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# EVALUATE THE ROLE OF PHARMACISTS IN THE TREATMENT OF HIGH BLOOD PRESSURE.

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## ABSTRACT

The objectives of this study were to evaluate the knowledge and participation of pharmacists in the management of a hypertensive patient. All Royal Medical Services Pharmacies have been asked to complete a Pharmacist Questionnaire. A total of 40 pharmacies in the survey. Only 70% of pharmacists were able to provide a correct definition of hypertension. Most people believe that high blood pressure in the general population is well controlled and that both tolerance and compliance with blood pressure treatment are satisfactory. They can often provide 80% SBPM device, but 36% can only provide advice on recommended methods. As a result, pharmacists' knowledge is often wrong and must be improved through continuous education programs.

## INTRODUCTION

High blood pressure, a reversible risk factor for MI and stroke, is a common health problem in France that affects about one half of adults over the age of 40. They have shown the ability to lower blood pressure, cardiovascular disease and mortality.[1,2,3,4] Because systemic hypertension often does not fully manifest itself, it is important for patients to have clear information about the risks associated with increase blood pressure, as well as lifestyle changes and drugs. Drug side effects should also be described. The participation of physicians in this educational process is very important, but it is likely that pharmacists also play an important role in this regard. In addition, patients can ask their pharmacist to go to the pharmacy to measure their blood pressure or request an automatic sphygmomanometer (SBPM). Promoting the use of SBPM, which can help improve patient education and control blood pressure, is important. Several studies have reported success, including adequacy of medication and patient satisfaction with hypertension in the elderly.[5,6] In the RMS epidemiological study, therefore, the walk through pharmacies was successful The secondary objectives were to estimate the knowledge of the pharmacists in management of high blood pressure.

## METHODS

Irbid is one of the largest cities in Jordan in terms of demographic and epidemiological profile, higher average age (30% over 60), resulting in higher cardiovascular mortality. The "Pharmacist" questionnaire should be returned with the call response. The purpose of this questionnaire is to evaluate the pharmacist's knowledge in Prince Hashem Bin Alhussien about HBP, in particular the definition of HBP, control of HBP in Jordan, treatment compatibility, drug-related side effects and concerns about SBPM. The questionnaire was submitted by 40 pharmacists participated in the questionnaire survey. Statistical analysis was performed using Statview software (SAS Institute, Berkeley, California, USA). Student unpaired t-test was used to compare continuous variables and test 2 was used to test the differences between classification variables. Multivariate analysis was performed through logistic regression analysis. P values less than 0.05 were considered statistically significant.

## RESULTS

Results of the 'Pharmacists' questionnaire'.
Only 45% of pharmacists correctly defined HBP, i.e. BP above 140/90 mm Hg. Four former World Health Organization pharmacists (160/95 mm Hg) reported 3% strains without referral. According to previous responses, pharmacists did not think that treating high blood pressure was a real problem. In fact, we thought that 70% of them were satisfied and only 19% were satisfied. Poor. Only 27% of pharmacists reported that patients reported "recurrent" or "moderate" side effects. ACE inhibitors, calcium channel blockers, and beta blockers have been reported to be bad tolerated at approximately 23%, 15%, and 9%, respectively. Most patients 60%

asked physicians and pharmacists to observe side effects at the beginning of treatment. Overall, 25% of respondents believe that this information should be provided by a physician and 4% of them should provide it by a pharmacist. Finally, pharmacists 11% of them thought that the information about side effects was irrelevant. Most pharmacists were confident of the benefits of SBPM. 90% of them believed that this method could "help physicians to diagnose or evaluate the effectiveness of treatment." 10% of Pharmacists believed that doctors' decisions were "useless due to lack of approval and validity". 31 find it "beneficial for patients in improving their HBP management", while 9 people consider it "harmful to patients as long as they can cause obsessive-compulsive behavior or severe anxiety". A total of 75% pharmacists emphasized the benefit of good patient education before handing over the devices. Frequent use by pharmacists 53% was measured "once a day for one month". Only 20% of pharmacists recommended repeating "measurement twice a day for one week." 27% (18 patients) advised patients to measure "at any time" as shown in table 1.

**Table 1: Attitude of pharmacy toward hypertensive disease.**

| | |
|---|---|
| 1- which of the following value is normal BP: | |
| A- super than 140/90 | 45% |
| B-equal 140/90 | 10% |
| C- 160/95 | 10% |
| D- non of the above | 35% |
| 2- What is the percentage of normalized patients in Jordan: | |
| A- less than 50% | 50% |
| B-equal 50% | 20% |
| C-more than 50% | 10% |
| D- more than 80% | 20% |
| 3- The compliance with the antihypertensive treatment was considered : | |
| A- not problem | 5% |
| B- satisfactory | 70% |
| C-poor | 19% |
| D-less important | 6% |
| 4- ACE-inhibitors worse tolerated by the patients: | |
| A-YES | 23% |
| B-NO | 77% |
| 5-Calcium channel blockers worse tolerated by the patients: | |
| A-YES | 15% |
| B-NO | 85% |
| 6-Beta-blockers worse tolerated by the patients: | |
| A-YES | 9% |
| B-NO | 81% |
| 7- The information about side effects of antihypertensive treatment should be given by: | |
| A- The doctors only | 25% |
| B-The pharmacists only | 4% |
| C- Doctors and pharmacists | 50% |
| D- The pharmacist are irrelevant | 21% |
| 8- SBPM is | |
| A- Could help the doctor for the diagnosis or for the assessment of the treatment effects | 90% |
| B- Useless for the doctor's decision because of a lack of validation and reliability | 5% |
| C- Useful for the patients in improving the management of their HBP' | 2% |
| D- Harmful for the patients as long as it could result in obsessional behaviour or generate extreme anxiety' | 3% |
| 9-The best frequency of use of SBPM is: | |
| A- one measurement a day for 1 month | 30% |
| B- two measures a day during 1 week | 20% |
| C- at anytime of the day | 10% |
| D- Non of the above | 40% |
| 10- which of the following antihypertensive treatment has lipid soluble effect: | |
| A- Atenolol | 50% |
| B-Propranolo | 25% |
| C-CCB | 20% |
| D- Hydralazine | 5% |
| 11-which of following medication is suitable for pregnant with hypertension: | |
| A- methlyl dopa | 65% |
| B-Atenolol | 10% |
| C- CCB | 10% |
| D-Ramipril | 15% |
| 12- Which of medication cannot be used as antihypertensive therapy during pregnancy | |
| A. Atenolol | 10% |
| B. Bisoprolol | 15% |
| C. Enalapril | 30% |
| D. Amlodipin | 30% |
| E. Methyldopa | 15% |
| 13- which of the following is not the major side effect of BB drugs: | |
| A. Tiredness | 10% |
| B. Bradycardia | 15% |
| C. Cold peripheries | 30% |
| D. Wheezing | 40% |
| E. Hyperkalaemia | 5% |
| 14- Which of the following antihypertensive drugs is aldosterone antagonists | |
| A. Spironolactone | 80% |
| B. Atenolol | 10% |
| C. ACE inhibitors | 5% |
| D. ARBs | 5% |
| E. CCBs | .. |
| 15- Which of the following is contraindicate of diuretic: | |
| A. gout | 50% |
| B. Asthma/chronic obstructive pulmonary disease | 20% |
| Angina Heart block | |
| C. Heart failure | 10% |
| D. Dyslipidaemia | 10% |
| E.Non of the above | 10% |

## DISCUSSION

Pharmacists' involvement in controlling high blood pressure may increase control.[7,8] Drug programs to promote high blood pressure health are currently being implemented in Canada and the United States. They are very rare in Europe. Most of them have been shown to improve the outcome of high blood pressure, improve infection and reduce BP levels. However, study 90'10 showed that the efficacy of such drug interventions is largely determined by the patient's income status. The results of the survey show that pharmacists can highlight the following issues in their need to training programs to improve the treatment of people with high blood pressure: clinical definitions of optimal blood pressure, high blood pressure and high blood pressure; SBPM method (list of devices tested, frequency and measurement methods, delivery of results to physician), attention to lifestyle changes, patient data on side effects of drug treatment, importance of drug adherence and risk of acute withdrawal, reason for hybrid treatment.

## CONCLUSION

Pharmacists, established as one of the most cost-effective healthcare providers in the community, can increase patients' knowledge and commitment to HBP management. The knowledge of the pharmacists evaluated in our study is often insufficient. Appropriate training programs should then be extensively developed and considered as one of the key components of health services.

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