



Journal Homepage: -www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/16397
DOI URL: <http://dx.doi.org/10.21474/IJAR01/16397>



RESEARCH ARTICLE

A COMPREHENSIVE STUDY OF BILIOUS DISEASES: AN OVERVIEW

Sana Kausar^{1*}, Mohammad Zulkifle², Waris Ali³ and Nabila Subhan⁴

1. Assistant Professor, Department of Mahiyatul Amraz, Eram Unani Medical College, Lucknow.
2. HoD, Prof. Department of Kulliyate Tib, National Institute of Unani Medicine, Bangalore.
3. Associate Professor, Department of Ilmul Saidla, Eram Unani Medical College, Lucknow.
4. Assistant Professor, Department of Mahiyatul Amraz, Aligarh Unani Medical College, Aligarh.

Manuscript Info

Manuscript History

Received: 05 January 2023

Final Accepted: 09 February 2023

Published: March 2023

Key words:-

Health, Yellow Bile, Bilious Diseases

Abstract

Human being has always been suffering from diseases. Before the beginning of Tibb (medicine) (300Bc), superstitions were considered as the cause of disease. Therefore, Gods and Goddesses were worshipped to cure disease and regain health. Since the existence of medicine, the material is considered a cause of disease. Accordingly, treatment shifted towards the material. In 500 BC Buqrat (Hippocrates) started the discussion of health. He established the views of structure, composition, properties and functions, health and disease in respect of the human body. So, the goal of Greek medicine is to protect health to the possible extent and cure disease. Hippocrates proposed the concept of Akhlāṭ Arba'a (four humours/four fluid) these are Khilt -i- Dam (sanguineous humour), Khilt -i- Balgham (phlegmatic humour), Khilt -i- Ş afrā' (choleric humour) and Khilt -i- Sawdā' (melancholic humour). He also proposed that the harmonious state of four humours is responsible for health. And, disharmony results in disease. Every humour is attributed to specific qualities, characteristics and some specific and general functions. But the main function of these Akhlāṭ (humours) is to provide nutrition and replenishment of every organ of the body according to their temperament. Choleric humour is synonymously called yellow bile or bilious humour. Yellow bile is one of the four humours, responsible for health and disease. In abnormal state yellow bile can produce a number of diseases called bilious diseases. In U.S.M. (Unani System of Medicine) bilious diseases are discussed under the heading of Sū'-i-MizājMāddī (morbid temperament associated with substance). In this paper, a brief explanation of yellow bile along with it relates is given. Pathophysiology of bilious diseases is given in detail.

Copy Right, IJAR, 2023,. All rights reserved.

Introduction:-

Bilious diseases(bilious diseases/diseases of yellow bile) consists of two word one isMarḍ (disease)other isŞ afrā' (yellow bile). Disease is an abnormal state that leads to disturbance of functions of the human body. In Unani medicine, the disease has been described as a condition opposite to health. In views of Galenus (Galen), health is a condition which keeps all the functions of body correct and disease is a condition which impairs all the functions of

Corresponding Author:- Sana Kausar

Address:- Assistant Professor, Department of Mahiyatul Amraz, Eram Unani Medical College, Lucknow.

the body¹. According to Ibn Sina (Avicenna), health is a state in which the temperament and structure of the human body are in normal condition and any disturbance in functions called as disease². Amongst the four humours, one humour is yellow bile. It is in least amount in comparison to other humours except black bile (melancholic humour) and always present in mixed state with blood and also stored in gall bladder^{3,4}. It is Ḥār-Yābis (hot and dry) in temperament^{4,5}, provides nutrition and replenishment to hot and dry organs like lungs, arteries and cartilage³. It is Raqīq(thin) in nature and potentially Yābis (dry)⁶. It is acute^{6,7} and caustic/ irritant in nature³ and it has a digestive virtue⁸. Unani philosophers described two categories of yellow bile, one is Tabī □ī (normal yellow bile) and other is Ghayr Tabī □ī (abnormal yellow bile)^{3,7}. Normal yellow bile performs various functions for the maintenance of health. Abnormal yellow bile affects the body qualitatively or quantitatively and produced diseases. It does not have much effect on body due to its deficiency. Excess and exaggeration of it cause morbidity^{3,6}.

Bilious Diseases

Bilious diseases are types of Khilṭ i Amrāḍ (humoural diseases) or Sū'-i-Mizāj Māddī (morbid temperament associated with substance) which are caused by abnormality of normal yellow bile^{1,2}. Sū'-i-Mizāj is abnormality of Kayfiyāt Arba'a (four qualities) and if this abnormality occurs due to any type of Mādda (material) then it is called Sū'-i-Mizāj Māddī (morbid temperament associated with substance)⁹. Mādda (matter) of Sū'-i-Mizāj (impaired temperament) are of six types i.e. four humours, Rī ḥī (gases) and Mā'-I (water) Mawād (matter)². Ibn Rushd described bilious diseases under the heading of Garm-wa-Khushk Māddi Amrāḍ (hot and dry materialistic diseases)¹⁰.

Yellow bile causes bilious diseases in following ways-

1. Change inconsistency¹¹.
2. Increase or decrease in quantity¹¹ e.g. Yaraqān Aṣ far (yellow jaundice), Waram (swelling), Ishāl (diarrhoea), CAD, Qūlanj Am'ā' (intestinal colic), Īlā'ūs (intestinal obstruction), Dī dān al-Am'a' (worm infestation) etc.
3. Putrefaction¹¹ e.g. Humma al-Ghibb (bilious fever/tertian fever) etc.
4. Combustion¹² e.g. Ṣ ubārā (maniac phrenitis), Māniyā (mania), Ḥurqa al-Mi'da (hyperacidity), Qarha al-Mi'da and Am'ā' (gastric and duodenal ulcers) etc.
5. Vapours¹³ e.g. Sārsam Ṣ afrāwi (bilious meningitis), Sharā (urticaria), Ḥī kka (pruritus) etc.

Synthesis of Ghayr Tabī 'I Khilṭ -i- Ṣ afrā' (Abnormal yellow bile)

Normal yellow bile is synthesised in the liver after the first transformation of food^{2,4}. Abnormal yellow bile is formed into both the liver and the stomach after alteration of normal yellow bile in respect of quantity and quality. Bilious diseases are produced by abnormal yellow bile¹⁴. So, the causative factors of abnormal yellow bile will be responsible for production of the Bilious diseases. When any corruption occurs in the four causes of the existence of yellow bile, then it becomes abnormal. Moreover, the resulting yellow bile is imbalanced in its quantity and quality of its various inconspicuous components.

Sabab-i-Māddī (material cause):

Ibn Rushd called material cause as Hayūlā (primordial matter)¹⁰. The material cause of yellow bile is firy^{1,6,15} constituents of food which is hot and dry in their temperament³. If this type of food is not taken at right time i.e. cold hours, in right order, in right quantity and quality, then they will be transformed into abnormal yellow bile which is more in quantity and hotter and drier in quality⁹.

Sabab-i-Fā'ilī (efficient cause):

The efficient cause of yellow bile is Ḥarārat (hotness) of liver^{1,6,15}. If Ḥarārat of liver increases, it produces more quantity of yellow bile which causes Imtilā' (dominance)¹⁰, whereas if Ḥarārat of liver decreases, it produces less quantity of yellow bile which causes deterioration in its functions.

Sabab-i-Ṣ urī (formal cause):

Excessive maturation of food in the liver is the formal cause of yellow bile^{1,6,15}. Because of this cause, the matter i.e. food, get a particular form/structure/basic profile. Therefore, yellow bile is produced after the excessive maturation of food in the same way as overcooking of milk converts into khoya (condensed milk). If the same milk is further heated, it will burn. Similarly, quality of yellow bile becomes altered after over maturation of food in the liver and now it is Ṣ afrā Muḥ tariqa (burnt yellow bile)¹⁵.

Sabab-i-Tamāmī (final cause):

Final cause of yellow bile is its normal functions^{1,6,15} which are affected by above mentioned causes of existence.

Due to corruption of the above three causes of existence, yellow bile becomes alter and unable to perform its normal functions. Corruption of these causes makes yellow bile more viscous or lighter and thinner which is unable to perform its goal. Besides when yellow bile is hotter and drier or more in quantity or both, the gallbladder's functions are interrupted, which results in various bilious diseases.

Others factors responsible for the synthesis of abnormal yellow bile are -

1. Hot climate, hot weather, hot geographical area³ like desert e.g. South Africa, Saudi Arabia etc.
2. Summer season^{1,6}.
3. Occupation- Those are associated with hot and dry atmosphere, such as blacksmith work, brick kiln work¹⁰ etc.
4. Excessive physical work, such as labour, farming, excessive exercise^{6,10} etc.
5. Age- Yellow bile is produced more in the age of Sin-i-Shabab (adolescence)⁶.

Due to all these factors, the abnormal yellow bile is produced that is either hotter and drier in quality or more in quantity or both. This is called Imtilā' (repletion). Gallbladder does not absorb it and its quantity increases in blood. When the organs continue to receive nourishment from this blood, they develop Sū-i-Mizāj Ş afrāwī (bilious impaired temperament)¹⁰ which causes many diseases. When Quwāṭ abī 'iyya (natural faculty) wants to expel this yellow bile, it is expelled towards the surface of the body which is called Yaraqan AŞ far (yellow jaundice)¹⁰.

In addition, if it decrease in quantity or quality, Burudat (coldness) dominated¹⁶ into the body organs and become responsible for many diseases such as Qūlanj (intestinal colic), Īlā'ūs (intestinal obstruction), Dī dān al-Am'ā' (worm infestation), Buṭ lān al-Haḍ m (indigestion) etc.

In both conditions, alteration take place in the yellow bile itself.

The second form of abnormal yellow bile is when other humour mixed with yellow bile like Balgham (phlegmatic humour) makes Ş afrā' Muḥ ḥ iyya (vitelline yellow bile) and Mirra-i-Ş afrā' (serous yellow bile) whereas Sawdā' (choleric humour) makes Kurrāthi (oxidised bile) and Zanjāri (erogenous bile)^{3,7,12}.

Ş afrā' Zanjāri is more dangerous than Kurrāthi, its temperament has been described like poison^{2,7,10}. When it is present in the cavity of the stomach, then many diseases such as Qarha al-Mi'da (stomach ulcers), Saḥ jwa Qurūḥ al-Am'ā' (abrasion and intestinal ulcers), Dhūsant āriya (diarrhoea) etc. are produced.

When they are absorbed into the stomach and mixed into the bloodstream, they prove fatal¹⁰ because they contaminate the blood and quench the innate heat of heart, leading to sudden death.

Pathophysiology of Bilious diseases

Pathos = suffering, Physiology = study of normal function. Pathophysiology is convergence of pathology with physiology. Pathos means suffering and logos means study¹⁷. Thus, pathology is scientific study of changes in the structure and functions of the body in disease. Whereas physiology is the discipline that describes mechanism operating within an organism¹⁸.

In Unani system of medicine, the normal physiology (health) of the body and the normal state of its organs is defined as balance or normal state of Umūr Tabī' iyya (factors of the existence)⁶. According to Unani medicine these seven Umūr (factors) are fundamental units of human body which provides matter, structure, aim and objective for the formation of Jism Tabī' ī (Ṭ abī 'at) (medicatrix nature)³. Therefore, pathology involves an imbalance, dysfunction or breakdown of one or more of these Umūr Tabī' iyya⁶. Out of these seven Umūr, Akhlāṭ (humours) are one for maintenance of normal physiology of human being. Unani physicians described that, a balance state of humours according to quality and quantity is necessary for human health, if any disproportion occur in quality and quantity disease is inevitable¹⁸. Disruption of any humour of four humours leads to various diseases¹⁸. So, the theory of humours also deals with all aspects of disease i.e. aetiology, pathology, prevention and treatment. Any derangement in quality and quantity or both is responsible for Khilṭ i Amrād (humoural diseases)¹⁸. From which one category is of bilious diseases. The causative factor of bilious diseases is abnormal yellow bile¹. When there is abundance of abnormal yellow bile in the body, function of Gallbladder becomes disrupt that leads to inability of

Gallbladder to absorb the yellow bile as required. As a result, it spreads into the blood and thus, organs continue to receive their nutrition from abnormal yellow bile and diverted from their Tabī Mizāj (normal temperament) towards hotness and dryness¹⁰. Finally, give rise to many diseases called Bilious diseases. The diseases arising from the above-mentioned humour are so many but Ḥumma al-Şafrāwī (bilious fever) and AwramŞafrāwī (bilious swelling) are specific bilious diseases which frequently occurs. These are acute in nature and appears rapidly due to acuteness of Şafrā¹⁶ but are capable of turning into chronic disease if excessive Iḥ tirāq (combustion) of Şafrā occurs.

Jurjani described the fever as example of Sū'-i-Mizāj Ḥārr Māddī (impaired hot materialistic temperament)¹² while Majusi described Fever and swelling⁷.

List of bilious diseases in respect of Systems of Human Body

1.	GENERAL BILIOUS DISEASES	<p>a) AwramŞafrāwī (Swelling) e.g., Ḥumra (bilious inflammation), Māshrā (erysipelas), Namla (Herpes)</p> <p>b) ButhūrŞafrāwī e.g., Jumra, Jaurusia, Ḥaşaf (Miliaria Rubra), Jarab (Scabies), Sharā (Urticaria)</p> <p>c) Intishare shar (Hair fall)</p> <p>d) Tashaquq al-Sha'r (Splitting of hair)</p> <p>e) Ḥummā al-Şafrāwī (Bilious Fever/ Tertian fever)</p>
2.	NERVOUS SYSTEM	<p>a) SārsamŞafrāwī (Bilious Meningitis)</p> <p>b) Afate Dhahn (Mental Retardation)</p> <p>c) Sahr Yābis (Dryness- induced Insomnia)</p> <p>d) Junūn (Insanity)</p> <p>e) Māniyā (Mania)</p> <p>f) Dā' al-Kalb (Cynanthropy)</p> <p>g) Quṭ rub (Melancholia with intentional loneliness)</p> <p>h) Şubārā (Violent behaviour associated with bilious meningitis/ maniac phrenitis)</p> <p>i) Alzheimer's</p> <p>j) Parkinsonism</p> <p>k) Friederichs ataxia</p> <p>l) Amyotrophic lateral sclerosis</p>
3.	RESPIRATORY SYSTEM	<p>a) Su'āl (Cough)</p> <p>b) Nafth al-Dam (Haemoptysis)</p> <p>c) Dhāt al-Ri'a (Pneumonia)</p> <p>d) Dhat al-Janb (Pleurisy)</p>
4.	CARDIOVASCULAR SYSTEM	<p>a) Waram Ghishā' al-QalbŞafrāwī (Bilious Myocarditis)</p> <p>b) Khafaqān (Palpitation)</p> <p>c) C. A. D.</p>
5.	DIGESTIVE SYSTEM	<p>a) Waram Marī Şafrāwī (Bilious swelling of oesophagus)</p> <p>b) Qurūḥ al-Marī Şafrāwī (Oesophageal Ulcer due to bilious humours)</p> <p>c) Sū'-i-Mizāj-i-Mi'da Ḥārr (Şafrāwī) (Hot morbid temperament of stomach)</p> <p>d) Su' al-Haḍ m (Dyspepsia)</p> <p>e) Ḥurqa al-Mi'da (Hyperacidity)</p> <p>f) Waram al-Mi'daŞafrāwī (Bilious Swelling of Stomach)</p> <p>g) Dukhāni Dakar (Belching)</p> <p>h) Qurūḥ al-Mi'da (Gastric Ulcers)</p> <p>i) Buṭ lān al-Ishtihā' (Loss of Appetite)</p> <p>j) IshālŞafrāwī (Bilious Diarrhoea)</p> <p>k) Saḥ jwa Qurūḥ al-Am'ā (Crohn's Disease)</p> <p>l) Zaḥī r (Dysentery)</p> <p>m) Dhūsant āriya Mi'wiyya (Bloody Diarrhoea of intestinal origin)</p>

		<p>n) Qabḍ (Constipation)</p> <p>o) QūlanjAm‘ā’Şafrāwī (Intestinal Bilious Colic)</p> <p>p) Īlā’ūs(Intestinal Obstruction)</p> <p>q) Dī dān al-Am‘a’(Worms Infestation)</p> <p>r) Waram Jigar Şafrāwī (Hepatitis)</p> <p>s) YaraqānAŞ far(Jaundice)</p> <p>t) Neonatal Jaundice</p>
6.	URINARY SYSTEM	<p>a) Waramal-Kulyawa al-MathānaŞafrāwī (Bilious inflammation of Kidney and Urinary Bladder)</p> <p>b) Qurūḥ al-Kulyawaal-Mathāna(Ulcer of Kidney and Urinary Bladder)</p> <p>c) Ḥurqa al-Bawl(Burning Micturating)</p>
7.	REPRODUCTIVE SYSTEM	<p>a) Kathrat-i-Ḥayḍ (Polymenorrhoea)</p> <p>b) Sayalan al-Raḥim(Leucorrhoea)</p> <p>c) Sū’-i-Mizājal-RaḥimŞafrāwī (Bilious Morbid Temperament of Uterus)</p> <p>d) Waramal-RaḥimŞafrāwī (Bilious Swelling of Uterus)</p> <p>e) Qurūḥ al-RaḥimŞafrāwī (Ulcer of Uterus)</p>

General signs and symptoms of bilious diseases-

Almost all Signs and symptoms of dominancy and deficiency of yellow bile are present in bilious diseases and are helpful in their diagnosis.

Dominancy of humours is also called *Imtilā’* (repletion). Therefore, *Imtilā’* of yellow bile occurs in two ways:

Imtilā’BaHasbulAw’ia(quantitative repletion of blood vessels)-Yellow bile is increased in quantity.

Imtilā’BaHasbulQuwā(qualitative repletion of blood vessels)-Yellow bile increased in quantity and quality both. These *Imtilā’*(repletion/dominancy)of yellow bile are recognised by their specific signs and symptoms which are as follows-

1. Bitter taste¹⁰.
2. The body¹⁴, as well as conjunctiva colour, become yellowish(pale)^{2,4,6,10}.
3. Dryness in mouth¹⁰ and nostrils^{1,4}.
4. Rough tongue⁴.
5. Excessive thirst^{2,4,10,19}.
6. Decrease appetite^{19,20}.
7. Frequent nausea and bilious vomiting^{1,10,19}.
8. Diarrhoea with burning sensation^{10,19}.
9. Feeling of tactile sensation in the body, piloerection^{1,19}.
10. Heat intolerance and feel better in cold weather⁴.
11. Hyperactivity.
12. Tachycardia²⁰.
13. Yellowish stool with burning sensation during defecation³.
14. Thin¹⁹ and yellowish coloured urine¹⁰.
15. Rapid and irregular pulse^{3,10,21} due to hardness /decrease elasticity of arteries¹⁰ and increase inspiration^{1,21}.
16. Sees fire, yellow flag, or objects in the dream²⁰.
17. Excessive psychological manifestations like extreme anger, emotions, boldness, anxiety²².
18. Worry, carelessness, lack of sleep²².
19. Tendency of murder may develop in extreme condition.

Signs and symptoms of deficiency of yellow bile -

1. Decreasebody temperature¹⁶.
2. Weakfaculties of the stomach due to dominance of Burudat¹⁶.
3. Alteration in body colour¹⁶.

Result and Discussion:-

From the content of literature, it is clear that disease is an abnormal state of human body in which all functions of human body become disrupt. It is described in two categories Sū'-i-Mizāj (abnormal temperament) or Sū'-i-Tarkī b (abnormal structure). Out of seven Umur (factors), humours are one for the maintenance of health. Yellow bile is one among the humours, responsible for the health and disease in the body. Its pathologies almost always involve excess. Yellow bile is hot and dry in temperament so always causes hot and dry diseases. It also causes cold diseases but very rarely. Yellow bile abnormality, quantitative or qualitative affects all systems of the body and produced various bilious diseases causing Sū'-i-Mizāj Ḥārr-Yābis Māddī (morbid hot and dry temperament with substance). Normal yellow bile is acute, hot and corrosive in nature but does not harm the body. It becomes harmful after combustion because it becomes more acute, hot and corrosive and develops various worse pathologies/diseases in the body e.g. Gastric ulcer, Duodenal ulcer, Mania, Subara (maniac phrenitis), Qutrub (Melancholia with intentional loneliness) etc. Sometimes blood toxicity also develops due to absorption of Ş afrā' Zanjāri (Verdigris green yellow bile) in circulation from the stomach. Other abnormal forms of yellow bile affect the body and produces various bilious diseases. Abnormal form of yellow bile e.g. Ş afrā' Kurrāthi (Leek green yellow bile) and Zanjāri (Verdigris green yellow bile) are formed in the stomach and affects the body organs either in the form of vapours or fluid. e.g. Ş udā' Shirkī Mī 'dī (Headache due to morbidity of stomach), Sharā (Urticaria), Ş ubārā (Maniac phrenitis), Sārsam Ş afrāwī (Bilious Meningitis) etc. At last, it is concluded that theory of humours in respect of maintenance of health and disease is a unique theory. Yellow bile provides lots of benefit to human body by its qualitative and quantitative balance. In present day bilious diseases are not cured / treated satisfactorily and they are simply managed. This paper would provide the reader, basis for the treatment approach of at least some bilious diseases.

Acknowledgement:-

The authors are highly thankful to their respective department for providing material and peaceful environment during study.

Reference:-

1. Ibn Sina AAHIA. Kulliyat-e-Qanoon (Urdu Translation by Kabiruddin HM). New Delhi: Idara Kitab-ul-Shifa; 2015.
2. Ibn Sina AAHIA. Alqanoon Fit Tib. (Urdu Translation by Kanttori GH). New Delhi: Idara Kitab-us-Shifa; YNM.
3. Nafis B. Kulliyat-e-Nafisi (Urdu Translation by Kabiruddin HM). Vol 1&2 New Delhi: Idara Kitab-ul-Shifa; 1954.
4. Baghdadi AIAIH. Kitab-al-Mukhtar Fit Tibb. Vol.1. New Delhi: CCRUM; 2005.
5. Aqserai J. Tarjuma Aqserai ma Sharah-e-Mojaz. Lucknow: Matba Munshi Naval Kishore; YNM.
6. Masihi AS. Kitab-ul-Miah (Urdu Translation by CCRUM). Vol 1. New Delhi: CCRUM; 2008.
7. Majoosi AHBA. Kamil-us-Sana. (Urdu transl. Hkm. G.H. Kantoori) New Delhi: Idara Kitab us Shifa; 2010.
8. Humoural Pathology in Greek medicine (Internet). [Cited on 24 April 2021]. Available from: https://www.greekmedicine.net/pathology/Humoural_Pathology.html
9. Zulkifile M. Baig FM. Itlaqi Kulliyat. Bangalore: NIUM; 2020.
10. Rushd AWI. Kitab-ul-Kulliyat. (Urdu Translation). Lahore: Maktaba Daniyal; 2017.
11. Pathologies of Yellow bile (Internet). [Cited on 30 April 2021]. Available from: <https://www.greekmedicine.net/pathology/Pathologiesof Yellow Bile.html>
12. Jurjani I. Zakhira Khawarazm Shahi. New Delhi: Idara Kitab-us-Shifa; 2010.
13. Baghdadi AIAIH. Kitab-al-Mukhtar Fit Tibb. Vol.3. New Delhi: CCRUM; 2005.
14. Razi AB. Kitab-ul-Murshid. Delhi: Taraqqi Urdu Bureau; 2000
15. Arzani MA. Akseerul Quloob Mufarrehu Quloob (Urdu Translation by Kabir Hkm. SM) New Delhi: Idara Kitab-ul-Shifa; 2002.
16. Kumar V, Abbas A, Aster J. Robbins Basic Pathology. 10th ed. Elsevier; 2017
17. Mohan H. Textbook of Pathology. 5th ed. New Delhi: Jaypee Brothers Medical Publishers; 2005.
18. Kabeeruddin M. kitab-ul-Akhlat., New Delhi: CCRUM; 2009.
19. Razi AB. Kitab ul Mansuri. CCRUM, New Delhi, 1991.
20. Rahman A, Ali JS, Zulkifile M, Ahmad I. Concept of Akhlat Arba (four humours) with relation to health and disease. IJHM. 2014; 2(4):46-49.
21. Zaidi IH. Kulliyat-e-Umoor-e-Tabiyah. Aligarh; 2011.
22. Ahmad HSI. Introduction to Al-Umur Al-Tabiyah. 1st ed. Aligarh: Hakim Nuzhat Ishtiyag; 1980.