurses; 37 (26.8%) were doctors and 17 (12.3%) were clinical officers. Majority 62 (44.9%) belongs to private health facility level; 61 (44.2%) were to hospital health facility level and 15 (10.9%) were from healthcare centres. Majority 77 (55.8%) had work experience between 24 to 60 months; 44 (31.9%) had work experience more than 61 months and 17 (12.3%) had work experience between 1 to 23 months. Majority 91 (65.9%) were not trained on pre-eclampsia/ eclampsia and only 47 (34.1%) had training on pre-eclampsia/ eclampsia as per **Table - 1**. There was maximum 34 (91.9%) doctors had adequate knowledge about risk factors of pre-eclampsia/ eclampsia; 72 (85.7%) nurses had adequate knowledge about risk factors of pre-eclampsia/eclampsia and 12 (70.6%) clinical officers had adequate knowledge about risk factors of pre-eclampsia/ eclampsia. At the same time 36 (97.3%) doctors were aware of symptoms of pre-eclampsia/ eclampsia; 75 (89.3%) nurses were aware of

symptoms of pre-eclampsia/ eclampsia and 14 (82.3%) clinical officers were aware of symptoms of pre-eclampsia/ eclampsia as per **Table - 2**.

Almost all health workers (99%) knew methyldopa is the drug used to control raised blood pressure; 80% knew nifedipine is the drug used to control raised blood pressure and 29% would use hydrallazine to control blood pressure. To control and prevent eclampsia 95% of health care workers would give magnesium sulphate as per **Table - 3**. More than half (64%) of health workers had adequate knowledge in managing patients with pre-eclampsia and eclampsia. Among the doctors 84% had adequate knowledge. Those who had training 77% had adequate knowledge as per **Table - 4**.

Conclusion

Findings of the study showed that majority 76 (55.1%) had adequate knowledge about pregnancy –induced hypertension and 62 (44.9%) had inadequate knowledge about pregnancy-induced hypertension. Almost all health workers, 99% knew methyldopa is the drug used to control raised blood pressure. To control and prevent eclampsia 95% of health care workers given magnesium sulphate. There was maximum 34 (91.9%) doctors had adequate knowledge about risk factors of pre-eclampsia/ eclampsia; 72 (85.7%) nurses had adequate knowledge about risk factors of pre-eclampsia/ eclampsia and 12 (70.6%) clinical officers had had adequate knowledge about risk factors of pre-eclampsia/ eclampsia. Finding of the study indicated the need to conduct frequent assessment of knowledge and risk factors of pregnancy-induced hypertension among health care workers.

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Table – 1: Distribution of health care workers interviewed.

| Characteristic | N = 138 | Percentage |
|---------------------------------|---------|------------|
| Age (years) | | |
| 20 – 30 | 22 | 15.94 |
| 31 – 40 | 84 | 60.87 |
| Above 41 | 32 | 23.19 |
| Cadre | | |
| Nurses | 84 | 60.87 |
| Clinical officers | 17 | 12.32 |
| Doctors | 37 | 26.81 |
| Health facility level | | |
| Hospital | 61 | 44.20 |
| Health centre | 15 | 10.87 |
| Dispensary | 62 | 44.93 |
| Work experience (months) | | |
| 1 – 23 | 17 | 12.32 |
| 24 – 60 | 77 | 55.80 |
| Above 61 | 44 | 31.88 |
| Trained Pre-eclampsia/eclampsia | | |
| Trained | 47 | 34.06 |
| Un trained | 91 | 65.94 |

Table – 2: Proportion of health care workers with knowledge of the risk factors and symptoms of the risk factors and symptoms of pre-eclampsia/ eclampsia.

| Variables | Nurses N = 84 | | Clinical officers N = 17 | | Doctors N = 37 | | Total N = 138 | |
|-------------------------|------------------|------|-----------------------------|------|-------------------|------|------------------|------|
| | N | % | N | % | N | % | N | % |
| Risk factors | | | | | | | | |
| Primi gravidity | 72 | 85.9 | 12 | 70.6 | 34 | 91.9 | 118 | 85.5 |
| Young age | 32 | 38.1 | 6 | 35.3 | 23 | 62.2 | 61 | 44.2 |
| Advanced age | 16 | 19.1 | 2 | 11.8 | 14 | 37.8 | 32 | 23.2 |
| Previous history | | | | | | | | |
| PIH | 36 | 42.9 | 3 | 17.6 | 35 | 94.6 | 74 | 53.6 |
| Twining | 51 | 60.7 | 13 | 76.5 | 32 | 86.5 | 96 | 69.6 |
| Others | 41 | 48.8 | 6 | 35.3 | 18 | 48.7 | 65 | 47.1 |
| Symptoms | | | | | | | | |
| Severe headache | 75 | 89.3 | 14 | 82.4 | 36 | 97.3 | 125 | 90.6 |
| Epigastric pain | 48 | 57.1 | 7 | 41.2 | 34 | 91.9 | 89 | 64.5 |
| Blurring of vision | 64 | 76.2 | 10 | 58.8 | 35 | 94.6 | 109 | 79.1 |
| Nausea/ Vomiting | 4 | 4.8 | 0 | 0 | 13 | 35.1 | 17 | 12.3 |

Table – 3: Proportion of health care workers with knowledge on anti-hypertensives and anti-convulsants in managing pre-eclampsia/eclampsia.

| Drug | Nurses N = 84 | | Clinical officers N = 17 | | Doctors N = 37 | | Total N = 138 | |
|---------------------------|------------------|------|-----------------------------|------|-------------------|------|------------------|------|
| | N | % | N | % | N | % | N | % |
| Anti-hypertensives | | | | | | | | |
| Methyldopa | 84 | 100 | 15 | 88.2 | 37 | 100 | 136 | 98.6 |
| Nifidipine | 66 | 78.6 | 10 | 58.8 | 35 | 94.6 | 111 | 80.4 |
| Hydralazine | 18 | 21.4 | 1 | 5.9 | 21 | 56.8 | 40 | 29.1 |
| Anti-convulsants | | | | | | | | |
| Magnesium sulphate | 82 | 97.6 | 12 | 70.6 | 37 | 100 | 131 | 94.9 |
| Diazepam | 49 | 58.3 | 12 | 70.6 | 26 | 70.2 | 87 | 63.0 |

Table – 4: Overall proportion of health care workers with knowledge in managing patients with pre-eclampsia/ eclampsia.

| Characteristic | Total knowledge | | | | Total N = 138 | |
|---------------------------------|-------------------|------|---------------------|------|------------------|--|
| | Adequate N= 76 | | Inadequate N= 62 | | | |
| | N | % | N | % | | |
| Age (in years) | | | | | | |
| 20 – 30 | 12 | 15.8 | 10 | 16.1 | 22 | |
| 31 – 40 | 51 | 67.1 | 33 | 53.2 | 84 | |
| Above 41 | 13 | 17.1 | 19 | 30.7 | 32 | |
| Cadre | | | | | | |
| Nurses | 38 | 50.0 | 46 | 74.2 | 84 | |
| Clinical officers | 7 | 9.2 | 10 | 16.1 | 17 | |
| Doctors | 31 | 40.8 | 6 | 9.7 | 37 | |
| Health facility level | | | | | | |
| Hospital | 38 | 50.0 | 23 | 37.1 | 61 | |
| Health centre | 14 | 18.4 | 1 | 1.6 | 15 | |
| Dispensary | 24 | 31.6 | 38 | 61.3 | 62 | |
| Work experience (months) | | | | | | |
| 1 – 23 | 7 | 9.2 | 10 | 16.1 | 17 | |
| 24 – 60 | 43 | 56.6 | 34 | 54.8 | 77 | |
| Above 61 | 26 | 34.2 | 18 | 29.1 | 44 | |
| Trained pre-eclampsia/eclampsia | | | | | | |
| Trained | 36 | 47.4 | 11 | 17.7 | 47 | |
| Un trained | 40 | 52.6 | 51 | 82.3 | 91 | |

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