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An assessment of correlation between *Mizaj* (Temperament) and grade 1 essential hypertension: An observational study

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Abstract

Objective: The objective of the present study is to assess correlation with the *Mizaj* of the patients afflicted with grade 1 essential hypertension.

Background: Essential hypertension is one of the leading causes of the global burden of disease. The World Health Organization rates it as one of the most important causes of premature death worldwide and accounting for 10.4 million deaths per year. In classical Unani literature there is not description of any disease with the caption hypertension. However, ancient Unani scholars *Razi*, *Majoosi* and *Ibn-e-Sina* have described many clinical manifestations under the heading of *imtila* which simulates to the clinical features of hypertension and represents it very well.

Material and Methods: A single blind randomized comparative clinical trial (between test and control group) was conducted on 60 diagnosed patients of grade 1 essential hypertension aged between 35-65 years in the department of Moalejat AKTC, AMU Aligarh. The patients were selected on the basis of inclusion and exclusion criteria. *Mizaj* of the patients was determined using a proforma designed to assess the *Mizaj*.

Results and Observations: Out of 60 cases, 31 (51.67 %) cases, (50% in test group and 53.33% in control group) were found to have *Damvi Mizaj* (Sanguineous temperament).

Conclusion: It can be concluded that the incidence of grade 1 essential hypertension is higher in patients having sanguineous temperament.

Keywords: *Mizaj*, grade 1 essential hypertension, *Damvi*, sanguineous

Introduction

Hypertension (HTN), also known as high or elevated blood pressure (BP) is the term which is used to describe an increase in blood pressure. HTN is also known as the “silent killer” because it is usually asymptomatic until organ damage occurs [1, 2]. Clinically, hypertension may be defined as that level of blood pressure at which the institution of therapy reduces blood pressure-related morbidity and mortality [3]. The commonest form of hypertension has been termed ‘Primary or essential hypertension’, i.e. hypertension for which there is no clearly defined etiology [3-5].

It is one of the leading causes of the global burden of disease [3]. The World Health Organization rates it as one of the most important causes of premature death worldwide and accounting for 10.4 million deaths per year [2, 3]. Globally, an estimated 26% of the world’s population (1 billion people) has hypertension, and the prevalence is expected to increase to 29% (1.56 billion) by 2025, driven largely by increases in economically developing nations. [1, 4, 6, 7, 8, 9]

The term *zightul-dam-qavi* was translated by unani scholars contemporary to Indian period to entitle hypertension [10]. In classical Unani literature there is no description of any disease with the term hypertension. However ancient Unani scholars *Razi*, *Majoosi*, *Ibn-e-Sina* have well described a condition *imtila* which exhibits manifestations such as headache, palpitation, breathlessness, vertigo, epistaxis etc. simulating that of hypertension. [11, 12, 13] *Razi* explained *imtila* as the vascular pressure caused by increased blood volume and/or decreased lumen of blood vessels [11].

Unani scholars classified *Imtila* into two categories [11, 14, 15]

(i) *Imtila-ba-hasbil aw’iyya* and (ii) *Imtila-ba-hasbil quwa*

When studied thoroughly, the clinical features, causes, and complications of hypertension corresponds more with *Imtila-ba-hasbil aw’iyya* which develops due to *su-e-mizaj Damvi* [11-13].

There is description of numerous factors in classical unani literature which are now regarded as predisposing factors for hypertension. *Razi*, *Ibn-e-Sina* and *Ibn-e-Rushd* explained that *Yaboosat-e-urooq* develops as a result of *yaboosat-e-mizaj* and causes hardening and narrowing of blood vessels i.e. arteriosclerosis which has been considered to be a major predisposing factor for the development of hypertension [16-20]

The concepts of humors and temperament are the prime fundamentals of Unani system of medicine which deal with all the aspects of disease. The body contains four (major kinds of) *akhlat* (humours) - *dam* (blood), *balgham* (phlegm), *saфра* (bile) and *sauda* (black bile) [19]. Unani physicians have classified the *mizaj* (temperaments) of an individual into four types *damvi* (sanguine), *balghami* (phlegmatic), *safravi* (bilious), and *saudavi* (melancholic) based on the preponderance of the respective humour [19]. A right proportion, according to quality and quantity of humours, and mixing of which (homeostasis) constitutes health and its imbalance results in deranged temperament i.e. *sū-i-Mizāj* which causes deranged body functions and development of diseases [19, 21].

In view of the above therefore the present study was designed to assess the *Mizaj* of the patients enduring grade 1 essential hypertension and to know whether any relationship exists between these two conditions.

Material and Methods

The present study was conducted on the patients who attended the OPD’s and IPD’s of Moalejat, Ajmal Khan Tibbiya College and Hospital, Aligarh Muslim University, Aligarh for a period extending from March 2019 to March 2020 (One year). The study was of two months duration and

it was single blind randomized comparative clinical trial (between test and control group). The patients were selected on the basis of specific inclusion and exclusion criteria.

Inclusion criteria

- Clinically diagnosed patients of Grade 1 (According to WHO/ISH, Systolic blood pressure = 140-159 mm of Hg and Diastolic blood pressure =90-99 mm of Hg) [22] essential hypertension on three consecutive visits under optimal conditions.
- Patients of all genders.
- Patients in the age group of 35 to 65 years.
- Patients not taking any anti-hypertensive drugs prior to start of treatment.
- Clinically stable patients
- Those who gave written consent

Exclusion criteria

- Patients of severe or malignant hypertension
- Patients of Secondary hypertension
- Patients below 35 and above 65 years of age
- Pregnant and lactating women
- Patients with other systemic and metabolic diseases
- Chronically ill patients
- Patients of altered mental status
- Patients who did not sign informed consent form

Assessment of Mizaj

Mizaj of patients were determined using a proforma designed on the basis of different parameters mentioned in classical Unani literature for the assessment of *mizaj*. Table 1.

Table 1: Mizaj Assessment chart

Date: _____
 Name of the Patient: _____ Father’s Name: _____
 Age/Gender: _____ Height (in cm): _____
 Weight (Kg): _____ Occupation: _____
 Mobile No: _____
 Address: _____

Parameter (Evidence)	<i>Damwi</i> (Sanguineous)	<i>Balghami</i> (Phlegmatic)	<i>Şafravi</i> (Bilious)	<i>Saudāwi</i> (Melancholic)
Morphological				
Skin texture/temperature Score:01	Warm & Smooth <input type="checkbox"/>	Soft & Moist <input type="checkbox"/>	Hard & Hot <input type="checkbox"/>	Rough & Cold <input type="checkbox"/>
Complexion Score:05	Reddish <input type="checkbox"/>	Whitish <input type="checkbox"/>	Pale <input type="checkbox"/>	Blackish <input type="checkbox"/>
Body built Score:5	Muscular <input type="checkbox"/>	Fatty <input type="checkbox"/>	Moderate <input type="checkbox"/>	Lean & Thin <input type="checkbox"/>
Texture of hairs Score:0.5	Thick & Lusty <input type="checkbox"/>	Thin & Smooth <input type="checkbox"/>	Curly <input type="checkbox"/>	Straight <input type="checkbox"/>
Growth and distribution of hairs score:0.5	Rapid, Average <input type="checkbox"/>	Slow, Scanty <input type="checkbox"/>	Moderate/profuse <input type="checkbox"/>	Excessive <input type="checkbox"/>
Colour of hairs Score:0.5	Blackish <input type="checkbox"/>	Brownish <input type="checkbox"/>	Yellow-Black (Golden) <input type="checkbox"/>	Black & White (Mixed) <input type="checkbox"/>
Physiological				
Urine Score:01	Moderate in Quantity <input type="checkbox"/>	White, More in Quantity <input type="checkbox"/>	Yellow, Less in Quantity <input type="checkbox"/>	Turbid, Less in Quantity <input type="checkbox"/>

Tolerate well Score:01	Dryness <input type="checkbox"/>	Summer <input type="checkbox"/>	Cold <input type="checkbox"/>	Dampness <input type="checkbox"/>
Remains well in Score:03	Spring <input type="checkbox"/>	Summer <input type="checkbox"/>	Winter <input type="checkbox"/>	Autumn <input type="checkbox"/>
Appetite Score:01	Strong Appetite (Can Skip A Meal) <input type="checkbox"/>	Less Appetite (feel heaviness after eating) <input type="checkbox"/>	Strong Appetite (Can't Skip A Meal) <input type="checkbox"/>	Irregular Appetite <input type="checkbox"/>
Thirst Score:01	Average (++) <input type="checkbox"/>	Poor (+) <input type="checkbox"/>	Increased (++++) <input type="checkbox"/>	Low (+++) <input type="checkbox"/>
Digestion Score:01	Average <input type="checkbox"/>	Slow <input type="checkbox"/>	Strong <input type="checkbox"/>	Irregular <input type="checkbox"/>
Movements and activities Score:03	Average in Physical Activity <input type="checkbox"/>	Dull Laziness <input type="checkbox"/>	Brisk, Hyperactive <input type="checkbox"/>	Less <input type="checkbox"/>
Sleep Score:01	Average <input type="checkbox"/>	Excess <input type="checkbox"/>	Disturbed Sleep <input type="checkbox"/>	Insomnia <input type="checkbox"/>
Psychological				
Dream Score:01	Blood, Red Objects <input type="checkbox"/>	Water, Snow <input type="checkbox"/>	Fire, Yellow Objects <input type="checkbox"/>	Black, Fearful Dreams <input type="checkbox"/>
Anger /joy Score:01	Comes On Easily & Easily Lost <input type="checkbox"/>	Comes On Hardly <input type="checkbox"/>	Frequent, Severe & Persists For Long <input type="checkbox"/>	Infrequent But Persist <input type="checkbox"/>
Response to external stimuli in adverse condition Score:01	Aggressively Respond <input type="checkbox"/>	Weekly Respond <input type="checkbox"/>	Bravely Respond <input type="checkbox"/>	Cowardly Respond <input type="checkbox"/>
Decision taking power Score:01	Take Boldly <input type="checkbox"/>	Hesitate in Taking Decisions <input type="checkbox"/>	Take Quickly <input type="checkbox"/>	Afraid in Taking Decisions <input type="checkbox"/>
Memory Score:01	Good, Retention Also Good <input type="checkbox"/>	Not Good <input type="checkbox"/>	Good, But Can't Retain For Long <input type="checkbox"/>	Can't Learn Easily But Excellent Retention <input type="checkbox"/>

Total Collection:

Damwi:
Balghami:

Safrawi:
Sawdāwi:

Observations and results

Since the study was a comparative trial between two groups. A total of 31(51.67%) cases, (50% in test group and 53.33% in control group) were found to have *Damvi mizaj* (Sanguineous temperament) followed by 17(28.33%) of

Balghami mizaj (Phlegmatic temperament), 7(11.67%) of *Saudavi mizaj* (Melancholic temperament) while 5(8.33%) were found to have *Safravi mizaj* (Bilious temperament). Table 2; Fig. 1

Table 2: Distribution of the Patients according to *Mizaj* (Temperament)

Mizaj	Test Group		Control Group		Total	
	No. of Patients	%age	No. of Patients	%age	No. of Patients	%age
Sanguineous (Damvi)	15	50	16	53.33	31	51.67
Phlegmatic (Balghami)	8	26.67	9	30	17	28.33
Bilious (Safravi)	3	10	2	6.67	5	8.33
Melancholic (Saudavi)	4	13.33	3	10	7	11.67
Total	30	100	30	100	60	100

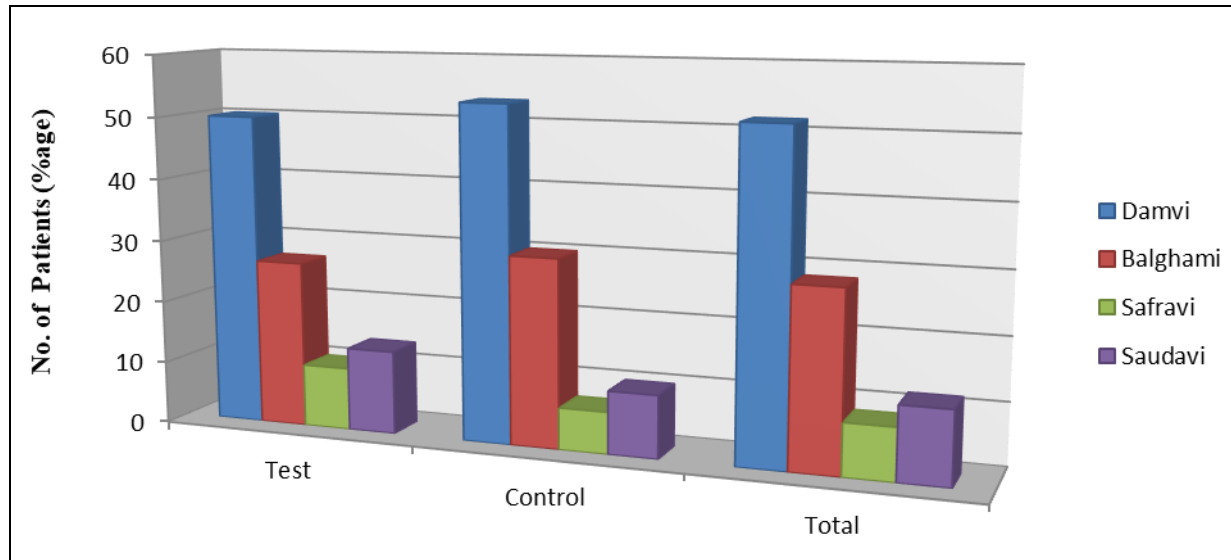


Fig 1: Distribution of the Patients according to *Mizaj* (Temperament)

Discussion

The result of present study showed that the maximum number of cases were of *Damvi mizaj* (Sanguineous temperament) i.e. 31 (51.67%), followed by 17 (28.33%) of *Balghami mizaj* (Phlegmatic temperament), 7 (11.67%) of *Saudavi mizaj* (Melancholic temperament) while 5 (8.33%) were found to be *Safravi mizaj* (Bilious temperament). According to this distribution maximum number of cases lies in the sanguineous temperament. The observed data correlates with the Unani literature of *imtila* and the disease is more common among individuals of sanguineous temperament So the sanguineous temperament may be considered as a predisposing factor for grade 1 essential hypertension.

Conclusion

It can be concluded that the individuals with *Damvi Mizaj* (Sanguineous temperament) are likely to be more prone to develop grade 1 hypertension as compared to individuals of other temperament. So, *Damvi Mizaj* may be considered an important predisposing factor for the development of grade 1 essential hypertension. Since the hypertension is a life style ailment and its complications are life threatening. Hence it is better to prevent rather to control the disease. Therefore, the individuals having sanguineous temperament must follow all preventive measures for living a sound life.

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