



STUDY OF EVALUATION OF ABO BLOOD GROUP IN YOUNG ADULTS WITH REFERENCE TO DIFFERENT MIZAJ.

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ABSTRACT: Mizaj is derived from the Arabic word which means intermixing with each other. According to Ibn Nafees mizaj is an Inter mixture of different components. 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. This study is conducted to relate the relationship between mizaj and blood groups. A cross-sectional descriptive study to assess the ABO blood groups in 60(sixty) healthy volunteers of different mizaj was carried out in the department of physiology. Based on the various observations it is found that Damvi mizaj is highest in all blood groups and saudavi mizaj is lowest in all blood groups.

KEYWORDS: Mizaj, saudavi, damvi, temperament and ABO Blood groups.

INTRODUCTION

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 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). 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)*². The concept of Mizaj, is a major pillar of Tibb philosophy, is the amalgam of a person's physical characteristics and his psychological and emotional attributes². The admixture of different elements and their qualities in a specific ratio in a particular entity, whether living or non-living dominates its *mizaj*¹. Ibn Sina defines mizaj as the quality resulting from the interaction of opposite qualities present in elements consisting of minute particles so that most of the particles of each element may touch most of the others. Thus, when these particles act and react on one another with their properties, these emerge from there emerges from their properties, a uniform quality which is present in all of them. Gruner defined mizaj is that quality which results from the mutual interaction of the four contrary primary qualities residing within the elements⁴.

The antigens of the ABO system are an integral part of the red cell membrane and of all the cells throughout the body. They are also found in plasma and other fluids. If A is absent from person's red cells, anti A agglutinins are found in the serum and if antigen B is absent from person red cells the serum contains anti-B agglutinins. In most infants anti A and anti B agglutinins can first be demonstrated at 3-6 months. The titer of anti A and anti B reaches its maximum at the age of 5-10 yrs and then falls as the age increases⁹⁻¹⁰. An antigen is a substance that is foreign to the normal body and is immunogenic i.e. an antigen can induce the formation of an antibody. Antigens are usually proteins.

MATERIAL AND METHODS

A cross sectional descriptive study to assess the ABO blood group in 60(sixty) healthy volunteers of different mizaj was carried out in the department of physiology, A and U tibbia college, Karol Bagh, Delhi during period of 2020-2021.

INCLUSION CRITERIA

- Individuals of 18-30 years of age
- Either sex
- Clinically healthy.

EXCLUSION CRITERIA

- Person with age below 18 years
- Person with age above 30 years
- Alcoholics
- Smokers and tobacco users
- Diabetes mellitus/hypertension/ liver or heart disease
- Pregnancy and lactation
- Past history of trauma.

DETERMINATION OF MIZAJ (BODY TYPE)

Mizaj of each subject was assessed with the help of mizaj assessment performa which is based on Ajnas e Ashra described in unani classical literature.

DETERMINATION OF ABO BLOOD GROUP BY GLASS SLIDE METHOD:

ANTISERUM

ABO blood group testing was done by monoclonal blood group antiserum which had Antisera A(blue), Antisera B(yellow) and Antisera D(colourless).

SPECIMEN

Capillary blood of volunteers was collected on glass slides by the finger prick method.

METHOD

A clean and dry glass slide was divided into three sections with a glass marking pencil. The sections were labeled as anti-A, anti-B and anti D to identify the antisera.

One drop of anti-A, one drop of anti-B serum in the center and one drop of anti D were placed on the corresponding section of the slide. one drop of blood sample to be tested was added to each drop of antiserum. Antiserum and blood by using a separate stick was mixed for each section over an area about 1 inch in diameter.

By tilting the slide backwards and forwards, agglutination was examined after exactly two minutes.

Result

Positive (+): Little clumps of red cells were seen floating in a clear liquid.

Negative (-): Red cells were floating homogeneously in a uniform suspension.

PRINCIPAL

| Blood Group | Antigen |
|-------------|---|
| A | Has only A antigen on red cells (and B antibody in the plasma) |
| B | Has only B antigen on red cells (and A antibody in the plasma) |
| AB | Has both A and B antigens on red cells (but neither A nor B antibody in the plasma) |
| O | Has neither A nor B antigens on red cells (but both A and B antibody are in the plasma) |

In addition to the A and B antigens, there is a third antigen anti-D called the Rh factor, which can be either present (+) or absent (-).

OBSERVATION

Total 60 volunteers were randomly selected for Mizaj identification and determination of ABO blood group as per inclusion criteria, out of which one dropped out so 59 volunteers completed their study.

TABLE 1. Distribution of subjects according to gender

| Gender | Number of Individuals | Percentage |
|--------|-----------------------|------------|
| Male | 27 | 54.24 |
| Female | 32 | 45.76 |
| Total | 59 | 100 |

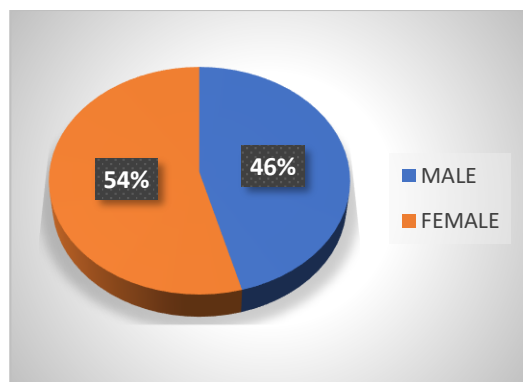


Figure 1. Distribution of individuals according to gender

The distribution of participants of male was 45.76% and 54.24% according to gender.

TABLE 2. Distribution of Subjects according to Mizaj

| Temperament | No. of Volunteers | Percentage |
|-------------|-------------------|------------|
| Damvi | 39 | 62.71 |
| Balghami | 11 | 18.64 |
| Safravi | 10 | 16.95 |
| Saudavi | 1 | 1.695 |
| Total(n) | 59 | 100 |

The 59 volunteers were distributed according to their Mizaj as shown in figure 2 out of the 59 volunteers, Damwi Mizaj included 37, Safravi included 10, Balghami included 11 and Saudawi included 1 volunteers. The maximum number of individuals was of Damwi Mizaj. It is because all participants were young individuals between the age group 18-25 years and the Mizaj of young people (sinn-e-namu) is Damwi as stated in Unani classical literature (Ahmad, ynm). The least number of individuals were in Saudavi Mizaj.

TABLE 3. Distribution of Subjects according to Blood Group

| Mizaj | AB+ve | | | AB-ve | | | A+ve | | | A-ve | | |
|----------|-------|---|-------|-------|---|-------|------|---|-------|------|---|-------|
| | M | F | Total | M | F | Total | M | F | Total | M | F | Total |
| damvi | 2 | - | 2 | - | - | - | 3 | 5 | 8 | 1 | - | 1 |
| balghami | 1 | - | 1 | - | - | - | - | 2 | 2 | - | - | - |
| safravi | - | 1 | 1 | - | - | - | 2 | 2 | 4 | - | - | - |
| saudavi | - | - | - | 1 | - | 1 | - | - | - | - | - | - |

| Mizaj | B+ve | | | B-ve | | | O+ve | | | O-ve | | |
|----------|------|---|-------|------|---|-------|------|---|-------|------|---|-------|
| | M | F | Total | M | F | Total | M | F | Total | M | F | Total |
| damvi | 7 | 4 | 11 | 1 | - | 1 | 6 | 8 | 14 | - | - | - |
| balghami | - | 5 | 5 | - | 2 | 2 | - | 1 | 1 | - | - | - |
| safravi | - | 3 | 3 | - | - | - | - | 2 | 2 | - | - | - |
| saudavi | - | - | - | - | - | - | - | - | - | - | - | - |

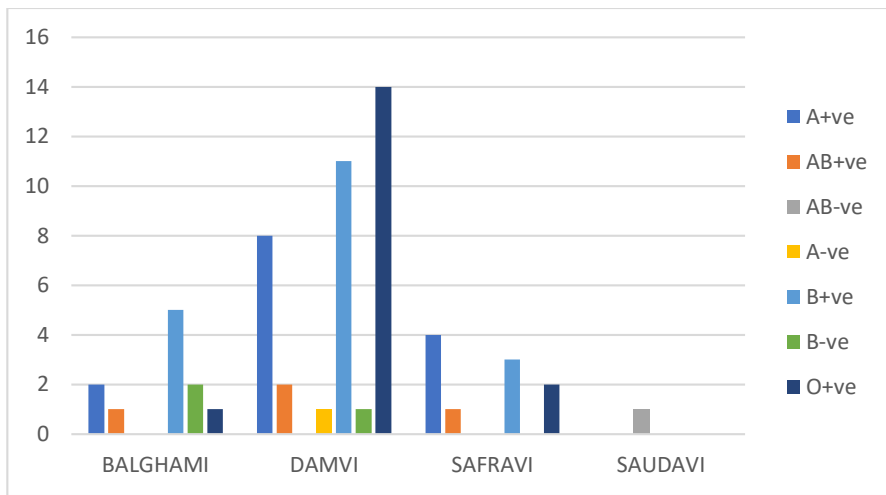


FIGURE 2. Distribution of Subjects according to Mizaj, gender and blood groups

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. This study was conducted to explore the relationship between mizaj and blood groups. The distribution of participants was almost equal according to gender. The 59 participants were distributed according to their mizaj as shown in table 2 out of 59 participants, Damvi mizaj included 39, Balghami included 11, Safravi included 10 and saudavi included 1 participant. 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, participants with AB+ve blood group are 4 out of which 2 falls in Damvi group and are male participants, 1 participant is Balghami which is also male and 1 participant is safravi and female. Participants with an AB-ve blood group is only 1 who is having saudavi mizaj and male. The participant with A+ve blood group is 14 out of which, 8 participants are having damvi mizaj and 3 are male and 5 female volunteers, 2 participants were balghami and female and 4 were safravi out of which 2 male and 2 females. Participants with A-ve blood group is 1 and who is male and damvi. Participants with B+ve blood group is 18 and maximum in number out which 11 were damvi, 7 male and 4 female, 5 Balghami female, 3 safravi female. Participants with B-ve blood group were 3 out of which there is 1 male damvi and 2 female Balghami. 17 participants were from the O+ve blood group out of which 14 participants fall in damvi group with 6 male and 8 female, 1 balghami female, and 2 safravi female. This study has limitations as this data is lacking to have volunteers of O-ve blood group and most blood groups do not have either male participants or female participants. So this data cant 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 blood groups.

CONCLUSION

Based on the various observations it is found that Damvi mizaj is highest in all blood groups and saudavi mizaj is lowest in all blood groups. From this study, it is clear that a possible correlation between blood groups and Mizaj certainly does exist.

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