Comparative Efficacy of Unani Drugs in the Management of Zight-ud-dam Qawi Ibtidai (Primary Hypertension)

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Abstract

Zight-ud-dam qawi ibtidai (Primary hypertension) is a disorder affecting the population at large. According to British Hypertension Society, hypertension is the level that exceeds the high normal level of 140/90 mmHg. Six Studies from different institutions were taken to compare their efficacy in the management of this disorder with Unani Drug combinations. Though all the drug combinations i.e. (i) Itrifal Kishneezi; (ii) Khameera Sandal Sada; (iii) Qurs Dawaus Shifa; (iv) Safoof-e-Kahu-Khar Khasak; (v) Safoof-e-Khashkhash & Sharbat-e-bazoori motadil and (vi) Safoof-e-Musakkin were proven to be effective but the most effective combination to normalise systolic blood pressure was found to be Safoof-e-Kahu-Khar Khasak while the most effective combination to normalise diastolic blood pressure as well as the symptomatology was found to be Safoof-e-Musakkin. Thus, after comparing the efficacy of all the Unani drugs combinations, '*Safoof-e-musakkin*' can be proposed to be the most effective Unani drug combination to be used for the management of zight-ud-dam qawi ibtidai, with best results.

Keywords: Zight-ud-dam qawi ibtidai, Itrifal Kishneezi, Khameera Sandal Sada, Qurs Dawaus Shifa, and Asrol.

Introduction

According to British Hypertension Society, hypertension is the level that exceeds the high normal level of 140/90 mmHg. It is categorised into 'grade I' (140-159/90-99 mmHg), 'grade II' (160-179/100-109 mmHg) and 'grade III' (≥180/≥110 mmHg) (Nicki, 2010). Hypertension develops due to alteration in Cardiac output, Viscosity of blood, Quantity of blood, Peripheral resistance and Elasticity of arterial wall (Best and Taylor, 1970). Clinical features that are mainly attributed to hypertension are headache, palpitation, fatigability, dizziness, dyspnoea on exertion, sleeplessness and mental stress etc. Almost the same concept is described in Unani literature under the headings of Imtila, and Salabat-e-Sharyan. Now the term Zight-ud-dam qawi has been coined for hypertension. The most important cause of hypertension is Imtila-e-Dam, which is of two types:

1. Imtila-e-dam bahasbul auiya
2. Imtila-e-dam bahasbul quwa

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In Imtila-e-dam bahasbul auiya there is raised blood volume resulting in increased vascular pressure. This type of imtila is due to excess accumulation of metabolic products, whether mahmooda (beneficial) or ghair mahmooda (harmful), and this type of congestion is common in obese people (Kantoori, 1889, 1896).

In Imtila-e-dam bahasbul quwa, faculties like quwwat-e-nafsaniya, quwwat-e-mudabbara badan and quwwat-e-tabia of body are disturbed. Among them, disturbance of quwwat-e-tabia leads to altered digestion resulting in production of harmful by-products. Similarly disturbed quwwat-e-nafsaniya and quwwat-e-mudabbira badan also weaken body systems at the level that a small quantity of toxin/ harmful by-products may produce symptoms of imtila (Kantoori, 1889, 1896).

A general guideline for the management of hypertension should be as follows:

1. Salt restricted diet
2. Weight reduction of obese and overweight
3. Regular physical activity
4. Cessation of alcohol intake and smoking
5. Stress reduction and to provide happy environment

Drug therapy includes the use of:

1. Musakkin or Moaddile Jazbat (Tranquilizers): Khashkhash, Bekh-e-Asrol, Tukhm-e-Kahu, Kishneez
2. Mudir-e-baul (Diuretics): Khar-e-Khasak, Tukhm-e-Gazar, Tukhm-e-Turab, Tukhm-e-Khayarain, Sharbat-e-Bazoori, Sharbat-e-Anannas
3. Musaffy/ Moaddile Dam (Blood Purifiers): Sandal, Chiraita, Unnab,
4. Mufatteh urooq (Vasodilators): Asrol, Kasni, Karafs, Revand chini
5. Muqawwi Qalb (Cardiotonic): Abresham, Yashab, Marwareed
6. Muqawwi Quwa Mudabbira badan wa quwa tabiya: Marwareed, Gauzaban

Observations and Results

Effect of test drug combinations on systolic blood pressure

The test drugs Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil showed 27mm of Hg, Itrifal Kishneezi 24.45 mm of Hg, Safoof-e-Kahu-Khar Khasak

30.6 mm of Hg, Safoof-e-Musakkin 22.7 mm of Hg, Khameera Sandal Sada 14.4 mm of Hg, and Qurs Dawaus Shifa 27.7 mm of Hg improvement in systolic blood pressure (Table-2).

Among them Safoof-e-Kahu-Khar Khasak had shown maximum improvement followed by Qurs Dawaus Shifa then Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil while Khameera Sandal Sada had shown least improvement in systolic blood pressure.

Effect of test drug combinations on diastolic blood pressure

The test drugs Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil showed 11.1 mm of Hg, Itrifal Kishneezi showed 14.93 mm of Hg, Safoof-e-Kahu-Khar Khasak showed 15.7 mm of Hg, Safoof-e-Musakkin showed 16.3 mm of Hg, Khameera Sandal Sada showed 9.2 mm of Hg and Qurs Dawaus Shifa showed 10.72 mm of Hg improvement in diastolic blood pressure (Table-3).

Among them Safooe-e-Musakkin showed maximum improvement, followed by Safoof-e-Kahu-Khar Khasak then Itrifal Kishneezi, while Khameera Sandal showed least improvement in diastolic blood pressure.

Effect of test drug combinations on symptoms

Headache was improved in 52% cases by Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil, 80% cases by Safoof-e-Kahu-Khar Khasak, 91.7% cases by Safoof-e-Musakkin 79.2% cases by Khameera Sandal Sada, 82% cases by Qurs Dawaus Shifa.

Palpitation was improved in 40.75% cases by Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil, 86.95% cases by Itrifal Kishneezi, 81.81% cases by Safoof-e-Kahu-Khar Khasak, 96% cases by Safoof-e-Musakkin 77.3% cases by Khameera Sandal Sada, 88% cases by Qurs Dawaus Shifa.

Fatigability was improved in 50% cases by Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil, 88.88% cases by Itrifal Kishneezi, 75% cases by Safoof-e-Kahu-Khar Khasak, 94% cases by Safoof-e-Musakkin, 47.3% cases by Khameera Sandal Sada and 79% cases by Qurs Dawaus Shifa.

Dizziness was improved in 50% cases by Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil, 37.5% cases by Itrifal Kishneezi, 75% cases by Safoof-e-Kahu-Khar Khasak, 92% cases by Safoof-e-Musakkin, 61.9% cases by Khameera Sandal Sada and in 88% cases by Qurs Dawaus Shifa.

Exertioinal dyspnoea was improved in 12.5% cases by Safoof-e-Khashkhash & Sharbt-e-bazoori motadil, 57.89% by Itrifal Kishneezi, 75% by Safoof-e-Kahu-Khar Khasak, 84% by Safoof-e-Musakkin, 33.3% cases by Khameera Sandal Sada and 82% by Qurse Dawaus Shifa.

Sleeplessness was improved in 93.3% cases by Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil, 91.89% by Itrifal Kishneezi, 80% by Safoof-e-Kahu-Khar Khasak, 95.7% by Safoof-e-Musakkin, 76.5% by Khameera Sandal Sada and 84% by Qurs Dawaus Shifa.

Mental stress was improved in 95.8% cases by Safoof-e-Musakkin, while 78% cases by Qurs Dawaus Shifa

The most effective Unani drug combination to improve the overall symptomatology was found to be the combination 'Safoof-e-Musakk' having Bekh-e-Asrol, Kishnieez Khushk and Filfil Siyah; second to this was the drug Qurs Dawaus Shifa, while least effective drug combination was 'Safoof-e-Khashkhash' & 'Sharbt-e-Bazoori Motadil'.

Discussion

The test drugs used for the management of hypertension mainly have Musakkin, Mukhaddir, Mufarreh, Munawwim, Mudir-e-Baul, Muftteh Urooq, Dafe Khafqan, Dafe Suda, Mubarrid, Muqawwi qalb wa dimagh effects. The studies conducted have different combinations having the drugs which possessed the above mentioned effects. Therefore all the test drug combinations have proved effective in the ailment.

The most effective drug combination was found to be the combination No 4. (Table-1) This combination showed maximum effect to reduce diastolic blood pressure (Table-3) as well as to improve the symptomatology (Table-4). The mechanism of action of the combination can be attributed to the effects of the drugs present in it like Musakkin, Munawwim, Musakkin Alam, Dafe Fisharuddam, Mukhaddir of Asrol (Anonymous, 1969; Chopra, 1958; Goswami, 1977) Mufarreh, Muqawwi qalb wa dimagh, Dafe Khafqan, Dafe Suda, Mudir baul, Munawwim, Mubarrid, Dafe fisharuddam of Kishneez Khushk (Kirtikar, 1996; Anonymous, 1950) and Musakkin alam, Muqawwi asaab, Mudir, Jaali, Mukhaddir, Musleh of Filfil Siyah (Anonymous, 1969; Kirtikar, 1996).

Second most effective combination was found to be the combination No 3 (Table-2). This combination was most effective on systolic blood pressure while second most effective on the diastolic blood pressure. The symptoms

like headache, palpitation, sleeplessness were responded well with this combination and on some other symptoms the effect was average. This overall effect matches with the effects of Tukhm-e-Kahu (sedative, hypnotic, cooling, aesthetic, blood Purifier) (Khan, 1895; Nadkarni, 1954; Kirtikar and Basu, 1987; Chopra, 1956) and Khar Khasak (mubarrid, musaffi dam, musakkin alam, and antidote) (Khan, 1895; Nadkarni, 1989; Kirtikar and Basu,1987; Chopra, 1958). Apart from the above, Tukhm-e-Kahu and Khar Khasak also possesses mudir-e-baul (diuretic) effect that leads to systolic antihypertensive effect by decreasing the blood volume (Nadkarni, 1954; Anonymous, 1962; Chopra, 1956; Kirtikar and Basu, 1987; Khan, 1895).

Third most effective combination was found to be the combination No. 6. (Table- 2) This drug showed appreciable effect in reducing systolic blood pressure to a greater extent (Table- 3) along with improving the symptomatology (Table- 4). This effect of the drug may be due to vasodilator effect of the main constituent Asrol (Bhatia, 1942).

Rest of the other combinations too have antihypertensive effects on symptomatology as well as on the levels of blood pressure but comparatively they are not enough potent as above three, even though the combinations contain the drugs having Musakkin, Munawwim, Musakkin Alam and Mubarrid effects but do not have vasodilatation effect.

Table 1: Test Drug Combinations Used

Drug Combination No.	Name of Test Drug Combination	Ingredients	Botanical Identity
1.	Safoof-e-Khashkhash	Tukhm-e-Kahu	Lectuca sativa Linn.
		Tukhm-e-Khurfa	Portulaca oleracea Linn.
		Tukhm-e-Khashkhash	Papaver somniferum Linn.
		Gul-e-Neelofer	Nymphea lotus Linn.
		Kishneez Khushk	Coriandrum sativum Linn.
	Sharbat-e-Bazoori Motadil	Tukhm-e-Khyar	Cucumis sativus Linn.
		Tukhm-e-Kharpaza	Cucumis melo Linn.
		Tukhm-e-Khyarza	Cucumis melo Linn. var. Utilissimus
		Bekh-e-Kasni	Cichorium intybus Linn.
		Tukhm-e-Kasni	Cichorium intybus Linn.
		Bekh-e-Badyan	Foeniculum vulgare Mill.

2.	Itrifal Kishneezi	Halaila	Terminalia chebula Retz.
		Amla	Emblica officinalis Gaertn.
		Kishneez	Coriandrum sativum Linn.
		Turanjbeen	Alhagi maurorum Medik.
		Badam Shireen	Prunus amygdalus Batsch.
		Gul-e-Surkh	Rosa damascena Mill.
		Usukhuddoos	Lavandula stoechas Linn.
3.	Safoof-e-Kahu-Khar Khasak	Tukhm-e-Kahu	Latuca sativa Linn.
		Khar Khasak	Tribulus terrestris Linn.
4.	Safoof-e-Musakkin	Bekh Asrol	Rauwolfia serpentina Benth.
		Kishneez Khushk	Coriandrum sativum Linn.
		Filfil Siyah	Piper nigrum Linn.
5.	Khameera Sandal Sada	Sandal Safaid	Santalum album Linn.
		Gul-e-Surkh	Rosa damascena Mill.
6.	Qurs Dawaus Shifa	Asrol	Rauwolfia serpentina Benth.
		Filfil Siyah	Piper nigrum Linn.

(Alam, 1991; Rahman,1999; Ansari, 2002; Aftab, 2005; Ahmad, 2007; Arif, 2008)

Table 2: Effect of Drug Combinations on Systolic Blood Pressure

S. No.	Name of drug combination	Before treatment (mmHg)	After treatment (mmHg)	Improvement (mmHg)
1.	Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil	186.4	159.4	27
2.	Itrifal Kishneezi	173.1	148.65	24.45
3.	Safoof-e-Kahu-Khar Khasak	165.2	134.6	30.6
4.	Safoof-e-Musakkin	162.7±13.7	140±14.7	22.7
5.	Khameera Sandal Sada	161.8	147.4	14.4
6.	Qurs Dawaus Shifa	151.5±9.5	123.8±6.0	27.7

(Alam, 1991; Rahman,1999; Ansari, 2002; Aftab, 2005; Ahmad, 2007; Arif, 2008)

Table 3: Effect of Drug Combinations on Diastolic Blood Pressure

Sl. No.	Name of the drug	Before treatment (mmHg)	After treatment (mmHg)	Improvement (mmHg)
1	Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil	103.1	92.0	11.1
2	Itrifal Kishneezi	106.75	91.82	14.93
3	Safoof-e-Kahu-Khar Khasak	101.3	85.6	15.7
4	Safoof-e-Musakkin	102.7±8.8	86.4±10.8	16.3
5	Khameera Sandal Sada	100.9	91.7	9.2
6	Qurs Dawaus Shifa	93.32±2.5	82.6±3.1	10.72

(Alam, 1991; Rahman, 1999; Ansari, 2002; Aftab, 2005; Ahmad, 2007; Arif, 2008)

Table 4 : Effect of Drug Combinations on Symptoms

Symptoms	Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil	Iitrifal Kishneezi	Safoof-e-Kahu-Khar Khasak	Safoof-e-Musakkin	Khameera Sandal Sada	Qurs Dawaus Shifa
	(% of improved cases)					
Headache	52	-	80	91.7	79.2	82
Palpitation	40.75	86.95	81.81	96.0	77.3	88
Fatigability	50	88.88	75	94.0	47.3	79
Dizziness	50	37.5	75	92	61.9	88
Exertional dyspnoea	12.5	57.89	75	84	33.3	82
Sleeplessness	93.3	91.89	80	95.7	76.5	84
Mental stress	-	81.1	-	95.8	-	78

(Alam, 1991; Rahman, 1999; Ansari, 2002; Aftab, 2005; Ahmad, 2007; Arif, 2008)

Conclusion

To manage Zight-ud-Dam Qawi Ibtidai (Primary Hypertension), several Unani Mufrid and Murakkab medicines are described in Classical Unani Literature and many studies have been done in different institutions to validate their efficacy on scientific parameters. On comparing some of these studies, it is being concluded that:

To manage systolic blood pressure Safoof-e-Kahu-Khar Khasak is the best combination, followed by Qurs Dawaus Shifa then Safoof-e-Khashkhash & Sharbt-e-Bazoori Motadil followed by Itrifal Kishneezi, Safoof-e-Musakkin and Khameera Sandal Sada in order.

To manage diastolic blood pressure Safooe-e-Musakkin is the best combination, followed by Safoof-e-Kahu-Khar Khasak then Itrifal Kishneezi followed by Safoof-e-Khashkhash, Qurs Dawaus shifa and Khameera Sandal in order.

To manage the symptomatology of zight-ud-dam qawi Safoof-e-Musakkin is the best combination, followed by Qurs Dawaus Shifa, then Itrifal Kishneezi followed by Safoof-e-Kahu-Khar Khasak, Khameera Sandal Sada and Safoof-e-Khashkhash & Sharbat-e-Bazoori Motadil in order

Among the six combinations i.e. Itrifal Kishneezi, Khameera Sandal Sada, Safoof-e-Kahu-Khar Khasak, Safoof-e-Musakkin, Qurs Dawaus Shifa and Safoof-e-Khashkhash & Sharbat-e-Bazoori Motadil, the best three was found to be Safoof-e-Musakkin, Safoof-e-Kahu-Khar Khasak and Qurs Dawaus Shifa in same order in the management of Zight-ud-dam qawi ibtidai (Primary hypertensioin).

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