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Review Article

UNANI PERSPECTIVE OF NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD)

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ABSTRACT

The non-alcoholic fatty liver disease (NAFLD) is not described in classical Unani literature as such; however, many physicians have discussed the features caused by sua-e- mizaj har and sua-e-mizaj barid which imitate the clinical features of non-alcoholic fatty liver. The liver is responsible for the metabolic functions of the body. Synthesis of humours (Akhlāt) takes place in liver. The temperament of liver is hot and moist (har ratāb) but due to some unhealthy dietary habits, fat consumption in very large amount and using such diets which is unfavourable to the liver, the mizaj of liver is changed to barid.

Keywords: NAFLD, Liver, Fatty liver, Unani

INTRODUCTION

The non-alcoholic fatty liver disease (NAFLD) is not described in classical Unani literature as such; however, many physicians have discussed the features caused by sua-e- mizaj har and sua-e-mizaj barid which imitate the clinical features of non-alcoholic fatty liver. The liver is responsible for the metabolic functions of the body. Synthesis of humours (Akhlāt) takes place in liver. According to Unani scholars, liver is the core of quwwat-e-tabbayah (nutritive faculty) through some sub faculties such as quwwat-e-hazema, quwwat-e-masiqa, quwwat-e-jazba and quwwat-e-dafiyah. These quwas are responsible for metabolic functions of the body. ¹⁻⁹

The temperament of liver is hot and moist (har ratāb) but due to some unhealthy dietary habits, fat consumption in very large amount and using such diets which is unfavourable to the liver, the mizaj of liver is changed to barid. As a result, the normal function of the liver is affected and there is production of balghami khoon in the liver causing accumulation of morbid matter in the form of fat. Occasionally excessive intake of hot drinks, drugs and alcohol change the mizaj of liver which is known as sue mizaj har kabid. ^{1,5,9}

SHAHAM (FAT) IN UNANI LITERATURE

Fat is a product of nutritive blood, and its main function is to conserve the heat in human body. According to Hakim Kamaluddin Husain Hamdani, shaham (fat) is a white and soft structure which contains oily substance in good quantity and mostly found in membranes and ligaments. He described some functions of shaham like, it produces heat in the body just like dried grass in the flame, it makes organs soft and healthy, and it plays an important role in the maintenance of physique and

beauty.⁵ Ibn Quf Masihi told that shaham keeps the organs wet and provides the shield to the body for heat loss and external injuries.² Majoosi said that fat is white and soft material. The temperament of fat is cold so the fat containing organs are cold. Described the types and functions of fat with regard to its site and said it is a white and soft body. Due to presence of fat, the temperament of fat containing organs become cold.^{5,10} Ibn Sina has mentioned in his book Al-Qanoon Fit Tib that fat always denotes coldness and produce flabbiness, lack of fat is due to heat as the substance which causes greasiness in blood is fat and fat causes cold. More fat, more coldness, and more moisture. So, fat indicates the amount of heat in the body.¹¹ Allama Qarshi said that increase of fat is due to Rutubat and lack of fat is due to Yabusat and increase body mass due to fat is a sign of Burudat.¹²

According to Hakeem Akbar Arzani fat produce by the liquid fatty substance in the blood. It coagulates by coldness and melts due to heat. He also mentioned the function of Shaham as it remains organs wet and safe.¹³

TYPES OF SHAHAM (FAT)

In Unani system of Medicine, there are two types of fat are mentioned i.e. Sameen (Liquefied fat) and Rawaj (Coagulated fat). Sameen remains liquid at normal body temperature while Rawaj found to be viscous and coagulated at the same temperature. Masihi mentioned two types of Shaham, i.e. Sameen and Sarb. Sameen is said when it is found over the muscles and when not over the muscles, it is known as Sarb.¹⁰ Majoosi described that semi solid fat found over muscles is Sameen and that membrane at which fat present in large quantity is Sarb. Another term used by him is Wadak for the fat which provides nutrition to muscles.¹¹

Hakim Kamaluddin Husain Hamdani mentioned that one type of Shaham is soft and liquid in nature and found over muscles and membranes, called as Sameen and the other one is viscous and coagulated in nature and named as Rawaj.¹⁴ Abu Sahal Masih classified irrespective of above alluded classifications of Fat. Masihi classified fat as Shaham and Sameen.¹⁵

ASBAB (CAUSES) ^{5,16-19}

1. Overeating -Use of excessive food and drink
2. Undernutrition- Reduction in food intake
3. Excessive cold regimens
4. Suppression of innate heat due to excessive fat depot
5. Dissipation of innate heat due to excessive activity
6. Accumulation of morbid matter in the body
7. Obstruction due to accumulation of morbid matter
8. Occupation which produces cold
9. Long term exposure to cold
10. Use of excessive cold food, drinks, and medication
11. Excessive fear and anxiety

MAHIYATE MARZI (PATHOPHYSIOLOGY) ^{2,3,20-22}

Intake of martoob ghiza (food and drink) and medication alter the normal mizaj of liver from har ratab to su-e-mizaj barid ratab which leads to deposition of fat in the liver parenchyma resulting in zaufe kabid and impairment of liver function.

Due to accumulation of morbid matter, there is sudda formation causing weakness of hepatic faculties which ultimately leads to disturb metabolic functions of liver.

ALAMAT WA NISHINIYAN (CLINICAL FEATURES)

The following clinical presentation has been depicted in classical Unani literature under the heading of sue mizaj kabid barid:

1. Indigestion ^{7, 19,23}
2. Dull pain in hepatic region ^{2,6}
3. Anaemia^{3,23,24}
4. Dull face ^{3,23, 25}
5. Pallor of the tongue and face ^{2, 6}
6. Puffiness of the face ^{3,25}
7. Less desire of thirst ^{6,11}
8. Increased appetite in early stages and loss of appetite in advanced stage of disease^{21, 26}
9. Feeling of excessive hotness ^{19, 23}
10. Excessive thirst^{2, 3}
11. Bitter taste²³
12. Anorexia^{2, 6}
13. Vomiting¹⁹
14. Diarrhoea²
15. Itching and heaviness in right hypochondrium ^{23, 24}
16. Weakness of the body ^{25,26}

TASHKHEES (DIAGNOSIS) OF SU-E-MIZAJ BARID KABID

In Unani system of medicine the diagnosis of disease is basically made by clinical presentation with the diagnostic tools viz. nabz (examination of pulse) and baul wa baraz (examination of urine and stool).

Examination of Nabz (pulse) ^{3,10,19,25}

In su-e- mizaj kabid barid nabze laiyin, nabze mutafawit and nabze za'eef is found.

Examination of Baul (urine) ^{21,24}

Baul is like washed water of meat^{21,24}

Examination of Baraz (Stool) ^{26,27}

Appearance of baraz whitish yellow in colour. Sometimes baraz may become soft and frothy.

AWARIZAT (COMPLICATIONS) ^{17,24}

If not treated early Su-e-mizaj kabid barid may be manifested as follows:

1. Zaufe kabid
2. Wajaul kabid
3. Sooul qinya
4. Istasqa

USOOL-E-ILAJ (PRINCIPLE OF TREATMENT)

First we should correct the temperament of the liver to normalise the liver functions. For this purpose such drugs are used which normalise the liver temperament and liver function. For this purpose, Muhallil (resolvent) Mushtahi (Appetizer) Musakhin (calorific) Muqawwi (Tonic) Mudir (Diuretic) and Mufatteh (deobstruent) drugs are used, which normalize the liver function and its temperament.^{3, 24} Ibn-e-sina described that we should avoid excessive tabreed of liver as it causes ascites, and excessive taskheen of liver because it leads to weakness of the liver, so whenever treating liver disease, he recommended the use of mubarridat (cold), musakhinat (calorific), muqawwiyat (Tonic) mufattihat (deobstruent) along with aromatic and astringent drugs.³ Mushil (purgative) drugs may be used if Iltahab (inflammation) is on the concave surface (inferior) and mudirrat (diuretics) if Iltahab on the convex side of the liver.²⁴ Jalinoos has noted that when inflammation is in early stage we should use diuretics and purgatives and when inflammation is near about to dissolve we should use laxatives.^{2,21,28}

ILAJ (TREATMENT)

In Unani system of medicine the treatment is divided into three types:

1. Ilaj bil ghiza (Dietotherapy)
2. Ilaj bil tadbeer (Regiminal Therapy)
3. Ilaj bil dawa (Pharmacotherapy)

A. Ilaj bil ghiza (Dietotherapy)

In the management of NAFLD, diet plays a key role. unhealthy dietary habits alter the temperament of liver. Lateef and easily digestible ghiza (diet) like dalya, chicken soup, small birds soup, sagudana kheer, pulses, kishneez, paudeena should be used. Ghaleez and kaseef ghiza should be avoided. Excessive oily, fried, spicy food and the food which takes much more time to digest should also be avoided. As these types of food causes accumulation of morbid matters and obstruction which disturb the normal function of liver. The munzij, mufatteh and muqawi-e-jjiger ghiza is beneficial for liver like maul shaer (barley water) with tukhme kasni and zarishk. ^{2, 3, 20, 2, 24, 25}

B. Ilaj bil tadbeer (Regimental therapy)

In Unani system of medicine tadbeer is very important in the management of liver diseases. Jalinoos recommended riyazat (exercise) like brisk walking because it reduces the body mass index (BMI) and helps to keep the body healthy. Allama Qarshi also described role of riyazat in sue mizaj barid kabid in his book Jameul Hikmat. ^{2, 17, 23}

C. Ilaj bil dawa (Pharmacotherapy)

In Unani system of medicine there are so many drugs which are used to treat liver disorders including NAFLD like disease from very earliest time viz. Mufaatihah-e-jigar (Deobstruent), Mudirrat (Diuretics), Mushilat(Purgatives), Muhallilat (Resolvent), Musakkhinat (Calorific). The drugs are prescribed according to site of pathology and temperament of the disease, if iltahab (inflammation) present on the superior surface of the liver then diuretics in the form of Aab-e-Anar and sikanjabeen are effective.^{3, 11, 26} Use of purgative and light muhallilat such as tukhme kasni, beekhe kasni and mako khushk in the form of decoction is recommended if iltahab (inflammation) is present on

the inferior surface of the liver.^{11,26} The drugs based on afsanteen (*Artemisia absinthium* Linn) like Sharbat-e-Afsanteen with sikanjabben unsali is very effective while Qurs-e-Afsanteen has been advised at night for sue mizaj barid jigar (cold derangement of liver). In case of both har and barid diseases of liver, Aabe kasni is very effective drug.^{2, 21, 29}

CONCLUSION

Non-alcoholic liver disease (NAFLD) has been affecting mankind since a longer period of time. Although many researches provided useful information regarding its treatment but the problem is still prevailing and complications related to hepatobiliary system are increasing. Drugs used to treat this disorder also cause side effects at different levels with variable severity and the time demands to discover those drugs which can be helpful in treating NAFLD without causing adverse effects.

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