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# Classification of Diseases in Unani System of Medicine

Mohd. Salman<sup>1</sup>, Tasfiya Hakeem Ansari<sup>2</sup>, Sabiha Rasulsab Arjunagi<sup>3</sup>, Ayesha Begum Quazi Nasimuddin<sup>4</sup>

<sup>1</sup>PG Scholar, Department of Mahiyatul Amraz, National Institute of Unani Medicine, Bangalore 560091, Karnataka, India Corresponding Author Email: slmn93khn[at]gmail.com

Mobile Number: +91 - 9818074322

<sup>2</sup>Assistant Professor, Department of Mahiyatul Amraz, National Institute of Unani Medicine, Bangalore 560091, Karnataka, India Email: *Tasfiya.hakeem[at]gmail.com* 

<sup>3</sup>Assistant Professor, Department of Mahiyatul Amraz, Luqman Unani Medical College and Hospital, Bijapur 586101, Karnataka, India Email: sabihaarjunagi[at]gmail.com

<sup>4</sup>PG Scholar, Department of Mahiyatul Amraz, National Institute of Unani Medicine, Bangalore 560091, Karnataka, India Email: ayeshaquazi[at]gmail.com

Abstract: At present era various sets of classification of diseases are available both in Unani medicine and Modern medicine. There are some classifications of diseases that exist in both. Classical medical literature suggests that roots of classification of diseases traced back to Unani physicians. Galen played pivotal role in classifying diseases. Physicians after Galen supplemented his classification and even added new classification of diseases as per need. In fact, classification of diseases help in better understanding and management of diseases. This paper aims to highlight historical background as well as different types of classification of diseases documented in Unani medicine. Relevant information for this paper is collected from classical Unani manuscripts and their translations, journals, theses, etc. After collection, these were analyzed and systematized in comprehensive manner.

Keywords: Classification of diseases, Simple diseases, Complex diseases, Temperamental diseases, Structural diseases

#### 1. Introduction

Classification of disease is concerned with the simplification of medicine for easy understanding and better management of diseases. Therefore, many attempts were made to classify diseases on different basis by many physicians over time. Hippocratic treatises provide the historical background of the classification of diseases where diseases are categorized based on age, sex, population distribution, severity, and duration. [1] Later diseases were classified on various bases including organ involved, origin (hereditary or not), organ sharing, trouble-free management, etc. [2-7]The classification of diseases most commonly used in USM is one that is based on the involvement of organ and was given by Jalinoos (Galen). Later, Abbas Majoosi, Ibn Sina, Ibn Hubal and other physicians followed it. Like Unani medicine, classifications of diseases are also based on various factors modern medicine. e.g., topographic, pathological, etiologic, epidemiological, and statistical etc. [8]

# 2. Historical background

Since Hippocrates is the father of medicine history of disease classification must be traced back to his medical works. The medical treatises of Hippocrates are the early text of medicine, compiled by several scholars, collectively known as the Hippocratic Corpus.It is found that none of the Hippocratic works attempts a systematic definition and classification of diseases and symptoms. However, treatises like *Acute diseases, Diseases of women, Epidemics, On the Nature of the Child,* etc. are dedicated to a particular category of diseases that might be considered his attempt of primitive classification of diseases. Similarly, He used the

term "loimos" designate the category of general diseases, caused by "pestilence". Age, sex, geographical area, duration of disease etc. are some factors that were included by authors of Hippocratic corpus while categorizing the diseases. <sup>[1]</sup>

After Hippocrates, Plato has made a specific attempt to classify diseases in the *Timaeus*. He gave following three classes of disease:

- 1) Those due to imbalance or mal-distribution of elements.
- Those due to a disordered sequence of formation of tissues.
- Those due to an abnormal accumulation of air (wind), phlegm or bile.

A third attempt of early classification of disease was made by Celsus in his*De medicina* Book III. With reference to Greeks, he mentioned two kinds of diseases; acute and chronic. [9]

Galen was the first physician who is credited to define disease. He defined it on the basis of function. He also defined symptom, draw the distinction between health and disease or between disease, symptom and affection. He attempted to provide a systemic classification of diseases or symptoms. Galen's attempts of classification Dedocumented in morborum differentiis and Desymptomatum differentiis. [9]

# **Classification of Diseases**

I. Based on the involvement of organs, diseases are classified as *mufrada* and *murakkaba* diseases. This classification is given by Jalinoos. <sup>[2, 3, 7]</sup>

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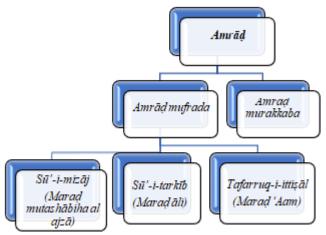


Figure 1: Classification of Amrād

- (a)  $Amr\bar{u}d$  mufrada (Simple diseases): Those diseases which are produced either due to  $s\bar{u}$ '-i- $miz\bar{a}j$  (dystemperament), $s\bar{u}$ '-i- $tark\bar{\imath}b$ (structural disease) or tafarruq-i- $Ittis\bar{\imath}al$  (discontinuity) are known as  $Amr\bar{\imath}ad$  Mufrada and are as follows:
- 1. Sū'-i-Mizāj /(Temperamental Diseases): This disease is also called maraḍ mutashābiha-al-ajzā' as it involves a'ḍā'mufrad (simple/homogenous organs) first. e.g., flesh, nerve, etc. followed by compound organs like hands, feet, etc. It is of two types, simple and compound, and each with or without morbid matter, called sū'-i-mizāj māddī and sū'-i-mizāj sādarespectively. [3, 4]

**Table 1:** Types of  $S\bar{u}$  '-i-Miz $\bar{a}j$ :

Types of Sū'-i-Mizāj(Morbid temperament)					
Sū'-i-Mizāj mufrad		Sū'-i-Mizāj murakkab			
(Non-composite morbid temperament)		(Composite morbid temperament)			
Sū'-i-Mizājsāda	Sū'-i-MizājMāddī	Sū'-i-Mizājsāda	Sū'-i-MizājMāddī		
(simple morbid	(morbid temperament associated	(simple morbid temperament)	(morbid temperament associated with		
temperament)	with substance)		substance)		
Ḥārrsāda	<u>ḤārrMāddī</u>	Ḥārrraṭbsāda (simple morbid	<i>ḤārrraṭbMāddī</i> (morbid hot and moist		
(morbid hot temperament)	(morbid hot temperament with	hot and wet temperament)	temperament with substance)		
	substance)				
Bāridsāda	BāridMāddī	Ḥārryābissāda	Ḥārr yābis Māddī		
(morbid cold temperament)	(morbid cold temperament with	(simple morbid hot and dry	(morbid hot and dry temperament		
	substance)	temperament)	associated with substance)		
Raṭbsāda	RaṭbMāddī	Bāridraṭbsāda	Bārid raṭb Māddī		
(morbid wet temperament)	(morbid moist temperament with	(simple morbid cold and moist	(morbid cold and moist temperament		
	substance)	temperament)	with substance)		
Yābissāda	YābisMāddī	Bāridyābissāda	Bārid yābis Māddī		
(morbid dry temperament)	(morbid dry temperament with	(simple cold and dry morbid	(morbid cold and dry temperament		
	substance)	temperament)	associated with substance)		

- 2.  $S\bar{u}$ '-i-Tark $\bar{t}b$  / (Structural Diseases): This disease mainly involves compound organs. Since compound organs are named as  $a'd\bar{a}$  aali, so  $s\bar{u}'$ -i-tark $\bar{t}b$  is also named marad aali. [3] $S\bar{u}'$ -i-tark $\bar{t}b$  cause disturbances in the structure of the organs. Physicians divided  $s\bar{u}'$ -i-tark $\bar{t}b$  into the following types: [3, 7, 10, 11]
- a) Amrāḍ-i-khilqat (Constitutional diseases)
- b) Amrāḍ-i-miqdār (Voluminous diseases)
- c) Amrāḍ-i-adad (Numerary diseases)
- d) Amrāḍ-i-waḍ '(Positional and proximity diseases)

The compound organs when having proper constitutions, and specific volumes, are accurate in numbers, are in the correct positions with respect to their neighbouring organs (which must be in them), then their  $tark\bar{\imath}b$  (structure) is normal and organs are healthy. On the contrary, when these are irregular in the constitution with high or low volume, absence, decrease or increase in the number of the organ, and having extreme near or far in position with respect to the neighbouring organ than normal, then their structures are abnormal and organs are diseased. [12]

**Amrāḍ-i-khilqat**: It is also known as amrāḍ-i-ṣurat. In this type of  $s\bar{u}$ '-i-tark $\bar{\iota}$ b there is an alteration in the structure of the organ that includes shape, lumen, cavity, and surface. On this basis, Unani Physicians categorized  $amr\bar{a}ḍ-i-khilqat$  into the following four types: [3, 4, 13, 14]

- Amrāḍ-i-Shakl (Morphological alterations/ Morphological diseases)
- Amrāḍ-i-Majārī (Luminal alterations/diseases/ Luminal diseases)
- Amrād-i-Mw'iya wa Tajāwīf (Cavitational alterations/ Cavitationaldiseases)
- Amrāḍ-i-Satooh/Safā'iḥ (Surface alterations/ Surface diseases)

*Amrāḍ-i-miqdār*: Itis a type of  $s\bar{u}$ '-*i-tarkīb* that deals with abnormal changes in volume of body organs. The increase or decrease of volume may be generalized or localized. [4] e.g., Obesity<sup>[4, 7, 11, 12]</sup>, Emaciation [4, 11, 12], Elephantiasis [2], Macroglossia [3, 4, 7, 11], Microglossia [3, 7, 12], etc.

**Amrāḍ-i-adad:** This subtype of  $s\bar{u}'$ -i-tarkib is concerned with the congenital or acquired numeral abnormality of viscera or body organs. This numeral abnormality may be more or less than the normal number. The increase or decrease in number may be natural or unnatural. [4] e.g., Polydactyly<sup>[2, 4, 7, 11, 15]</sup>, presence of one kidney instead of two, Ectrodactyly [3, 7, 11], Pterygium [4, 7], Macrodontia [7], Achriria [7], Adactyly [4], etc.

Amrāḍ-i-waḍ': This subtype deals with defects in the position and proximity of body organs. The defect in position includes total or partial shifting of any organ. e.g.,

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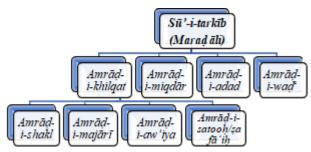
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bone dislocation <sup>[3,4]</sup> or hernia of viscera. <sup>[2,3,7,15]</sup> It also includes the defects in voluntary and involuntary movements of body organs. <sup>[3,7]</sup> Movements may either be increased as in Parkinsonism or decreased as in Ankylosing Spondylosis. The defect in proximity includes loss of gap between two adjacent organs leading to the cessation of their movement. For example, stricture between any two organs <sup>[3]</sup>, Ankyloblephron <sup>[2]</sup>or Syndactyly <sup>[3]</sup>, etc.



**Figure 1:** Types of  $S\bar{u}$ '-i-

#### **Tarkīb**

3. *Tafarruq-i-Ittiṣāl* / (**Discontinuity**): These diseases involve simple as well as compound organs. These diseases arealso known as *Amrāḍ Aam*. Examples are skin abrasions, wounds, ulcer, fractures of long bone and cartilage, cuts and tears of nerves, muscle injuries, arterial and venous rupture, etc. [15] *Tafarruq-i-Ittiṣāl* of every organ have their specific names which are given below: [3]

**Table 2:** Names of different types of *Tafarruq-i-Ittiṣāl* <sup>[3, 4, 13,16]</sup>

	jarraiq i Ittișai	
Site	Type	Nomenclature
Muscles	Wound	Jarḥa
	Ulcer	Qarḥa
	Tear	Hatk
	Incision	Ḥazz
Bones	Transverse fracture	Kasr
	Breaking into many pieces	Tafattut
	Longitudinal fracture	Ṣadʻ
Veins	Rupture	Shaq
	Longitudinal tear	Ṣad'
	Rupture at middle	Infijār
Arteries	Rupture	Umm al-Dam
Nerves	Transverse	Batr
	Longitudinal	Shaq
	Longitudinalminimal loss	Shadkh
Membranes	Tear	Fatq
Skin	Skin Abrasion Sahj	
	Scratch	Khadsh
	Site Muscles  Bones  Veins  Arteries Nerves  Membranes	Site Type  Muscles Wound  Ulcer  Tear  Incision  Bones Transverse fracture  Breaking into many pieces  Longitudinal fracture  Veins Rupture  Longitudinal tear  Rupture at middle  Arteries Rupture  Nerves Transverse  Longitudinal  Longitudinalminimal loss  Membranes Skin Abrasion

# (b) Amrāḍ murakkab (Complex diseases)

When more than one type of disease i.e.,  $s\bar{u}'$ -i-miz $\bar{a}j$ ,  $s\bar{u}'$ -i-tark $\bar{i}b$ , and Tafarruq-i-ittis $\bar{a}l$ collectively form a single disease such that it is diagnosed and treated as a single disease, it is known as marad murakkab. e.g., Awr $\bar{a}m$ . [3, 17]

- 1) Amrāḍ *Zāhira* (External diseases) and *Amrāḍ Bāṭina* (Internal diseases). This classification is also given by Galen. [3, 10]
- (a) Amrāḍ Zāhira (External diseases): According to Galen, these are diseases that are easy to recognize or locate. e.g., such as pains in the stomach and lungs.
- **(b)** Amrāḍ Bāṭina (Internal diseases): These are diseases that are difficult to recognize or locate such as the disorders of the liver and of the bile duct, and

- sometimes these diseases can never be known except by guess, such as the disorders of the urinary tract.
- Maraḍ-i-Aṣlī (Primary disease) and Maraḍ-i-Shirkī (Secondary disease)
- (a) *Maraḍ-i-Aṣlī* (**Primary disease**): This type of disease is confined to the organ of its origin.
- **(b)** *Maraḍ-i-Shirkī* (Secondary Disease): In this type of disease, one organ shares the disease with another organ. The causes of the disease sharing between organs are as follows:<sup>[5]</sup>
  - Both organs are interconnected by nerves or veins etc. e.g., the brain and the stomach are interconnected by the vagus nerve, and the uterus and breast are interconnected by veins.
  - One organ serves as a passage for another such as groins (i.e., inguinal glands) for the swelling of the shanks.
  - Organs are adjacent. e.g., the neck and brain.
  - In neighboring organs, one which is weaker receives the superfluous matter from the strong organ, as the axilla does from the heart.
  - One of the two organs is the origin and source of the function of the other organ. e.g., the diaphragm for the lungs in respiration.
  - One organ is the servant of another, as nerves are servants of the brain.
  - Both organs are associated with a third organ, as the brain is associated with the kidney because each of them is associated with the liver.
  - The association becomes an affliction, for example, when the brain is afflicted, the stomach shares it and thus its digestive power gets impaired.
     Consequently, the stomach supplies morbid vapors and imperfectly digested aliment to the brain and so increases the affliction of the brain itself.
- 3) MaraḍMusallam and Maraḍghayr Musallam <sup>[2, 3]</sup> Every disease is either amenable to treatment or not.
- (a) MaradMusallam (amenable disease): In this type of disease there is no impediment to its proper treatment.
- (b) Maradghayr Musallam (nonamenable disease): This type of disease is not amenable to treatment as there is some impediment associated with it that disallows correct treatment. e.g., headache when it is associated with catarrh.
- 4) AmrāḍMuta 'addiya (Infectious) and Amrāḍghayr Muta 'addiya (Non-Infectious Diseases):
- (a) *Amrāḍ Mutaʻaddiya*: These diseases are contagious. The physicians were of the view that these are common in low lying areas or the area of congested houses. e.g., leprosy, scabies, smallpox, etc. [2]
- (b) Amrāḍ ghayr Mutaʻaddiya: These diseases are not contagious. e.g.,epilepsy.
- 5) AmrāḍMutawāritha (Hereditary diseases) and Amrāḍghayr Mutawāritha:
- (a) *Amrāḍ Mutawāritha* (Hereditary diseases): These diseases have a hereditary basis, so, they run in families, such as leukoderma, congenital baldness and leprosy, etc. <sup>[2, 5]</sup>
- (b) (b) Amrāḍ ghayr Mutawāritha (Non Hereditary diseases): Contrary to Amrāḍ Mutawāritha. These

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diseases do not have a hereditary basis. e.g., Diarrhoea, etc.

- 6) Gender-specific diseases:
- (a) There are diseases that are only restricted to males. e.g., vesicle stone, etc.
- (b) Some diseases are only found in **females**. e.g., Uteritis, endometriosis, etc.
- 7) Age-specific Diseases:
- (a) Some diseases are common in **children**. e.g., cheilosis, diarrhoea, cough, ear discharge, epilepsy, etc.
- (b) Some diseases are common in the **elderly**. e.g., dribbling of urine, paralysis, weakness of eyesight, etc.
- (c) Some diseases are common in **middle-aged** men. e.g., piles, asthma, pleurisy, etc.
- 8) General and local disease:
- (a) General diseases: These diseases are generalized in nature and hence involve the whole body. e.g., fever, smallpox, etc.,
- (b) Local diseases: These diseases are localized in nature and hence located at specific sites. e.g., pain in the eye, ear, tooth, etc.
- 9) Some diseases are incurable e.g., some cancers, etc.
- 10) Some diseases are transferring in nature, e.g., pleural pain transforms lung ulcer or dysentery gets converted into viscid diarrhea. [6]
- 11) Ethnic diseases (Amrāḍ Jinsiyya):These diseases are common to people of a region or a tribe. e.g., Kala-azar in Bengal and Assam and Oriental Sore in Delhi and Lahore.[5]
- 12) Diseases are also classified according to their severity and duration, which are as follows:
- (a) **Acute Diseases:** These diseases are severe and sudden in onset. According to physicians, the duration of these diseases may vary but of shorter duration.
- (b) **Chronic Diseases:** These diseases are less severe and gradual in onset. The duration of these diseases is forty days or more. [2]

**Table 3:** Types of Diseases according to severity and duration

S. No.	Types	Period of culmination
1.	Ḥādd-fil Ghayit-e-qaswa	less than or equal to 4 days
2.	Ḥādd-fil Ghaiya	between 4 <sup>th</sup> and 7 <sup>th</sup> days
3.	ḤāddJidda	between 7 <sup>th</sup> and 11 <sup>th</sup> days
4.	Ḥādd Mutlaq	at 14 <sup>th</sup> day
5.	Qaleel al-Hidda	either upto 17 <sup>th</sup> ,20 <sup>th</sup> or 24 <sup>th</sup> day
6.	Ḥādd al-Muzminat	at 37 <sup>th</sup> day
7.	Muzmin	more than or equal to 40 days

#### 3. Discussion and Conclusion

It is inferred that Hippocrates did not provide any systematic definition and classification of diseases and symptoms. Yet several of his treatises discuss same category of diseases that is indicative of earliest attempt of classification of diseases. But several classifications of diseases based on age, sex, geographical area, severity and duration etc, should be credited to Hippocrates. On the other hand, Plato classified diseases based on three different causes. It was an innovative

approach by Plato though he was not a physician. Yet his attempt provided a new horizon to explore for future physicians. Celsus credited the acute and chronic classification of diseases to Greeks.

In classifying diseases Galen appeared real trendsetter. He gave basic classification of diseases based on organ involved which was later enriched by physicians. This classification also provides a pathological basis of diseases. It is inclusive and hence most of the diseases can easily be categorized in this classification. Since this classification provides the pathological basis for diseases hence it is inferred that this classification gives insight into the management of disease as well. e.g., the general management approach for diseases related to luminal obstruction would be the same. Age specific disease classification mentioned by ancient physicians are even now in practice e.g., geriatrics, paediatrics, are the separate branch of medicine etc. Many transferring diseases which are now completely understood by modern scholars like "Typhoid, when it's prognosis is poor, there is formation of ulcer in the colon which ultimately leads to perforation in the intestine", have already been categorized in a separate category of Transferring illnesses. As far as the ethnic diseases as described by ancient scholars, it is inferred that many lifestyle diseases are restricted to people of a region or a tribe or have specific geographical conditions. e.g., people living in mediterranean regions have least prevalence of Obesity and low triglycerides levels. Study confirmed that Mediterranean diet in other groups revealed low prevalence of Diabetes Mellitus and low triglycerides levels in blood. Thus, Mediterranean diet reduces the incidence of cardiovascular events. [18] In the present article we have find that some diseases are incurable e.g., some cancers, etc. Hippocrates opined that cancer is an incurable disease. Treatment of cancers with regimens like Al-Kayycauses metastasis of cancer cells towards vital organs which leads to the early death of patient while patient having cancer or tumor on periphery can be easily treated with surgical excision. [6] Thus, as we look at present time, similar consequences may come to our knowledge of cancer treatment. This shows that ancient physicians were way ahead their time in classifying diseases.

# **Conflict of Interest:**

The authors have no conflict of interest.

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#### **Author Profile**



**Mohd. Salman** received the B.U.M.S degree from A & U Tibbia College and Hospital, Karol Bagh, New Delhi (University of Dehi) in 2019. During 2019-21 he stayed in A & U Tibbia College and Hospital, Karol Bagh, New Delhi as a house physician/surgeon. Now,

he is pursuing M.D. in Mahiyatul Amraz (Pathology) from National Institute of Unani Medicine, Bangalore, Karnataka since 2021.

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