

Unani Concept of Jaundice and its Management

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Jaundice is a disease, which is characterized by yellow staining of the skin and sclera by abnormally high blood levels of the bile pigment bilirubin. The yellowing extends to other tissues and body fluids. Bilirubin, a tetrapyrrole pigment, is a breakdown product of heme (ferroprotoporphyrin IX). About 70 to 80% of the 250 to 300 mg of bilirubin produced each day is derived from the breakdown of hemoglobin in senescent red blood cells. The remainder comes from prematurely destroyed erythroid cells in bone marrow and from the turnover of hemoproteins such as myoglobin and cytochromes found in tissues throughout the body.

The philosophy of Unani system of medicine is based on the humoral theory. The theory was central theme to the teachings of Hippocrates and Galen and it became the dominant theory in Europe for many centuries. As per the Unani system of medicine, the cause of jaundice is the accumulation of yellow or black humours in the cutaneous tissue and its nearby tissues. Based upon the nature of discoloration jaundice is classified into two types: Yellow Jaundice and Black Jaundice.

In the allopathic system there lack of effective drugs for jaundice. Some hepatoprotective drugs are available but many side effects are associated with them due to their chemical composition. In Unani system of medicine, this disease can be cured with completely natural and non-invasive methods.

Keywords: Unani; Jaundice; Humours; Hepatoprotective.

Jaundice is a yellowish discoloration of the skin, mucous membranes and sclera caused by elevated levels of the chemical bilirubin in the blood

(hyperbilirubinemia). The term jaundice is derived from the French word *jaune*, which means yellow. Jaundice is not a disease but rather a visible sign of an underlying disease process. Jaundice is typically seen when the level of bilirubin in the blood exceeds 2.5-3 mg/dl (milligrams per decilitre).

Demographic Data

Incidence and Prevalence: About 5% of the population is thought to have a hereditary disorder called Gilbert syndrome (benign unconjugated hyperbilirubinemia), which can produce jaundice during periods of unusual stress or illness. This type of jaundice usually is considered clinically insignificant. About 10% of the population has cholelithiasis (gallstones), which can cause jaundice.

Aetiology

Jaundice in adults is caused by various medical conditions that affect the normal metabolism or excretion of bilirubin. Bilirubin is mostly formed from the daily breakdown and destruction of red blood cells in the bloodstream, which release hemoglobin upon rupturing. The heme portion of hemoglobin molecule is then converted into bilirubin, which is transported in the bloodstream to the liver for further metabolism and excretion. In the liver, the bilirubin is conjugated (made more water soluble), and is excreted into the gallbladder (where it is stored) and into the intestines. In the intestines, a portion of the bilirubin is excreted in the feces, while some is metabolized by the intestinal bacteria and excreted in the urine.

Jaundice occurs if there is a dysfunction of the normal metabolism or excretion of bilirubin. This disruption in the metabolism or excretion of bilirubin can occur at various stages, and it is therefore useful to classify different causes of jaundice based on the where the dysfunction occurs. The causes of jaundice are generally classified as pre-hepatic (the problem arises before secretion to the liver), hepatic (the problem arises within the liver), and post-hepatic (the problem arises after bilirubin is excreted from the liver).

Clinical Features

Basically, jaundice is not a disease, but rather a visible sign of an underlying disease process. Individuals with jaundice will have a yellow discoloration of the skin to varying degrees, and may also exhibit yellowing of the mucous membranes and of the white of the eyes.

However, depending on the underlying cause of the jaundice, individuals may experience different symptoms. Some individuals may have very few, if any, symptoms at all, while others may experience more severe and pronounced symptoms. Individuals with jaundice may experience any of these signs and symptoms: pale-colored stools, dark-colored urine, skin itching, nausea and vomiting, rectal bleeding, diarrhea, fever and chills, weakness, weight loss, loss of appetite, confusion, abdominal pain, headache, swelling of the legs, and swelling and distension of the abdomen.

Unani Concept

PRODUCTION OF AKHLAT (HUMOURS) IN THE BODY

The term *khilt* is referred to as something, which is mixed. The fluids, which are present in our body, are *Dam* (Blood), *Balgham* (Phlegm), *Safra* (Yellow Bile) and *Sauda* (Black Bile) are basically in the state of mixture. Hence they are called as *Akhlat*¹.

Akhlaat (Humours) are those body fluids, which are produced after metabolism (*Taghayyur wa Istehala*) of food products¹. Humours are in fact; the fluids, which the human body obtains from the food, and include various hormones and enzymes also. They are present in blood vessels i.e., both arteries and veins and intervening blood capillaries. Lymphatics and lymph nodes, intercellular spaces as well as other cavities in the body between various organs are also filled with humours¹. These four fluids are responsible for maintaining moisture of different organs of the body and also provide nutrition to the body. Unani physician maintain that when any disturbance occurs in the equilibrium of the humour it causes disease, therefore the Unani system of treatment aims at restoring its equilibrium¹.

Classification of Humours

ACCORDING TO PROPERTIES

1. *Khilt-e-Mehmood*: It is capable of assimilating into the organ to which it has to nourish either singly or by combining with other *Khilt* i.e., it should provide the replacement of the contents which has been dissolved, and expelled or excreted from that particular organ.
2. *Khilt-e-Ghair Mehmood* or *Khilt-e-Raddi*: It is produced normally in the body as a result of various metabolic activities but, do not possess any advantage to the body as like *Khilt-e-Mehmood* does. They are also called as *Khilt-e-Fuzlah*¹.

OTHER CLASSIFICATION

Based upon the production of humour and nature of discoloration, jaundice is classified into two types:

1. *Yarqane Asfar* (Yellow Jaundice)
2. *Yarqane Aswad* (Black Jaundice): (This type of jaundice rarely occurs due to excess of bile; hence it is not discussed here)

YARQANE ASFAR (YELLOW JAUNDICE)

In this type there is an abnormal excess flow of *Safra* (bile) towards the circulatory system i.e., inside the blood causing discoloration of the entire skin, conjunctiva, and other secretions of the body and organs of the body. The causes of jaundice can be divided into two categories^{2, 5, 27}.

1. Non Obstructive

- a) No obstruction in the normal path of biliary tract, instead there are some changes, which occur in the various organs of the body to convert the blood into the yellow humour.
- b) A disturbed elimination of bile from the blood^{1-3, 5, 27}.

In this category there are many types of jaundice, which are mentioned here briefly:

- i) **Bohran (During crisis):** At the time of disease crisis, like in high fever, body system expels bile towards skin and other external parts of the body^{2, 5, 29}.
- ii) **Su-e-Mizaj Kabid (Derangement of temperament of liver):** Sometimes, jaundice occurs due to *Su-e-Mizaj Kabid* (disturbed temperament of liver) or excessively hot temperament. In this situation food materials are abnormally metabolized and converted into bile, and due to its over production it is transmitted into blood circulation^{2-3, 5, 27}.
- iii) **Su-e-Mizaj Badan (Disturbed body temperament):** Jaundice may occur due to heat of entire body or blood vessels, which causes accumulation of more bile in the blood vessels. This condition is mostly seen in pyrexia and pyaemia^{2-3, 5, 27}.
- iv) **Amraz-e-Kabid (Hepatic disorders):** Due to inflammation of liver the biliary canaliculi gets obstructed which leads to more heat in liver causing more production of bile in it resulting in transmission of bilirubin to general circulation through blood vessels in the liver. Jaundice is also caused due to weakness of liver, cirrhosis of liver, cancer of liver and fatty liver^{2-3, 5}.

- v) **Sammiyat-e-Haiwan (Toxic jaundice):** Sometimes jaundice occur due to bite of poisonous animal e.g. snake bite, wasp bite, ants bite and locust bite etc.^{2-3, 5, 27}.
- vi) **Hawa-e-Haar (Hot air):** Sometimes jaundice occurs due to sunlight of very hot weather which causes more production of bile (usually women and children are affected)^{2, 5}.
- vii) **Miscellaneous causes:** Defective circulation of blood or change in composition of blood, weakness of nerves, diseases of heart, lungs, and physiological states e.g., fear, sadness and disturbed digestion etc.⁵.

2. Obstructive: An obstruction in the bile duct, which leads to absorption of bile into the blood^{2-3, 5, 27}. There are several causes of obstruction in the normal path of bile flow:

- i) **Lesion:** There are obstructive lesions, abscess, tumours or cyst in the liver which hinder the flow of bile towards gall bladder and intestine. This includes all the diseases of liver which can cause obstruction e.g. cirrhosis and carcinoma of liver^{2-3, 5, 27}.
- ii) **Cholecystitis:** Sometime icterus occurs due to inflammation of gallbladder or its ducts (cholangitis)^{2-3, 5, 27}.
- iii) **Obstruction of bile ducts:** There are two conditions in the obstructions:
 - a) The obstruction may be in the hepatic duct
 - b) The obstruction may be in common bile duct. The causes of obstruction in the ducts are bile stones, highly viscous bile, intestinal worms etc.^{2-3, 5, 27}.

Management of *Yarqan* in Unani Medicine

These are described as follows:

1. **Bohran (Crisis):** In this type of jaundice measures can be adopted to help the body mechanisms to expel the *Maddah* (material). Patients should be given *Sikanjabeen* and hot water⁵. Medicated Tub Bath/Sitz bath also lead to promising effects.
2. **Su-e-Mizaj kabid haar (Hot temperament of liver):** *Aab-e-Anar Tursh* (Sour pomegranate juice/water), *Maa-ul-Sha'eer* (barley water), *Aab-e-Tarbooz* (juice of *Citrullus lanatus*), and *Aab wa Maghz Kaddu-e-Daraz* (pulp and water of *Lagenaria siceraria*) can be given. Medicines like *Afsanteen* (*Artemisia absinthium* Linn.), *Aab-e-Mako* (water of *Solanum nigrum* Linn.), *Aab-e-Kasni* (*Cichorium intybus* Linn.) (Juice obtained by straining fresh leaves) and *Aalu Bukhara* (*Prunus domestica* Linn.) can be

given as coolant and also for purification of blood. *Qurs-e-Afsanteen*, *Qurs-e-Ward*, *Qurs-e-Tabasheer*^{2, 4-5, 7-8}. As purgatives, *Tukhm-e-Kasni* (seeds of *Cichorium intybus* Linn.) 10.5 gm, *Ijjas kibaar* (*Prunus domestica* Linn.) 10 numbers of *Tamar-e-Hindi* (*Tamarindus indica* Linn.), *Turanjabeen* (*Alhagi maurorum* Baker Dext) and granular sugar. As a diet, *Aab-e-Jau* (*Hordeum vulgare* Linn./barley water) is highly recommended².

3. **Su-e-Mizaj Badan (Disturbed body temperament):** Drugs causing purgation of bile should be used e.g. decanted liquid of soaked *Haleela-Zard* (*Terminalia citrina*), *Aalu-Bukhara* (*Prunus domestica* Linn.), *Banafshah* (*Viola odorata* Linn.), *Tamar-e-Hindi* (*Tamarindus indica* Linn.), *Khayar-e-Shambar* (*Cassia fistula* Linn.) and *Turanjabeen* (*Alhagi maurorum* Baker Dext) etc. Cold syrups and diet should be advised e.g. *Aab-e-Kasni sabz* (*Cichorium intybus* Linn.), *Aab-e-Mako sabz* (*Solanum nigrum* Linn.), *Aash-e-Jau* (Semi liquid preparation of barley), *Aab-e-Kaddu* (*Lagenaria siceraria*), *palak* (*Spinacia oleracea* Linn.), *Bathua* (*Chenopodium album* Linn.), *Khubbazi* (*Malva sylvestris* Linn.), *Kheera* (*Cucumis sativus* Linn.), *Kakri* (*Cucumis melo* Linn.), *Aab-e-Tarbooz* (*Citrullus lanatus*) also cold and moist vegetables respectively. *Qurs-e-Kafoor* and *Aab-e-Anaar-Dana-Tursh* are also found effective^{2, 5-7}.
4. **Amraz-e-Kabid (Hepatic disorders):** In this regard, underlying causes should be removed and cholagogue medicines should be avoided^{5, 7}.
5. **Sammiyat-e-Haiwan (Toxic jaundice):** *Aab-e-Anaar* (*Punica granatum* Linn.), *Luaab-e-Isapghol* (*Plantago ovata* Forsk.), *Aab-e-Kasni* (*Cichorium intybus* Linn.), *Qurs-e-Kafoor*, *Aab-e-Jau* (*Hordeum vulgare* Linn./barley water), and *Raughan-e-Badam* can be used. Apart from this some Unani medicines with antidote properties can also be used. Like *Tiryaaq-e-Kabeer*,⁵ *Qurs-e-Tabasheer* 4.5 gm along with *Aab-e-Anarain* (juice of *Punica granatum* Linn.) or *Qurs-e-Kafoor* (preparation of *Cinnamomum camphora* Linn.) 4.5 gm.
6. **Hawa-e-Haar (Hot weather or air):** If jaundice is occurred due to hot air, the surroundings of the patient should be cooled by using ice and other things, cold fruits juice/water and cool diet should also be given, e.g. *Aab-e-Anaar* (*Punica granatum* Linn.), *Aab-e-Seb* (*Malus-sylvestris* Mill.), *Aab-e-Tarbooz* (Water of *Citrullus lanatus*), *Aab-e-Kaddu* (water of *Lagenaria siceraria*), and *Aab-e-Khayar* water of *Cucumis sativus* Linn. and other cool foods should be administered⁵.
7. **Hepatic duct obstruction:** Different measures should be adopted

for expulsion of extra bile from the body e.g. *Hijamah* (Cupping), *Fasd* (Venesection), *Idraar-e-Baul* (Diuresis), *Ishaal* (Purgation), *Tareeq* (Diaphoresis), *Irsaal-e-Alaq* (Leeching). Thereafter, some *Mufatteh-e-Sudad* (deobstruent drugs) should be given e.g., *Ghariqoon* (*Agaricus alba*), *Kasni* (*Cichorium intybus* Linn.), *Aspand* (*Peganum harmala* Linn.), *Karafs* (*Apium graveolens* Linn.), *Bekh-e-Badyan* (*Foeniculum vulgare* Mill.), *Kababah* (*Zanthoxylum armatum* DC), *Anisoon* (*Pimpinella anisum* Linn.) and *Biranjasaaf* (*Achillea millefolium* Linn.), etc. If the temperament is hot, *Aab-e-Kasni Sabz* (*Cichorium intybus* Linn.), *Aab-e-Mako Sabze* (*Solanum nigrum* Linn.) and *Shikanjabeen* can be given. Apart from this, *Ghiza-e-Lateefah* (Easily digestible diets) are recommended^{4-5, 9}.

Dietary Recommendations

Baarid and *Ratab* (Cool and wet) vegetables: *Kadu* (*Lagenaria siceraria*), *Paalak* (*Spinacia oleracea* Linn.), *Bathua* (*Chenopodium album* Linn.), *Khubbazi* (*Malva sylvestris* Linn.), *Kheera* (*Cucumis sativus* Linn.), *Kakri* (*Cucumis melo* Linn.) and *Sikanjbeen Tursh* are highly recommended⁶.

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