Original Research Article

**Assessment of Nurses’ Knowledge Regarding Adverse Effect Of Antihypertensive Drugs: A Cross Sectional Study**

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**ABSTRACT**

The current study was conducted in some hospitals in Basra, southern Iraq, on some nurses working in various departments to participate in the questionnaire, which aims to evaluate nurses’ knowledge about the adverse action of high blood pressure medications. 70 female and male nurses participated in the questionnaire to answer 20 questions. The results were 78. 49% of the nurses were sure of the answer, 20% did not know the answer, and 25.9 were not sure of their answers The total mean of score was significant (2.27),. The results conclude that knowledge of nurses regarding the adverse effects of high blood pressure medications on patients is insufficient, and nurses need to enhance scientific and practical knowledge.

**Keywords: Nurses, knowledge, hypertension, adverse effect. Antihypertensive drugs**

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1. **Introduction**

Poor adherence to antihypertensive medications and persistently elevated blood pressure may be responsible for a significant portion of cardiovascular events, including angina, myocardial infarction, chronic heart failure, kidney failure, transient cerebral ischemic attacks and strokes, premature mortality and disability, and increased hospitalisation costs. A significant proportion of cardiovascular events such as angina pectoris, myocardial infarction, chronic heart failure, renal failure, strokes, transient cerebral ischemic attacks, premature deaths, disability and hight cost of hospitalization can be attributed to poor adherence to antihypertensive medications and persistent elevation in blood pressure. [1,2,3,4]. So that Reducing renal and cardiovascular morbidity and death by blood pressure (BP) reduction is the primary objective of antihypertensive medication treatment. In order to do this, patients should be urged to follow the recommended non-pharmacologic and pharmacologic treatment plans. Therefore, the importance of treatment with antihypertensive drugs is to decrease blood pressure (BP) in order to prevent renal and cardiovascular morbidity and death. Patients must follow the recommended pharmacological and non-pharmacological management measures in order to receive successful therapy. [5].

Adverse effects like cough, edoema, Wheezing/shortness of breath, headache, flush, increased urination, fast pulse, and dizziness can all be severe enough to interfere with the administration of antihypertensive drugs, even though hospitalisation for side effects and potentially fatal side effects are rare. Although life-threatening adverse effects and hospitalisation due to adverse effects are rare, side effects such as cough, edoema, flushing, headache, increased urination, rapid pulse, wheezing/shortness of breath, and dizziness can be detrimental enough to interfere with the medication used to treat hypertension. [6,7,8,9,10,11,12,13,14,15,16,17,18]

In hypertension patients, adverse effects play a major role in the non-adherence to antihypertensive treatment. Most patients are unaware of whether their antihypertensive drugs are to blame for their symptoms. On the other hand, non-adherent patients are often those who believed that their antihypertensive drugs were the cause of their problems. Patients should actively participate in the decision-making process and get counselling on common side effects of their antihypertensive drugs. Future research utilising prospective study designs is necessary to have a deeper understanding of the relationship between non-adherence and deleterious outcomes. The detrimental effect of non-adherence to antihypertensive medications in patients with high blood pressure is significant. Many patients have no idea whether their symptoms are caused by antihypertensive drug therapy. Patients were nonadherent when they discovered that their antihypertensive drugs were the cause of their symptoms. Patients must to be personally and significantly involved in the decision-making process, as well as given counselling regarding the typical side effects of antihypertensive drugs. As a result, patients need assistance in comprehending the connection between side effects and non-adherence. [19].

The relationship between antihypertensive medication and side effects, demonstrating how this relationship changes for different drug classes and for less severe side effects (such syncope and hypotension without falls) as well as more severe side effects (like acute renal damage). Contrary to popular belief The correlation between adverse events and antihypertensive medication, and how this correlation varies throughout pharmacological classes, and mild adverse events (eg, hypotension without falls) and more severe adverse events (eg, acute kidney injury, syncope). Despite common belief [20,21].

Numerous variables influence adherence, including drug costs and doctors' inadequate communication with patients about the significance of treating hypertension, which is frequently asymptomatic. Adverse drug events (ADEs), many of which are dose-related, are a major cause of low compliance among patients using antihypertensive medicines. Factors that affect compliance include drug prices and doctors' unclear explanations to patients about the importance of treating asymptomatic hypertension. The most important cause of poor compliance among patients receiving antihypertensive medications is adverse drug events (ADEs), most of which are dose-related. [22,23]. Hypertension is most prevalent among people older than 60 years, People over the age of 60 are most susceptible to high blood pressure [24.25altered pharmacokinetics (e.g., decreased liver and kidney function, increased receptor sensitivity), which can result in even higher extremes in individual medication response than in younger individuals, might make therapy particularly difficult. It has also been recommended to identify unpleasant responses by various techniques in order to reduce the unfavourable prognosis linked to bad reactions. Because of the reduced function of the liver and kidneys and the elevated receptor sensitivity, which can result in altered individual drug response compared to younger adults. Various methods have also been used to reduce misdiagnosis associated with adverse reactions. [26] The adverse response profile to antihypertensive medications in our situation has not been adequately described, considering the antihypertensive arsenal utilised here. The tolerability profile of these medications in this setting has to be accurately described. Profile of adverse reactions reported by. Adverse interactions of antihypertensive drugs in our environment have not been properly described for the blood pressure used in this setting. There is a need to characterize the tolerability properties of these drugs in this environment. [27]

Results of [28revealed that 62.5 percent of patients who experienced an adverse response to ACEI had a dry cough, and one patient had loose stools. Additionally, 73.1 percent of patients using diuretics had excessive micturition, while 44 percent of patients taking CCB had polyuria, or an increase in volume.

1. **Materials and Methods**

A cross-sectional study aimed at evaluating the knowledge of nurses working in some Basra hospitals about the adverse effects of medications used to lower blood pressure. decrease the blood pressure. 70 nurses (both male and female) from various hospitals in Basrah, southern Iraq, who worked in various departments completed an assessment questionnaire designed for this purpose. The questionnaire included a demographic axis with questions about gender, years of experience, and educational attainment, as well as the hospital where the nurses were employed. To evaluate participants' knowledge and conduct a static analysis, the second axis contained some informational questions on the side effects of using antihypertensive drugs. For percentage, mean, and significance calculations, the SPSS programme is utilised.

1. **Results and Discussion**

One of the most common medications used to raise the causes of this condition is anti-hypertensive medication. Owing to the wide variety of these medications, their varied origins of manufacture and application, as well as the nature of their mechanisms of action, these preparations are a predictor of the development of unfavourable patient responses.Responsibility for adverse reactions to the drug falls on the user of the drug or the methods of administering it by the nursing or medical staff, and sometimes on the drug producer**.** Table No. (1) shows the number of participants in the questionnaire: 28.57 males and 71.43 females, due to the large female orientation towards this profession. Regarding the educational level, the majority of participants hold a diploma (45%) due to the recent establishment of the College of Nursing in the region. Nurses are distributed in various departments of the hospital

Table 1. The Frequency and Percentage of The Demographic Information

|  |  |  |  |
| --- | --- | --- | --- |
|  | | F | % |
| **Gender** | Male | 20 | 28.57 |
| Female | 50 | 71.43 |
| **Education Level** | Nursing School | 23 | 32.86 |
| BSc. | 13 | 18.57 |
| Diplomat | 32 | 45.71 |
| MSc, | 1 | 1.43 |
| Ph.D. | 1 | 1.43 |
| **Year of Experience** | 1-5 | 34 | 48.57 |
| 6-10 | 17 | 24.29 |
| 11-15 | 5 | 28.57 |
| 15> | 14 | 71.43 |
| **Work Department** | Emergency | 4 | 32.86 |
| ICU | 7 | 18.57 |
| Other | 59 | 45.71 |

The results in Table (2) regarding nurses’ knowledge of the adverse effects of hypertensive medications show that 49.78 of the nurses participating in the questionnaire know, 20% did not know, and 25.9% were not sure of their knowledge. we think that any nurses should Know all the adverse effects of hyper tensile drugs. We believe that the disparity in knowledge is due to the lack of academic knowledge and experience regarding this type of medicine. [29]. discovered that people did not engage in health-related behaviour if they had even a minimal level of health-related motivation and understanding. [30]

Table 2. Mean of Score and Significancy Regarding Scientific

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Questions** | **Know** | **Don’t Know** | **not sure** | **MS** | **S** |
| **1** | Adverse effects are rare occurrences | 20 | 24 | 16 | 2.66 | S |
| **2** | It causes flush, headache, | 38 | 16 | 16 | 2.94 | S |
| **3** | It causes increased urination, rapid pulse, | 56 | 9 | 5 | 4.07 | S |
| **4** | Cause edema, cough | 20 | 33 | 17 | 1.67 | NS |
| **5** | Risk of drug cause adverse effect on blood pressure | 22 | 30 | 18 | 1.83 | NS |
| **6** | Missed dose on BP cause adverse effects | 33 | 8 | 29 | 2.77 | S |
| **7** | Unavailability of drugs in the market | 26 | 25 | 19 | 2.13 | S |
| **8** | adverse effects of antihypertensive drugs are Tiredness and dizziness | 53 | 8 | 9 | 3.91 | S |
| **9** | Hypotension | 56 | 3 | 11 | 4.16 | S |
| **10** | adverse effects of antihypertensive Depend on period of drugs | 57 | 4 | 9 | 4.20 | S |
| **11** | Nightmares (bad dreams) | 17 | 25 | 28 | 1.61 | NS |
| **12** | Frequency of micturition | 56 | 2 | 12 | 4.17 | S |
| **13** | Reduced sexual urge | 18 | 7 | 47 | 1.96 | NS |
| **14** | Insomnia | 48 | 11 | 11 | 3.59 | S |
| **15** | Urinary incontinence | 36 | 12 | 22 | 2.89 | S |
| **16** | Diarrhea or Constipation | 20 | 20 | 30 | 1.86 | NS |
| **17** | Nervous/restless | 48 | 6 | 18 | 3.69 | S |
| **18** | Disturbance of taste | 23 | 20 | 27 | 2.03 | S |
| **19** | Nausea | 50 | 7 | 14 | 3.77 | S |
| **20** | Cold hands/feet | 43 | 10 | 17 | 3.31 | S |
| Total | |  |  |  | 2.27 | S |

**MS = Mean of Score S = Significant NS = None Significant**

The result of study showed that the mean of score of 75% of the items were significant and 25% were not significant and the total mean of score was significant (2.27) .

1. **Conclusions**

Several studies have indicated a lack of knowledge and poor behavior and practice among the rates of hypertension. This influences the location, level of knowledge and practice of controlling high blood pressure despite appropriate treatment. Therefore, health care must rely on not only diagnosing the causes of patients suffering from high blood pressure, but also creating awareness about combating high blood pressure and its complications. Hence, the researcher was interested in evaluating knowledge and awareness of high blood pressure among people with high blood pressure. Other studyestablished that a higher level of knowledge about the disease leads to better self-care and compliance with therapy or oversight. Nonetheless, there remained a discrepancy between understanding the illness and adhering to medication regimens and disease control.

As a result, there was a gap between knowledge and practice, meaning that even while participants knew what had to be done, they did not behave in that way. This is because, although knowledge contains a rational component, adhering to a practice entails a multitude of components, including emotional, social, biological, and cultural aspects. According to Aubert et al. (2008), the majority of individuals knew enough, but very few were driven, desired change, and made an effort to do it. Few had really put it into practice, meaning that deliberately adopting a new behaviour [31]. Therefore, we find it very necessary to improve the academic and training level regarding dealing with adverse reactions to medications and adhere to approved international standards in this regard, Continuous assess of nurses’ performance to improve their level.

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