Overview of risk factors in the use of antihypertensive biomaterials drugs in medical prescriptions

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ABSTRACT

A drug utilisation search is also packed with information about the effectiveness of drug use, as well as information about the drug itself. Prioritization is effective when it is used to facilitate the allocation of resources in a sensible manner, resources to assist you in maintaining or improving your fitness. Men and women always had a risk of hypertension. The current inquiry's main purpose is to present an overview about the antihypertensive drug exploitation sample, threat part drug detection evidence in the manufacturing and the identification of the threat. It provides richer insights into individualised but premium pharmacological care of hypertension by examining prescription trends and use of antihypertensive medicines. Gathering a data sample of the medicine used in anti-hypertensive prescriptions, as well as to determine the risk factors for hypertension is also briefed.

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1. Introduction

A drug utilisation search is also packed with information about the effectiveness of drug use, as well as information about the drug itself. Prioritization is effective when it is used to facilitate the allocation of resources in a sensible manner, resources to assist you in maintaining or improving your fitness [1]. Diastolic stress is defined as the strain experienced by the ventricles when the blood pressure is more than 140 mm Hg and/ or diastolic [2]. It is possible to relax muscle tissue while still experiencing diastolic stress, whereas the systolic stress (a high level of tension) is experienced when contracting the muscle tissue. Systole is characterized by the contraction of the ventricles. The Seventh Report of the Joint National Committee for High Blood Pressure Prevention, Detection, Evaluation and Medication has drawn up Adult Hypertension Categorizations for hypertension [3]. An important aspect of scientific audit is thoroughly investigating and learning about medication utilisation. Video display units are used to determine about which prescription drugs are to take and where additional information regarding rational drug use can be obtained [4,5]. Internationally, a number of different solutions for the treatment of hypertension have been made available to patients. These are used as references by clinical practitioners to help them with their work. Numerous practitioners, motivated by their own clinical experience with hypertensive patients, choose to employ a prescription sample that they have created for themselves. For primary care and doctors to be successful in the management of hypertension, they must have the ability to employ cutting-edge methods that are made available to them by the medical community. This work is to provide richer insights into individualised but premium pharmacological care of hypertension by examining prescription trends and use of antihypertensive medicines. The primary goal of the current study is to present an overview about gathering a data sample of the medicine used in anti-hypertensive prescriptions, as well as to determine the risk factors for hypertension.

2. Methodology

The general medicine division of the hospital was chosen as the site for this research. Specifically, in this division the place where the patients were brought was made. The successful completion of the research project being conducted in this division was made possible by the excellent coordination between the medical team and the pharmaceutical practise department. All of the relevant details pertaining to the study are included in the protocol, along

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Table 1
Sex rating at n = 102.

Sex	Number of patients	Percentage %
Feminine	43	42.77
Man	59	58.23

Table 2
Age at n = 102.

No.	Years	Man at n = 60	Feminine at n = 42	Number of patients	Percentage %
1	21–40	6	5	11	18.33
2	41–51	8	12	20	33.33
3	51–61	24	14	38	63.33
4	61–71	14	13	27	45.00
5	71–81	8	4	12	20.00

Table 3
A set of BMI at n = 102.

Crowding	BMI (kg/m^2)	Number of patients	Percentage %
Underweight	Less than 19	6	5.88
Normal weight	20–26	14	13.72
Overweight	26–31	36	35.29
Pre-obese	31–41	6	5.88
Obese	Over 41	40	39.21

Table 4
Hypertension partition at n = 102 (classification of JNC-7).

Crowding	Number of patients	Percentage %
Standard	6	5.88
Pre-hypertension	14	13.72
Stage-1	45	44.11
Stage-2	37	36.27

Table 5
Interoperability at n = 19.

No.	Interoperability	Number of patients	Percentage %
1.	Diabetes mellitus	35	17.94
2.	Hyperlipidaemia	7	3.58
3.	ARF/CRF	21	10.76
4.	Seizure	5	2.56
5.	Stroke	12	6.15
6.	IHD	4	2.05
7.	CHF	16	8.20
8.	Asthma/COPD	14	7.17
9.	UTI	16	8.20
10.	Angina	15	7.69
11.	Ulcer	19	9.74
12.	Anaemia	6	3.07
13.	MI	14	7.17
14.	LRTI	3	1.53
15.	Others	8	4.10

Table 6
Drugs particular at n = 783.

No.	Sorts of Drugs	Number of Drugs	Percentage %
1.	NSAID	72	9.19
2.	Antibiotics	63	8.04
3.	Antihypertensive	138	17.62
4.	Anti-ulcer	74	9.45
5.	Anti-diabetics	58	7.40
6.	Anti-anxiety	19	2.42
7.	Antiepileptic	8	1.02
8.	Analgesics	19	2.42
9.	Antiasthma	12	1.53
10.	Dyslipidaemia	55	7.02
11.	Antigout	13	1.66
12.	Anticoagulants	29	3.70
13.	Thrombolytic	20	2.55
14.	Antidotes	18	2.29
15.	Antianginal	25	3.19
16.	Minerals and vitamins	39	4.98
17.	Antacids	22	2.80
18.	Anti-histamine	6	0.76
19.	Potassium supplements	14	1.78
20.	Antiemetic	15	1.91
21.	Others	64	8.17

Table 7
Drugs of co-treated at n = 102.

Type of drugs	Number of co-treated	Percentage %
More than two drugs	21	20.59
Dual therapy	45	44.11
Mono therapy	36	35.29

Table 8
The drugs for anti-hypertensives at n = 152.

Denomination	Number of drugs	Percentage %
Beta blockers	34	22.36
ACE inhibitors	12	7.89
Diuretics	28	18.42
Alpha blockers	5	3.29
Angiotensin receptor blockers	31	20.39
Calcium channel blockers	42	27.63

c. patients who refuse to engage in the study would be denied the opportunity to take part in it

In addition, those who are unable to produce acceptable medical records are excluded from the study altogether. In order to guarantee each patient's privacy, each individual's personal information was recorded, including name, age, gender, admission and discharge dates, as well as the reason for the patient's admittance or discharge.

3. Observations

It was planned to use an observation strategy that had been approved by an ethics committee in an inpatient medical ward of a tertiary care hospital over an eight-month period. A full data entry form was completed on the day of admission and contained information such as patient demographics (age and gender), diagnosis, tests, therapy, and medicines. The approach was followed in accordance with the results of the laboratory measurements. Drug utilisation patterns were determined by screening patients' medication use with generic prescriptions and categorising pharmaceuticals according to their category, both of which were done in this study. When reviewing the patient's records, indicators of risk factors (that are present in the case history) were also noted. Interac-

with a literature review, objectives, and the detailed method etc. In order to take clearance for the study, the committee members were presented with the study protocol. Senior and junior doctors from the study department assisted in the research. The following are the eligibility requirements for this study:

a. participants must be over the age of 18 and either male or female
b. patient must have been diagnosed with hypertension

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Table 9
Anti-hypertensives suggested at n = 152.

Sorts of treatments	Sex name of drugs	Number of drugs	Percentage %
Calcium channel blocker (CCB)	Nifidepine	8	5.26
	Clinidipine	7	4.61
	Amlodipine	23	15.13
Beta blockers	Nebivolol	6	3.95
	Metoprolol	12	7.89
	Atenolol	18	11.84
	Propanalol	3	1.97
Angiotensin converting enzyme (ACE)	Ramipril	12	7.89
Angiotensin receptor blocker (ARB)	Olmesartan	3	1.97
	Losartan	8	5.26
	Telmisartan	19	12.50
Diuretics	Spironolactone	12	7.89
	Prazosin	5	3.29
	Torsemide	9	5.92
Alpha blockers	Furosemide	7	4.61

Table 10
Risk factors at n = 102.

No.	Risk factors	Influential variables	Percentage %
1.	Age > 50	10	9.80
2.	Family history	3	2.94
3.	Alcoholic	22	21.56
4.	Smoker and Alcoholic	20	19.61
5.	Obese	12	11.76
6.	Smoker	35	34.31

Table 11
Therapeutic examinations at n = 102.

Therapeutic examinations	Number of drugs	Percentage %
Formulation without drug interaction	45	44.12
Formulation with drug interaction	57	55.88

tions between medications were discovered through the usage of Micromedex as a medication database.

4. Discussion

According to the results obtained (Table 1), it was found that the rate of hypertensive in males is higher than the rate of hypertensive in females, [6]. Another study reported that the rate of hypertensive in males over the age of 50 years is higher than in the age groups under 50 years (Table 2), [7]. From the mass data

Table 13
The severity of the drug effect at n = 22.

Riskiness	Estimation of interferences	Percentage %
Main	3	13.64
Average	5	22.73
Slight	15	68.18

that was obtained by knowing the weight and height, an effect was found estimated at 54.3 % for obese people (Table 3) [8]. According to the classification of JNC-7, it was found that the number of patients with hypertensive is the category of the first stage of infection (Table 4) [9]. In another study, it was reported that patients with diabetes are more likely to develop hypertensive, Table 5 [10], and another study reported that the dual therapy that has been widely used for people with diabetes and hypertensive increased by 47.5 % Table 7 [11]. In another study, it was found that calcium-containing drugs were more commonly used than non-calcium-containing drugs by 41.97 % (Table 8) [12]. It was found that the most used treatments for antihypertensive drugs out of 152 drugs is amlodipine with a rate of 37.3 % (Table 9) [13]. In another studies, it was found that the risk of developing hypertensive increases for smokers (Table 10). Based on the studies presented, excellent results were obtained about the type of drugs used in the treatment of different hypertensive conditions, depending on the nature of the factors classified in the study (Tables 11-13) [14–19].Table 6.

5. Conclusion

If future research pursues this approach, it is possible that future studies will focus on monitoring drug use patterns in hypertensive patients on a periodic basis. Better health of patients necessitates handling of individual risk factors associated with those patients, such as smoking, alcohol consumption, and personal habits. Such antihypertensive adverse events could be studied in various disease groups, which can help in the development of guidelines for antihypertensive treatment management. Without a pharmacist's involvement, it was likely that hypertension will worsen and result in even more complications. To make sure the use of antihypertensive medications, it must be up to date and the necessary guidelines shall be examined and revised repeatedly.

CRediT authorship contribution statement

Qutaiba A. Qasim: Conceptualization, Methodology. **Ali saeed owayez:** Software, Data curation, Writing – original draft. **Mazin**

Table 12
Medicine-medicine Intercourse.

No.	Drugs intercourses	Intercourse	Influenced	Controls
1.	Spironolatone + Telmisartan	Life aggressive hyperkalemia	Major	Serum k stages should be monitored in patients with renal dysfunction.
2.	Aspirin + Metoprolol	Reduced effectiveness of metoprolol	Minor	intensity BP level
3.	Ramipril + Aspirin	Reduced ramipril effectiveness	Moderate	The benefits should be weighed against the risks by the clinician.
4.	Digoxin + Spironolactone	Digoxin toxicity	Minor	Supervise BP level
5.	Amlodipine + Metoprolol	Hypotension/ Brad ycardia	Moderate	Carefully examine the heart's role
6.	Aspirin + Atenolol	Reduced efficiency of atenolol	Minor	intensity BP stage
7.	Amlodipine + Diclofenac	Raised threat of GI haemorrhage	Minor	It might be antagonised to the antihypertensive effects.
8.	Clopidogrel + Amlodipine	Reduced response to clopidogrel	Moderate	Clopidogrel could possibly lose its effectiveness when used in combination with other drugs that affect platelet function.
9.	Aspirin + Furosemide	Reduced effectiveness of diuretics	Minor	Supervise BP intensity
10.	Diclofenac + Ramipril	Reduced antihypertensive effect	Moderate	Keep an eye on the patient for signs of hyperkalemia or acute renal failure.
11.	Aspirin + Spironolactone	Hyperkalemia	Minor	Supervise BP level
12.	Ramipril + Spironolactone	Hyperkalemia	Major	In patients with renal dysfunction, it is important to monitor serum k levels for the presence of persistent elevation.

A.A. Najm: Visualization. **H.N.K. AL-Salman:** Software, Investigation, Supervision.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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