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ANALYTICAL CASE STUDY OF MILDLY SYMPTOMATIC COVID-19 PATIENTS WITH REFERENCE TO MIZAJ.

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ABSTRACT: The Unani system of medicine originated in Greece. The Unani system of medicine is a comprehensive medical system that meticulously deals with the various states of health and disease. The word mizaj. is described as temperament which is derived from the Latin word TEMPERO, which means mix. In the Unani system of medicine mizaj is the most important and difficult concept as it describes the whole body and it should be in equilibrium and if there is any change in mizaj than the equilibrium gets disturbed and life is threatened. Corona viruses (CoV) are belonging to the genus Corona virus in the Corona viridae. All types of the CoVs are pleomorphic RNA viruses containing crown-shape peplomers with 80-160 nanometre in size with 27-32 kb positive polarization. Details of the cellular responses to this virus are not known, a probable course of events can be postulated based on past studies with (CoV). The clinical features of the Covid-19 are fever, running nose, Fever, Rhinorrhoea, Cough, Sore throat, Shortness of breath, Expectations, Loss of taste. The persons infected by the novel coronavirus are the main source of infection. A cross-sectional descriptive study to assess Mizaj in 115 mildly symptomatic covid 19 patients of different mizaj was carried out in the covid ward of A and u tibia college and hospital, Karol Bagh, Delhi. Based on the various observations it is found that most common mizaj in patients is Damvi and least common mizaj is saudavi. This can be due to the reason that patients with mild symptoms only admitted in tibia hospital and damvi mizaj may shows mild symptoms of diseases and saudavi mizaj may shows severe symptoms.

KEYWORDS: Mizaj, saudavi, damvi, temperament and covid 19.

INTRODUCTION

Mizaj is one of the basic and fundamental concepts of Unani system of medicine. The Unani system of medicine originated in Greece. The Unani system of medicine is a comprehensive medical system that meticulously deals with the various states of health and disease. It provides promotive, preventive, curative, and rehabilitative healthcare with holistic approach¹. The concept of Mizaj, is a pillar of *Tibb* philosophy, is the amalgam of a person's physical characteristics and his/her psychological and emotional attributes². The fundamentals framework of this system is based on deep philosophical insights and scientific principle including Empedoclean theory of four elements i.e. air, water, fire and earth, four, four proximate qualities (kafiyat) i.e hot, cold, dry and wet described by pythagoras¹ and Hippocrates (370-377B.C.), a Unani physician, gave the concept of four humors, which includes Blood(*Dam*), Phlegm(*balgham*), bile(*safra*) and black bile (*Sauda*). M This humoral theory holds that the human body is filled with four body fluids called humors, which are in balance when the person is healthy. These four humors, when in balance quantity are responsible for an internal physiological environment which is termed as *MIZAJ(BODY TYPE)*³. *Ibn Sina* defined Mizaj as the temperament is a quality resulting from interaction of opposite qualities present in elements consisting of minute particles so that most of the particles of each of the elements may touch most of the others. Thus, when these particles act and react on one another with their properties, uniform qualities quality which is present in all of them, this is called as *Mizaj*. *Ibn Sina* further writes that since the primary properties in the aforesaid elements are four namely hotness, coldness, moistness, and dryness, it is obvious that the temperaments of the integrating bodies are the products of these very properties.⁴ *Ismail Jurjani* said when different qualities of elements act and react by their powers then previous qualities become diminished and a new moderate quality is developed which is known as *Mizaj*⁵. *Gruner* defined mizaj is that quality which results from the mutual interaction of the four contrary primary qualities residing within the elements⁶.

In December 2019 novel Coronavirus (nCoV), which is one of the fatal public health problems, has appeared in the Huanan Seafood Market, where cattle animals are also traded, in Wuhan State of Hubei Province in China and has been the focus of worldwide consideration due to a pneumonia epidemic of unknown cause.⁷ At first, an unknown severe pneumonia case was detected on December 12, 2019, and possible influenza and other coronaviruses were ruled out after laboratory testing. Chinese health authorities proclaimed on January 7, 2020 that a new type of Corona virus (novel Coronavirus, nCoV) was isolated. 2 Corona viruses (CoV) are belonging to the genus Corona virus in the Corona viridae. All types of the CoVs are pleomorphic RNA viruses containing crown-shape peplomers with 80-160 nanometre in size with 27-32 kb positive polarization. Details of the cellular responses to this virus are not known, a probable course of events can be postulated based on past studies with (CoV). An Inhaled virus binds to epithelial cells in the nasal cavity and starts replicating. ACE2 is the main receptor for both CoV and SARS-CoV2. So, the ciliated cells are primary cells infected in the conducting airways. There is local spread of the virus but a limited innate immune response. The RT-PCR value for the viral RNA might be useful to predict the viral load and the subsequent infectivity and clinical course.^{17,18} Recombination rates of CoVs are same high because of regularly evolving transcription errors and RNA Dependent RNA Polymerase (RdRP) jumps. With highly mutagenic rate, Corona viruses are zoonotic pathogens that are existing in humans and various animals with extensive range of clinical features from asymptomatic course to necessity of hospitalization in the intensive care unit, causing fetal infections in respiratory, gastrointestinal, hepatic and neurologic systems.^{9,10,11} This virus was named as Novel Coronavirus WHO on January 12 and COVID-19 on 11 February 2020.⁹ The clinical features of the Covid-19 are fever, running nose, Fever, Rhinorrhoea, Cough, Sore throat, Shortness of breath, Expectorations, Loss of taste. The persons infected by the novel coronavirus are the main source of infection.¹² Direct person-to-person transmission occurs through close contact, mainly through respiratory droplets that are released when the infected person coughs, sneezes, or talks.¹³ Disease can be diagnosed by the different type of the investigations like RT-PCR, and, Rapid antigen test etc. While these symptoms become severe it develops the various kind of the complications like, Pleural effusion, respiratory distress, shock etc. Covid-19 severe cases may lead to require the artificial respiration, oxygen therapy, life support etc. Most of the people die due to Covid-19 due respiratory distress. There is no definitive treatment of the Covid-19 in the world yet. Most of the people are searching the cure of the Covid-19. The present control strategies of the disease include the reduction of secondary infections by early diagnosis and isolation of cases, providing optimal care to infected patients, and the development of effective diagnostic, preventive and therapeutic strategies, including vaccines. The combination of the various drugs has also been shown the synergistic effects in the cases of the Covid-19. Study evaluated the use of the different type of antibiotics to the reduce the severity of the infection. Another Studies evaluating the antiviral activity of types I and II interferons have been reported, interferon-beta (IFN-beta), as the most potent interferon, was reducing in- vitro (nCoV) replication. Some study reveals the combinations of the Lopinavir/Ritonavir (anti-HIV drugs) effective in the reduction of the viral load.^{14,15} Another study stated that corticosteroids are effective in the treatment of the hospitalized patients in the united states and also shown symptoms reducing effects on the mild cases of the Covid-19.¹⁸

MATERIAL AND METHODS

A cross sectional descriptive study to assess the Mizaj in 115(one hundred and fifteen) mildly symptomatic COVID-19 patients was carried out in COVID ward, A and U tibbia college and hospital, Karol Bagh, Delhi during period of 2020-2021.

INCLUSION CRITERIA

- Individuals of 20-70 years of age.
- Either sex.
- Patients with mild symptoms.
- Covid positive laboratory test report.

EXCLUSION CRITERIA

- Person with age below 20 years
- Person with age above 70 years
- Alcoholics
- Smokers and tobacco users
- Pregnancy and lactation
- Past history of trauma.

DETERMINATION OF MIZAJ (BODY TYPE)

Mizaj of each subject was assessed with the help of mizaj assessment proforma at bedside which is based on Ajnas e Ashra described in Unani classical literature.

DETERMINATION OF MIZAJ BY MIZAJ ASSESSMENT PROFOMA:

PROFORMA

Mizaj assessment proforma contains questionnaire based on Ajnas e Ashra i.e. Malmas (Tactus), Lahm-wa-Shahm (Flesh and fats), Ashaar (Hair rate of growth, colour, distribution), Laun-e-Badan (Body Complexion), Hayyat-e-Aza (Physique), Kaifat-e-Infal (Responsiveness of organs), Afal-e-Aza (State of functions), Fuzlaat-e-Badan (body waste), Nom-wa-Yaqza (sleep and wakefulness), Infalat-e-Nafsaniya (Psychic Reactions).

METHOD

Patients with mild symptoms were tested in laboratory for COVID-19 after that they were admitted in the COVID ward in Tibbia Hospital. Once they got admitted they were shifted to bed and asked for the questions mentioned in proforma according to Ajnas e Ashra.

RESULTS

All 4 types of Mizaj i.e. Damvi(Sanguineous), Sافرavi(Bilious), Balghami(Phlegmatic), Saudavi(Melancholic) were calculated for score and whichever of these Mizaj scored highest, patient had that Mizaj dominating and controlling his or her body anatomically,physiologically and psychologically.

PRINCIPLE**MIZAJ****CHRACTERSTICS**

DAMVI	Tactus- warm and soft, Body type-muscular, Hair-Black, thick, lusty and rapid growth Complexion-reddish, Blood vessels- mildly prominent, Digestion average with Normal appetite, urine reddish and in moderate quantity, stool semisolid and Voluminous, sweat odoured and more in quantity etc.
BALGHAMI	Tactus-cold and soft, Body type-fatty,less muscular, Hair-Brownish, thin, straight Complexion-wheatish, Blood vessels- not prominent, Digestion poor with less appetite, urine whitish and more in quantity, stool loose and Voluminous, sweat odoured and average in quantity etc.
SAFRAVI	Tactus-warm and dry, Body type-muscular,less fatty, Hair-yellow black, thick, curly Complexion-yellowish, Blood vessels- more prominent, Digestion strong with Increased appetite, urine yellowish and dilute and less in quantity, stool loose and Less amount yellowish, sweat odoured and more in quantity etc.
SAUDAVI	Tactus-cold and dry, Body type-lack of fats, Hair-straight, coarse, black and white Complexion-blackish, Blood vessels- narrow, Digestion irregular and False appetite, urine dark and turbid and less in quantity, constipated and Less amount blackish, sweat bad odoured and less in quantity etc.

OBSERVATION

Total 115 patients were randomly selected for Mizaj identification as per inclusion criteria and completed their study.

TABLE 1. Distribution of subjects according to gender

Gender	Number of Individuals	Percentage
Male	29	25.22
Female	86	74.78
Total	115	100

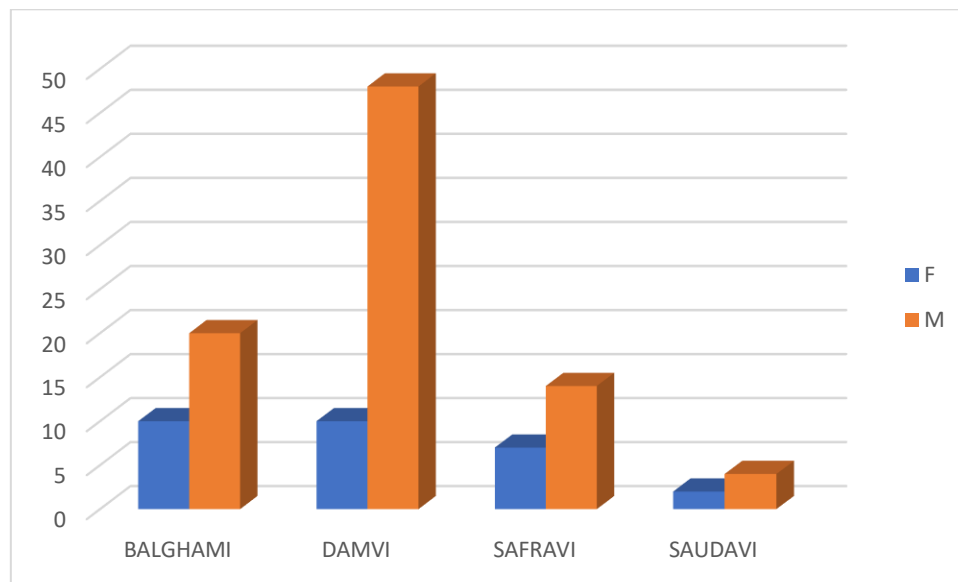


Figure 1. Distribution of individuals according to gender

The distribution of participants of male and female was 25.21% and 74.78% according to gender.

TABLE 2. Distribution of Subjects according to Mizaj

Temperament	No. of Volunteers	Percentage
Damvi	58	50.43
Balghami	30	26.08
Safravi	21	18.26
Saudavi	6	5.21
Total(n)	115	100

The 115 mildly symptomatic COVID 19 patients were distributed according to their Mizaj as shown in figure 2 out of the 115 patients, Damwi Mizaj included 58, Safravi included 21, Balghami included 30 and Saudawi included 6 patients. The maximum number of patients was of Damwi Mizaj.

The least number of individuals were in Saudavi Mizaj.

TABLE 3. Distribution of Subjects according to age groups, gender and Mizaj

Mizaj	20-29				30-39				40-49				50-59				60-69			
	M	%	F	%	M	%	F	%	M	%	F	%	M	%	F	%	M	%	F	%
Balghami	5	4.34	0	0	5	4.34	3	2.60	5	4.34	5	4.34	4	3.4	1	0.86	1	0.86	1	0.8
Damvi	21	18.26	5	4.34	10	8.6	1	0.86	12	10.43	2	1.7	3	2.6	2	1.7	2	1.7	0	0
Safravi	3	2.60	3	2.60	5	4.34	1	0.86	3	2.60	2	1.7	3	2.6	1	0.86	0	0	0	0
Saudavi	0	0	2	1.7	1	0.86	0	0	1	0.86	0	0	1	0.86	0	0	1	0.86	0	0
Total	29	25.21	10	8.6	21	18.26	5	4.3	21	18.26	9	7.8	11	9.5	4	3.4	4	3.4	1	0.8

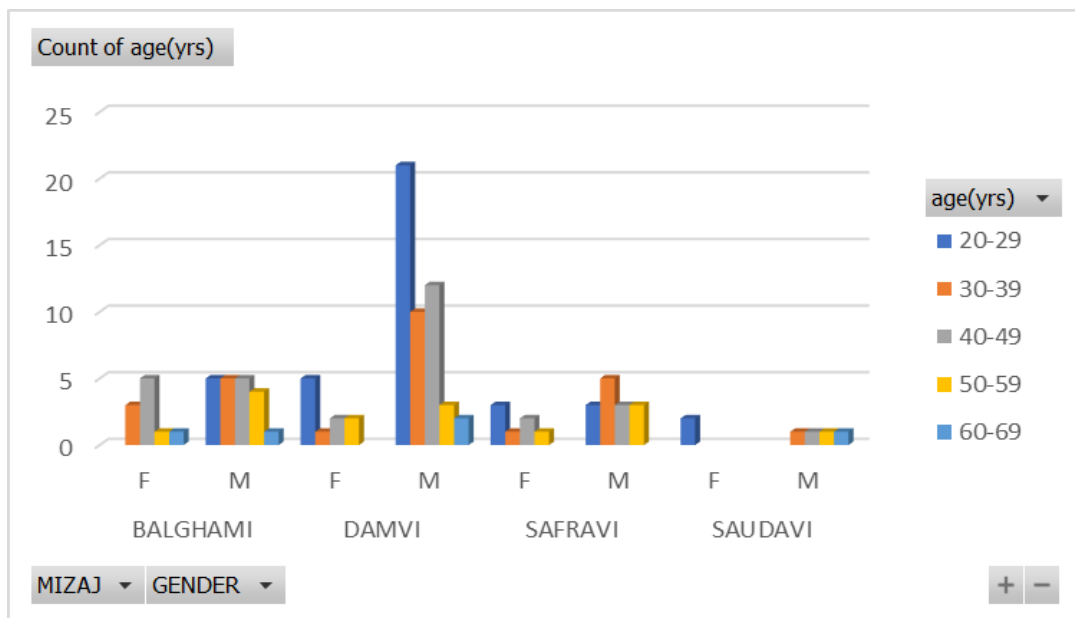


FIGURE 2. Distribution of Subjects according to Mizaj, Gender and Age

RESULTS AND DISCUSSION

Mizaj is an important concept in the Unani system of medicine. It plays a huge role in keeping the person healthy according to Unani physicians. The 115 participants were distributed according to their mizaj as shown in table 2 out of 115 participants, Damvi mizaj included 58, Balghami included 30, Safravi included 21 and saudavi included 6 participants. The maximum number of individuals was of damvi mizaj. It may be due to young age of all participants and mizaj of young age group people sin-e-namu is damvi as per Unani classical literature (Ahmed, ynm). The least number of participants had saudavi mizaj.

As shown in table 3, Age group of 20-29 contains 4.34% balghami male and no female of balghami mizaj of this age group, 18.64% of damvi male and 4.34% of damvi females, 2.64% of male with safravi mizaj and 2.64% of safravi female which is equal and no male with saudavi mizaj and 1.7% of saudavi females. So, total of males falls under age group of 20-29 is 25.21% and total females are 8.6%. age group of 30-39 contains 4.34% balghami male and 2.60% female of balghami mizaj of this age group, 8.6% of damvi male and 0.86% of damvi females, 4.34% of male with safravi mizaj and 0.86% of safravi female and no females with saudavi mizaj and 0.86% of saudavi males. So, total of males falls under age group of 30-39 is 18.26% and total females are 4.34%. Age group of 40-49 has 4.34% males of balghami mizaj and 4.34% females with balghami mizaj, 10.43% males falls in damvi mizaj and 1.7% females falls in damvi mizaj, safravi mizaj has 2.6% males and 1.7% females and saudavi mizaj has 0.86% males and no females. So total males in this age are 18.26% and females are 7.8%. Age group of 50-59 has 3.4% males of balghami mizaj and 0.86% females with balghami mizaj, 2.6% males falls in damvi mizaj and 1.8% females falls in damvi mizaj, safravi mizaj has 2.6% males and 0.86% females and saudavi mizaj has 0.86% males and no females. So total males in this age are 9.5% and females are 3.4%. Age group of 60-69 contains 0.86% balghami male and 0.86% females of balghami mizaj of this age group, 1.7% of damvi male and 1.7% of damvi females, 0% of male with safravi mizaj and 0% of safravi female which is equal and 0.86% male with saudavi mizaj and 0% of saudavi females. So, total of males falls under age group of 60-69 is 3.4% and total females are 0.86%. It means Damvi mizaj people are more likely to get Covid-19 then other mizaj people and Saudavi mizaj people are least likely to get infected with Covid-19. However, this study was limited to just one centre and for more detailed study and better results a larger sample study is required. So, this data can't be generalized over the whole population due to the small sample size. Further study needs to be conducted with a large sample size to get a better understanding of the correlation of mizaj with covid19.

REFERENCES

- [1] Unani system of medicine, the science of health and heaking AYUSH, ministry and family welfare, Government of India, www.indian medicine.nic.in.
- [2] Glynn, john ynm 'Temperaments revisited new interest in an old concept' at [www.e-imj.com/vol2- No2/vol2-NO2-N2.Htm](http://www.e-imj.com/vol2-No2/vol2-NO2-N2.Htm).
- [3] Ahmad, S. I., (ynm). Kulliyat-e-Asari, 1st Ed. Daftar al-masihi, Karol Bagh, p 62, 86.
- [4] Ibn sina Abu Ali Hussain Bin Abdullah, 1993, Al-Qanun Fil-Tibb Part-1, English Translation of the critical Arabic Text by Department Of Islamic Studies, Jamia Hamdard, New Delhi 1993, pp.191-193,195.
- [5] Jurjani, Ahmad-ul hasan, 1902, "Zakhira Khwazam Shahi vol.1". Urdu Translation by Hadi Hussain khan, Matab Munshi Naval Kishor, Lucknow, p16.
- [6] Gruner O.C, "A treatise on the canon of medicine of Avicenna, Luzac and company, London pp.57,63,64,242,246-273.
- [7] Seven days in medicine: 8-14 Jan 2020. BMJ 2020;368:m132.31948945.
- [8] Imperial College London. Report 2: estimating the potential total number of Novel coronavirus cases in Wuhan City, China. Jan 2020.
- [9] European Centre for Disease Prevention and Control data. Geographical distribution of 2019- nCov cases.
- [10] Woo PC, Huang Y, Lau SK, Yuen KY. Coronavirus genomics and bioinformatics analysis. Viruses 2010; 2:1804–20.
- [11] Drexler JF, Gloza-Rausch F, Glende J, Corman VM, Muth D, Goettsche M, et al. Genomic characterization of severe acute respiratory syndrome-related coronavirus in European bats and classification of coronaviruses based on partial RNA-dependent RNA polymerase gene sequences. J Virol 2010; 84:11336–49.
- [12] Yin Y, Wunderink RG. MERS, SARS and other coronaviruses as causes of pneumonia. Respirology 2018;23:130–7.
- [13] Gautret, P. Lagier, J.-C., Parola, P., Hoang, V.T., Meddeb, L., Mailhe, M., Doudier, B., Courjon, J. Giordanengo, V., Vieira, V.E., Dupont, H.T., Honoré, S., Colson, P., Chabrière, E., La Scola, B., Rolain, J.-M., Brouqui, P., Raoult, D., 2020. Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial. Int. J. Antimicrob. Agents 105949.
- [14] Coronavirus disease 2019 (COVID-19)—Symptoms and causes & quot;. Mayo Clinic. Retrieved 14 April 2020.
- [15] Mehta, P. McAuley, D.F., Brown, M., Sanchez, E., Tattersall, R.S., Manson, J.J., 2020. COVID19: consider cytokine storm syndromes and immunosuppression. Lancet 395,1033–1034.
- [16] Hui DS, Azhar EI, Madani TA, Ntoumi F, Kock R, Dar O, et al. The continuing 2019- nCoV epidemic threat of novel coronaviruses to global health -The latest 2019 novel coronavirus outbreak in Wuhan, China. Int J Infect Dis 2020;264–6.
- [17] Sims AC, Baric RS, Yount B, et al. Severe acute respiratory syndrome coronavirus infection of human ciliated airway epithelia: role of ciliated cells in viral spread in the conducting airways of the lungs. J Virol 2005; 79: 15511–15524.
- [18] Reyfman PA, Walter JM, Joshi N, et al. Single-cell transcriptomic analysis of human lung provides insights into the pathobiology of pulmonary fibrosis. Am J Respir Crit Care Med 2019; 199: 1517–1536.
- [19] Effect of Dexamethasone in Hospitalized Patients with COVID-19 Preliminary Report medRxiv 22 June 2020.