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Perception of hepatitis as *Warm-e-Kabid* in literature of Unani medicine

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Abstract

The word hepatitis consists of Greek word *Hepar* which means ‘Liver’ and the Latin word *itis* which means inflammation. So, Hepatitis refers to an inflammatory condition of the liver. In Unani system of medicine hepatitis is described as *Warm-e-Kabid*. Almost all Unani physicians described in their books about hepatitis; its etiology, sign and symptoms, prevention and treatment. Eminent Unani scholars mentioned that *Warm-e-Kabid* or hepatitis is a condition which occurs due to any derailment in temperament of liver and this disturbed temperament may lead to increase in the size of liver and other symptoms. Use of herbal drugs in the treatment of liver diseases has a long tradition, especially in Unani system of medicine. Various single and compound formulations are mentioned in Unani literature for the management of Hepatitis. In this paper an attempt has been made to review the *Warm-e-Kabid* (hepatitis) as available in classical literature of Unani Medicine.

Keywords: *Warm-e-Kabid*, Hepatitis, Unani Medicine

1. Introduction

Unani Medicine (Greco-Arab Medicine) is one of the ancient systems of medicine. A vast array of literature about liver diseases has been documented in this system of medicine. Liver or *Kabid* in Arabic is an organ for origin of Natural powers (Quwaa) [1, 2] Galen, (129-217 AD) even stated liver as counterpart with sun, which is a source of energy for other planets [2, 3]. Ancient Unani scholars were well aware about the significance of liver and considered it to be one of the dynamic organs responsible for the metabolic functions chiefly the production of humours (*Akhlat*) for nourishment, growth and development of the human body [1-3]. Each of the four humours named *Dam* (sanguine), *Balgham* (Phlegm), *Safra* (Yellow bile) and *Sauda* (Black bile) carries its own normal temperament [4]. Any deviation or derangement in quality or quantity of humours, leads to liver pathologies [5-7].

The word ‘‘Hepatitis’’ (*Warm-e-Kabid*) comes from two words, the Greek word ‘‘Hepar’’ which means ‘Liver’ and the Latin word ‘‘itis’’ which means inflammation or swelling. Thus Hepatitis refers to an inflammatory condition of the liver [8].

Hippocrates was the first Unani physician who described *Warm-e-Kabid* (hepatitis) with explanation based on humoral theories and human temperament [9]. There was continuous piling of knowledge by Galen and other Arab physicians, like Rabban Tabri, Zakaria Razi, Majoosi, Maseehi, Jurjani, etc. and all of them have contributed a lot in its diagnosis and management [10]. In Unani literature hepatitis is termed as ‘‘*Warm-e-Kabid* or *Warm-e-Jigar*’’ [5-7, 10]. In spite of the tremendous advancements made in modern therapeutics, no significant and safe hepato-protective agent is available in modern medicine [8, 11]. The WHO survey indicated that about 70-80% of the world’s populations rely on non-conventional medicine, mainly of herbal source, for their primary healthcare [12]. In Unani medicine, a large number of single and compound formulations have been proved to have hepato-protective activities [13].

Definition of *Warm-e-Kabid* (Hepatitis)

Warm-e-Kabid is the inflammation or swelling of the liver tissue. Sometimes inflammation also occurs in the muscles related to the liver and the mesentery, in the liver peritoneum or in the liver blood vessels [7, 10].

Concept of *Warm-e-Kabid* (Hepatitis) in Unani medicine:

The normal temperament of liver is hot and moist [14, 6, 7, 9], due to irregular dietary habits, drugs, excessive consumption of fatty foods, its *mizaj* is altered to *barid* (cold) and some times

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to an abnormal *haar* (hot), which is antagonistic to the liver, thereby allowing the accretion of morbid matter in the form of fat (*Tashahham-ul-kabid*) or *Safra* (bile) which affects the normal functioning of liver resulting in *Su-e-mizaj barid* or *haar* [5-7, 15]. Hepatitis may occur without symptom but can lead to jaundice as well. It can be manifested as either acute or chronic disease depending upon the cause. *Warm-e-Kabid haad* (Acute hepatitis) can be self-limiting or may progress to *Warm-e-Kabid Muzmin* (chronic hepatitis) and in this way can lead to acute liver failure in rare instances. So Pharmacotherapy (*Ilaj bil Dawa*) in the form of drugs of herbal, mineral and animal origin have been utilized since ancient times as per the concept to bring back the homeostasis of the humours and to correct the abnormal temperament involved [16].

Rabban Tabri mentioned that *Warm-e-Kbid Muhaddab* (swelling on the convex side of liver) occurs when lungs and diaphragm are involved and when involvement of spleen, stomach, and intestines takes place it will be *Warm-e-Kabid Muqar* (swelling on the concave part of the liver) [3].

Ismail Jurjani mentioned that due to a *Suddah* (obstruction) between liver and gallbladder *Safra* (bile) does not pass to duodenum and it leads to accumulation of bile in liver and thus results in *Warm-e-Kabid* [6].

Zakaria Razi mentioned that when liver absorbs useless substances due to *Su-e-mijaz haar* (abnormal hot temperament) then other necessary substances required by liver are unable to get absorbed by liver and it will result in *Warm-e-Kabid* [17].

Abul Hasan Ahmad Bin Mohammad Tabri mentioned that when obstruction occurs between spleen and liver it leads to formation of improper blood and that accumulates in bile canaliculi and produces liver inflammation [9].

Some Unani scholars in their books like *Moalajat-e-nafisi* and *Turjuma Aqsarai* described *Safra-e-moharriq* (Burnt or oxidised bile) as cause of hepatitis and hepatomegaly [18, 19].

Causes of Warm-e-Kabid

Ibne sina, Razi, and Azam Khan have described the following causes in the development of *Warm-e-Kabid* [5, 6, 17].

- **Su-e-Mizaj Haar Kabid**
 - Su-e-Mizaj Haar Sada
 - Su-e-Mizaj Haar Maddi
- **Su-e-Mizaj Barid Kabid**
 - Su-e-Mizaj Barid Sada
 - Su-e-Miza Barid Maddi
- Sometimes hyperpyrexia and chronic fever predisposes hepatitis but sometime the inflammation without fever may result in hepatomagaly. Excessive environmental heat can also result in hepatitis.
- Absorbing power increases due to hyperactivity of stomach and because of this liver absorbs more matter which normally should not, this absorbed matter causes inflammation of the liver.
- Many digestive disorders such as *zoaf-e-meda* (weakness of stomach) and constipation may be the cause of hepatitis as *zoaf-e-meda* itself produces cold temperament which in turn a cause of *warm-e-kabid*.
- Sometimes humours get accumulated in the liver because of emboli. If the obstruction is bilious and emboli are close to the gall bladder, the bile gets mixed with blood which irritates the vicinity of the liver and results in hepatomagaly. The excess of bile is one of the important causes of the liver inflammation.

Types of Warm-e-Kabid [5-7, 9, 17]

1. Classification on the basis of involvement four humours

- Warm-e-Jigar Damvi/ Falghamuni (sanguineous liver inflammation)
- Warm-e-jigar Balghami (phlegmatic liver Inflammation)
- Warm-e-Jigar Safrawi (Bilious liver inflammation)
- Warm-e-Jigar Saudawi / Sulb Sartani/ (Carcinomatous/ Black Bilious)

Azam Khan in *Ikseere Azam* has divided *Warm-e-Jigar Saudawi* into a *Warm-e-Jigar Sulb Ghair Sartani* (cirrhotic liver without carcinoma) and *Warm-e Jigar Sulb Sartani* (cirrhotic liver with carcinoma) [7].

2. Classification based on the site of inflammation [7, 17]

- Warm-e-Mohaddab jigar: When inflammation or swelling occurs towards the convexity of liver.
- Warm-e-Muqar Jigar: When Inflammation or swelling occurs toward the concave surface of liver. Mostly inflammation spreads and involves whole liver.

3. Classification based on severity and course of disease [5-7, 9, 17]

- Warm-e-Jigar Haar
- Warm-e-Jigar Barid

4. Classification based on suddah (obstruction) [17]

- Obstructive hepatitis
- Non obstructive hepatitis

1. Waram-e-Kabid Damwi (Sanguineous hepatitis)

It is an acute inflammatory condition of liver due to predominance of blood (Dam) characterized by inflammation or derailment of normal temperament of liver which can lead to increase in size of liver and other associated symptoms [5-7, 9].

Signs and symptoms

It is characterized by acute fever sometimes with and sometimes without chills and rigors. In mild condition of the disease fever is not a compulsory symptom. Along with fever, excessive thirst, pain and heaviness in right hypochondriac region. Oliguria, sometimes diarrhea and sometimes constipation, loss of appetite, indigestion along with other features of predominance of blood (Dam) are also seen. When it touches or press ribs the pain will be felt beneath the ribs. Facial redness, dry and coated tongue is also seen. Occasionally it is also associated with hiccup and dry cough. Urine of the patient becomes reddish and concentrated.

In the last stage of the *Waram-e-Kabid Damwi* (sanguineous hepatitis), syncope is also seen along with cold extremities. Patient feels difficulty in laying at left side. This type of fever is seen in age group between 25- 35 years [5, 6].

Types

- Waram-e-Jigar Moqaár: when inflammation develops in the concave part of the liver
- Waram-e-Jigar Mohaddab: when inflammation develops in the convex part of the liver.
- In early stage, symptoms of hiccup are more along with vomiting, loss of appetite and severe pain at the site of liver. While in later stage, symptoms include cough, dyspnoea, heaviness and pain at the site of liver [18, 5, 7, 17].

Causes: [5, 7, 17, 20]

- Excessive heat
- Impure and imbalance diet
- Excessive alcoholism
- Trauma at the site of liver
- Excessive use of sweet and oily items.
- Excessive consumption of water at the time of high grade fever
- Impurities of blood
- Sometimes it develops after seasonal fever and dysentery

Principles of treatment (Usool-e-Ilaj) [5, 7, 17, 20]

- Dietary control (Taql-eel-e-ghiza) is one of the basic principle of treatment found to be highly beneficial.
- Detoxifying the liver with the deleterious effects of daily encounters with air-water and food-borne toxins is also one of the principle of treatment in Unani system of medicine.
- Relieving congested and catarrhal conditions of liver and controlling bile secretion has a great role.
- Evacuation (Istifraagh) through Fasd (Venesection/ Bloodletting) is also basic principle of treatment of *Waram-e-kabid Damwi*.
- Resolution of inflammation (Tahleel-e-waram) through purgation (Ishaal) and deterrence of causative matter in case of inflammation, being in lower part of liver and diuresis (idraar), when the inflammation is in the upper part of liver.

Management

1. Regimental Therapy (Ilaj Bil Tadbeer) [5-7, 20, 21]

- *Fasd-e-Baasaleeq* (Bloodletting through basilic vein) or *Fasd-e-Akhal* (Bloodletting through Median cubital vein) of right hand.

2. Pharmacotherapy (Ilaj Bil Dawa) [5-7]

- Oral administration of *Luaab-e-asaphol* (Mucilage of seed of Plantago ovate).
- Oral administration of *Luaab-e-bihdana* (Mucilage of seed of Cydonia oblonga)
- Oral administration of pomegranate juice with *Sikanjabeen*
- Oral administration of *Maghz-e-Faloos Khayarshambar* (Fruit pulp of Cassia fistula) mixed with *Sheera-e-Tukhm-e-Kasni* (Cichorium intybus)

Local application or Zimaad [5, 7]

- Anti-inflammatory (*Mohalill-e-Auram*) drugs such as *Sandal* (Santalum album), *Baboona* (Masticaria chamomilla) in haar variety, *Sumbul-ut-Teeb* (Nardostachys jatamansi), *Zaafraan* (Crocus sativus) in barid variety are applied Locally.
- *Aard-e-Jau* (Flour of seeds of Hordeum vulgare), *Sandal* (Santalum album), *Gulab* (Rosa damascene), *Aab-e-Kasni* (Fresh juice of Cichorium intybus) and Vinegar.
- Local application of a mixture of fresh juice of leaves of *Mako* (Solanum nigrum.) *Roghan-e-Gul* and vinegar in the early stage of disease.
- Boil the following ingredients in water filter it and add *Sharbat-e-Deenar* 24 gms, *Sharbat-e-Bazoori* 24 gms and use this preparation in morning.

3. Dietotherapy (Ilaj Bil Ghiza) [5, 20]

Dietary Recommendations

- Always consume food in less quantity, light and easily digestible diet is to be preferred.
- Juice of fruits, especially of pomegranate (*Punica granatum*)
- *Sattu* (Flour of roasted seeds of *Hordeum vulgare*) mixed with sugar
- *Ma-ul-Shaeer* (Barley water) is best option for the patients of *waram-e-kabid damwi*.

Dietary Restrictions

- Avoid fruits having constrictive and retentive properties
- Avoid use of sweet and oily food items

Prevention

- Strong diuretics and purgatives are to be avoided in sanguineous hepatitis
- Advised complete bed rest. Sometimes mild walk is beneficial if the condition is good.

2. Waram-e- Kabid Safravi (Bilious Hepatitis) [5, 7, 17].

It is an acute inflammatory condition of liver which is caused by predominance of yellow bile (*Safra*) or obstruction towards gall bladder side of liver or it occurs due to derangement in quality and quantity of bilious humours (*Safra*).

Signs and Symptoms [6]

It is characterized by high grade fever, nausea, and vomiting, excessive thirst, loss of appetite, pain in right hypochondriac region, cough and hiccup, yellowish stool and eruptions of tongue along with the features of predominance of yellow bile. Tongue and face of the patient looks yellowish. In this type of inflammation the signs and symptoms of heat and dryness shall be more intense as compared to *Waram-e-kabid damwi*.

Management

Principles of Treatment (Usool-e-Ilaj) [5, 7, 17, 20]

- Evacuation of yellow bile (*Ikhraaj-e-Safra*) in case of excessive accumulation of yellow bile.
- Normalization of yellow bile (*Ta'adeel-e-Safra*) by using *Muaddilat-e-safra* drugs.
- Resolution of inflammation (*Tahleel-e-waram*) by evacuation of yellow bile through diuresis (*Idraar*), when the inflammation is in the upper part of liver and by purgation (*ishaal*) in case of inflammation being in lower part of liver.
- Cooling of liver's temperament (*Tabreed-e-kabid*) is highly beneficial.
- Laxation (*Talayin*): always avoid constipation for better results.
- Removal of hepatic obstruction (*Tafteeh-e-sudad-e-kabid*) if the cause of disease is obstruction.
- Toning up of liver (*Taqwiyat-e-jigar*) to get the optimum results.
- Use of diuretics and purgatives at regular intervals

Pharmacotherapy (Ilaaj bil Dawa) [5-7]

- Oral administration of following decoction (*Joshanda*) containing following ingredients which are usually cold and deobstruent in nature. *Mako* (*Solanum nigrum*),

Tukhm & Bekh-e-Kasni (*Cichohicoriun intybus*), Tkhm-e-Khira (*Cucumis sativus*), Parsiaoshan (*Adiantum capillus-veneris*), Asl-us-Soos (*Glycyrrhiza glabra*) along with vinegar (*Sikanjabeen*).

- Oral administration of the decoction of *Chahar Gul* with Maghz-e-fuloos Khayar Shambar (fruit pulp of *Cassia fistula*) Sharbat-e-Neelofar, Aaloo Bukhara, Sikanjabeen sada and Sikanjabeen rewandi are very effective in case of *Waram-e-Kabid Safravi* (Bilious Hepatitis).
- *Joshanda-e-Halaila* is also very effective
- *Joshanda-e-Fawaakih* has tremendous results.

Local application (zimaad) ^[5, 7, 20]

- Olive oil, *Aard-e-Gandum* (Wheat flour) and water
- *Aard-e-Jau* (Flour of seeds of *Hordeum vulgare*), Sandal (*Santalum album*), *Arq-e-Kasni* (Fresh juice of *Cichorium intybus*) *Arq-e-Gulaab* (*Rosa damascena*) and vinegar.
- Paste of sandal (*Santalum album*), *Gul-e-Surkh* (*Rosa damascena*), *Arq-e-Gulaab* (*Rosa damascena*) and Kafur (*Cinnamomum camphora* Nees.)

Dietary Restrictions

- *Aghziya Musakhhina* (Heat Producing Diets) must be avoided ^[7]

Prevention/ Precaution ^[5, 7]

- Heat enhancing regimens to be avoided like excessive exercises and excessive Hammam (Steam bath).

3. Waram-e-Kabid Balgami (Phlegmatic Hepatitis)

It is characterized by *Waram-e-Rikhw* (Soft swelling) of liver caused by predominance of Balgham (Phlegm) accumulated either due to excessive production or its deficient resolution. It is characterized by heaviness in right hypochondrium without pain and fever, softness on palpation along with the features of predominance of phlegm ^[5, 7, 17].

Signs and symptoms

White colouration of face and even stool colour also changes to white in this disease which is a peculiar sign. Along with facial whiteness, whitish discoloration of tongue is also seen. Viscosity of the blood is increased. It is characterized by continuous low grade fever sometimes with and sometimes without chills. In mild condition of the disease fever is not a compulsory symptom. Diminished thirst, mild swelling in right hypochondriac region below the ribs Sometimes constipation, loss of appetite, indigestion along with other features of predominance of phlegm (*Balgham*) are also seen. Face of the patient will be puffy and feet of the patient becomes inflamed ^[5-7].

Causes of Phlegmatic Hepatitis ^[5-7, 17]

- Excessive cold
- Use of improper and imbalance cold temperament causing diet
- Cold temperament of the patient
- Trauma at the site of liver
- Excessive use of phlegm producing foods.
- Sometimes it is developed after seasonal fever.

Usool-e-Ilaaj ^[5, 7, 17]

- Istifraagh (Expulsion) of phlegm from the body with the

help of enemas and diuretics are very effective in such cases.

- *Taqleel-e-Ghiza* (Dietary control): It is one of the basic principle of treatment found to be highly effective.
- *Tanqiya-e-Balgham* (Evacuation of phlegm) through *Ishaal* (purgation) and *Idraar* (Diuresis).
- *Taqwiyat-e-Meda wa Jigar* (Toning up of stomach and liver).

Ilaaj Bil Tadbeer (Regimenal Therapy): Some Unani regimens which are very effective for the management of phlegmatic hepatitis are as follows ^[5, 7].

- *Riyaazat* (Exercise)
- *Hammam* (Medicated steam bath)
- *Fasad-e-Baasaliq* (Bloodletting through basilica vein)⁽²¹⁾

Ilaaj Bil Ghiza (Dietotherapy) ^[20]

- Dietary recommendation include Maa-ul-Asl
- Fruits, Dry Fruits and Dairy products are restricted

Ilaaj Bil Dawa (Pharmacotherapy) ^[5-7]

- Enema prepared from *Joshanda Beekh-e-Karafs*, *Beekh-e-Izkhar*, *Shaghoofa-e-Izkhar*, *Anisoon*, *Booti Ghafis*, *Zoofa*, *Pudina*, *Ghaareeqoon*, *Turbud*, *Qanturiyoon*, *Daqeeq*, *Maweez Munaqqa*, *Injeer* along with Sugar.
- Oral administration of decoction of *Afsanteen* (*Artemisia absinthium*) with castor oil.
- Oral administration of decoction of *Tkhm-e-Karafs* (*Apium graveolens*), *Anisoon* (*Pimpinella anisum*), *Baadiyan* (*Foeniculum vulgare*), *Nankhwah* (*Ptycotis ajowan*), and *Beekh-e-Kasni* (*Cichorium intybus*.)
- Oral administration of diuretics like *Joshanda-e-Tukhm-e-Karafs*, *Anisoon*, *Baadiyaan*, *Ajwain desi*, *Beekh-e-Kasni* along with *Sikanjabeen buzoori*
- Apart from these, use of hot temperament diets and drugs to make the temperament of the liver hot is important in such cases.

Local application (Zimaad) ^[5, 7]

- Local application of the paste of *Khardal* (*Brassica nigra*) with cow milk is very effective in *Waram-e-Kabid balghami* (*Phlegmatic hepatitis*)

4. Warm-e-Jigar Saudawi (Melancholic Hepatitis) / Sulb Sartani/ (Carcinomatous/ Black Bilious)

Waram-e-Kabid Saudawi (Melancholic Hepatitis) is a hard swelling (*waram-e-sulb*) of liver having tendency of progression towards malignancy. It is caused by accumulation of thick humours in the liver, or consequent to its hot swelling (*Waram-e-haar*) or cold swelling (*Waram-e-baarid*). Excessive intake of alcohol is one of the leading cause of the disease. Few drugs also play major role in causing the disease. In other words “melancholic hepatitis” is a condition where there occurs derailment in temperament of liver and due to this deranged temperament it may lead to increase in liver size and other symptoms ^[5-7].

Signs and symptoms

It is characterized by heaviness in right hypochondrium exacerbated after food intake, cachexia, loss of appetite, nausea, hiccup, blackish discoloration of skin and hardness on palpation. It may be a prelude of ascites and may be a predisposing factor of hepatic malignancy ^[5, 7, 17].

Tahaffuz (Prevention/ Precaution)

- Wash your hands before and after handling food or eating.
- Regimes responsible to increase the production of black bile should be avoided.
- Don't share personal items such as razors, toothbrushes and nail clippers with an infected person.
- Refraining from alcohol
- Bed rest.

Ilaaj bil Tadbeer (Regimenal therapy) [5, 7, 20, 21]

- *Fasd-e-Baasaliq* (Bloodletting through basilic vein) is very beneficial
- *Fasd-e-Usaslim* (Bloodletting through Usaylim vein) of right hand is also beneficial

Pharmacotherapy (Ilaaj bil dawa) [5, 7]

- Oral administration of decoction of Gaozaban (*Borago officinalis*) Baadiyaan (*Foeniculum vulgare.*), Gul-e-ghafis (*Gentiana dahurica.*), Gulqand with Qurs-e-zarishk
- Oral administration of decoction of Aftimoon (*Cuscuta reflexa*), Sana (*Cassia anguisifolia*), Badaranjboya (*Nepeta ruderalis*), Asl-us-soos (*Glycyrrhiza glabra*), Gaozaban (*Borago officinalis*), Tukhm-e- kasni (*Cichorium intybus*) with Majoon-e- Najah 7-10gms.

Dietary Recommendations [5, 7, 20]

- Recommended diet includes *Ma-ul-Jubn*, Half fried egg and Camel milk
- Meat, Cheese, Sea birds and all fruits except pomegranate and apple are restricted

Conclusion

Hepatitis B represents one of the world's most common and serious infectious diseases. World-wide, over 350 million people are currently estimated to be persistent carriers of the hepatitis B virus (HBV) and each year approximately 1 million persons die from the chronic sequel of HBV infection, i.e. liver cirrhosis and hepatocarcinoma. In spite of the tremendous advancements made in modern therapeutics, no significant and safe hepato-protective agents are available in them. Various single and compound formulations are mentioned in Unani literature for the management of Hepatitis. And various clinical studies are already proved the hepatoprotective effects of drugs which are mentioned in Unani literature.

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