



Embracing Unani Medicine: A Holistic Approach to *khafaqān* (Palpitation) Management - An In-Depth Exploration

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Abstract: -

In general practice, Palpitations are a common and occasionally alarming symptom that provide a regular clinical challenge, prompting frequent referrals to cardiology. Palpitation, a clinical condition with a wide range of etiologies, from benign causes to dangerous arrhythmia, is defined in modern medicine as a painful awareness of one's own heartbeat. The ancient science of health and healing is known as the Unani medical system. In Unani medicine, the modern equivalent of palpitation is called *Khafaqān*. According to Unani medicine, the heart is one of the body's three essential organs. Palpitation, or *Khafaqān*, is deemed crucial for heart conditions since the heart is regarded as the head of the '*Aḍā*' *Haywāniyya* (vital organs). Among the oldest medical systems still in use today is the Unani System, which produces effective medications from materials found in plants, animals, and minerals. Hippocrates, who practiced medicine more than 2400 years ago, incorporated elements of both ancient Mesopotamian customs and Egyptian medicine into his practice. When discussing the therapy of *Khafaqān*, many medications—both single and complex formulations—have been mentioned.

Keywords:- Palpitation, *Khafaqān*, Unani system of medicine, *Adwiyah al-Qalbiya*

Introduction:-

The Unani System of Medicine is the name given to Greco-Arabic medicine, founded on the medical wisdom of Roman physician Galen and Greek physician Hippocrates. *Buqrāt*, better known as Hippocrates (460–377 BC), is said to be a descendent of Aesculapius and recognized as the father of Unani medicine.[1] The structure of this system is founded on the holistic perspective of the Hippocratic idea of the four *Akhlāt* (Humours): *Sawdā* (black bile), *Balgham* (phlegm), *Ṣafrā* (yellow bile), and *Dam* (blood).[2] Cardiovascular diseases comprise the most prevalent serious disorders in industrialized nations and are a rapidly growing problem in developing nations. Nonetheless, cardiovascular diseases remain the most common causes of death, responsible for one-third of all deaths—>800,000 deaths each year. In addition, cardiovascular diseases are highly prevalent, diagnosed in nearly half of the adult population. Palpitations are a common chest sensation, often characterized by a "thumping," "pounding," or "fluttering" sensation.

These palpitations can occur intermittently, continuously, or irregularly and are often observed when the patient is calmly resting. Palpitations can be induced by cardiac (43%), mental (31%), miscellaneous (10%), and unknown (16%) factors.[3] Palpitations are the most common presentation of tachyarrhythmias. Most tachyarrhythmias in patients without structural heart disease are due to supraventricular tachycardias.[4] According to an eminent Unani physician, *Ibn Sīnā* (980–1037 A.D.), Palpitation is a vibration of the heart brought on by something in the heart, its membrane, or other nearby organs that would cause the heart to suffer. This substance may come from an irritable temperament, an inflammatory condition, infection, or humors, and the humors may be *Damvī* (sanguineous), *Balghamī* (*phlegmatic*), *Sawdavī* (*melancholic*), *Safrawī* (bilious), *Rīhī*, or *Bukhārī* (gaseous or vaporous). Weakness will follow if this is due to a basic lack of temper (*Sū'-i-Mizāj Sāda*) that impacts the entire body [5]. *Azam Khan* mentioned in his book *Iksīr-A 'zam* that palpitation is defined as that coordinated movement of the heart resembling trembling, and its cause could be any such thing that causes distress and pain to the heart. The cause that brings distress to the heart is either within the heart, within its layers, or in the surrounding structures such as the stomach, brain, liver, intestine, and uterus. The cause lies throughout the entire body, and the distress experienced by all parts of the body also affects the heart. When there is excessive palpitation, it leads to dizziness, and if extreme fainting occurs, it can result in death [6]. Descriptions of heart diseases include various types of ill temperaments (*Sū'-i-Mizāj*) such as simple (*Sū'-i-Mizāj Sāda*) or abnormal substantial temperament (*Sū'-i-Mizāj Māddī*), heightened sensitivity of the heart (*khafaqān Hissī*), palpitations caused by valvular obstruction (*khafaqān Suddī*), and palpitations resulting from weakened heart muscles (*khafaqān Du'fī*). The obstruction of the respiratory passages, the consumption of hot medications and diets, immersion in hot water during bathing, and the application of perfumes with hot qualities can all contribute to palpitation [7]. The melancholic ill-temperament (*Sawdāwī al-Mizāj*) of the heart, characterized by an imbalance with the predominance of *Sawdā* (black bile) over the heart's normal temperament, stands as the most prevalent among *Sū'-i-Mizāj Māddī* [8]. *Ibn Zohr* (11th century A.D.), an eminent Unani scholar and author of *Kitāb al Taisir*, stated that palpitations occur due to external and internal causes and referred to irregular heart beats (9). Two types of palpitations have been mentioned in the book *Ṭibb-i-Akbar*. The first type is when a naive temperament arises in the heart and creates palpitations in the end. The second type is when blood volume increases in the body and causes the veins to expand, even though there is no infection, but due to congestion, it creates palpitations [10].

Epidemiology

Palpitations are a very common complaint in the general population, particularly in those affected by structural heart disease. Clinical presentation is divided into four groups: extrasystolic, tachycardic, anxiety-related, and intense. Anxiety-related is the most common [11]. The prevalence of palpitations is 6% to 11% within the community. In a study assessing the frequency of primary complaints across several outpatient primary care centers, 16% of patients expressed that palpitations were a significant issue for them. Furthermore, palpitations rank as the second most prevalent reason for patients being referred to cardiology [12]. However, there is substantial evidence indicating that palpitations are a common symptom not only in the general population but also among individuals with conditions such as hypertension or heart disease. In primary care studies, palpitations make up around 16% of the symptoms that lead patients to seek consultation with their general practitioner. They are the second most common reason, after chest pain, for patients to undergo a specialized cardiologic evaluation. According to case records, the prevalence of anxiety syndrome and panic attacks among patients experiencing palpitations ranges from 15% to 31% [13]. The high prevalence of palpitations highlights the importance of a structured and, ideally, evidence-based approach to diagnosis. A step-by-step evaluation is necessary to differentiate between patients with a benign prognosis and those with a potentially poorer prognosis from the outset. Regarding the prevalence of different causes of palpitations, clinical evidence shows that many individuals experiencing palpitations have either normal sinus rhythm or minor rhythm irregularities, such as brief episodes of supraventricular extrasystoles or occasional ventricular extrasystoles. However, clinically significant arrhythmias like atrial fibrillation/flutter or paroxysmal supraventricular tachycardias are also commonly observed [14].

In a prospective study conducted by Weber and Kapoor involving 190 patients who complained of palpitations at a university medical center, it was found that:

- 1) 41% of these patients experienced palpitations due to arrhythmias (16% had atrial fibrillation or flutter, 10% had supraventricular tachycardia, and 2% had ventricular tachycardia).
- 2) 3% had palpitations related to structural heart disease.
- 3) 31% had palpitations attributed to psychosomatic disorders, primarily panic and anxiety disorders.
- 4) 4 percent had palpitations due to systemic causes.
- 5) 6% experienced palpitations as a result of medication use, illicit substances, or stimulants.

In Weber and Kapoor's study, several factors were identified as independent predictors of a cardiac cause for palpitations. These factors included male sex, reporting an irregular heartbeat, a history of heart disease, and an event duration exceeding 5 minutes. Despite a comprehensive evaluation that included the use of loop recorders, a specific cause for palpitations could not be identified in 16% of the patients [15]. Indeed, establishing a definitive cause of palpitations is not always possible. Often, only a likely cause can be determined, and in some cases, multiple potential causes must be considered [16, 17].

Etiological factors [18]

1. Cardiac and Noncardiac Causes of Palpitations

| Cardiac | Non-cardiac |
|------------------------------------|-------------------------|
| Atrial fibrillation/flutter | Alcohol |
| Atrial myxoma | Anemia |
| Atrial premature contractions | Anxiety/stress |
| Atrioventricular reentry | Beta-blocker withdrawal |
| Atrioventricular tachycardia | Caffeine |
| Autonomic dysfunction | Cocaine |
| Cardiomyopathy | Exercise |
| Long QT syndrome | Fever |
| Multifocal atrial tachycardia | Medications |
| Sick sinus syndrome | Nicotine |
| Supraventricular tachycardia | Paget disease of bone |
| Valvular heart disease | Pheochromocytoma |
| Ventricular premature contractions | Pregnancy |
| Ventricular tachycardia | Thyroid dysfunction |

According to unani system of medicine:

The basic aetiology of *khafaqān* (palpitation) hence can be broadly classified into the following groups:

- Disease of the heart
- Diseases of the adjacent organ
- Miscellaneous causes

Under the category of diseases of the heart *Ismail jurjāni* (12th century A.D.) in his book *Dhakhīra khwārizm shāhī* has mentioned that heart diseases include abnormal substantial temperament (*Sū'-i-Mizāj Māddī*) and simple temperament (*Sū'-i-Mizāj Sāda*), high heart sensitivity (*khafaqān Hissī*), palpitations caused by valvular blockage (*Sudda*), and palpitations caused by weak heart muscles (*khafaqān Du'fī* [7]).

Under the category of diseases of adjacent organs *Azam Khan*, in his book *Iksir-A 'zam*, has mentioned that the palpitation arising from participation occurs within the covering of the heart, and the swelling of the covering of the heart occurs due to moistness, softness, or stiffness of the heart. And the palpitation occurs from the participation of the stomach, which occurs when a thick, viscous, or bilious secretion accumulates in the stomach and causes irritation to the heart. Through the participation of the lungs, palpitations occur in such a way that, due to the blockage of the alveolar vessels on that side, which is closer to the heart, fresh air cannot penetrate well, causing discomfort to the heart. [6]

Under the category of miscellaneous causes, *Rabban Tabri* (10th century A.D.) in his book *al Moalajat Buqratiyah* has mentioned causes such as intestinal worms, toxic medications, insect bites, fevers, foul odors, blood loss (from bleeding piles or severe venesection), anemia (*Sū' al Qinya*), hyperdynamic states (*Imtilā' Damvi*), etc. [19]

Pathophysiology:

The mechanisms behind cardiac feeling, the afferent sensory pathways involved, or the higher-order cognitive processing that amplifies, filters, and adjusts these sensations before bringing some of them to conscious awareness are all poorly understood [20]. The base of the frontal lobes and sub-cortical regions (thalamus, amygdala) may be implicated in the processing of afferent inputs. Palpitations are caused by a variety of causes, depending on the pathophysiological perspective: excessively strong heart contractions and abnormal heart movements in the chest, as in the case of some structural heart diseases associated with increased stroke volume; abnormalities in the subjective perception of the heartbeat; cardiac arrhythmia, including sinus tachycardia caused by mental disturbance, systemic diseases, or the use of certain medications, which, as in several psychosomatic diseases, cause the patient to feel a normal heart rhythm or mild cardiac rhythm disturbances that are poorly tolerated. A centrally driven "fright reaction" that sets off a chain of events that includes the sense of a beating heart might be argued to constitute the pathophysiology of palpitations in these circumstances [21]. It is crucial to emphasize that, despite the fact that cardiac rhythm disorders typically result in palpitations (or other related symptoms like fatigue, dyspnea, dizziness, syncope, and angina), arrhythmias, including prognostically relevant disorders like non-sustained ventricular tachycardias and atrial fibrillation, may remain completely asymptomatic in some subjects for unknown reasons. These reasons are likely linked to some clinical characteristics, such as male sex, absence of coronary heart disease, and congestive heart failure, or to the presence of peripheral neuropathy (such as in diabetic patients). Relevant arrhythmias may thus not be appropriately identified and treated in these individuals [22,23,24].

IN UNANI SYSTEM OF MEDICINE:

In normal circumstances, a healthy person does not feel the palpitations of their heart. However, if they engage in intense physical exertion or are temporarily affected by psychological factors, such as anxiety, their heart rate increases. Such palpitations are referred to as physiological and natural palpitations. The factors causing distress to the heart sometimes occur within the heart itself or its coverings, and at other times they occur in neighboring organs such as the stomach, liver, lungs, or intestines. Causes of distress can sometimes be congenital or non-congenital; sometimes inflammation or disconnection; and sometimes obstruction or sensory irritation. Palpitations occur due to the increased sensitivity of the heart. This happens because the heart becomes agitated upon experiencing mild discomfort, such as exposure to moderate cold or heat, certain foods, bodily vapors, and some physiological symptoms [6].

Clinical Presentation and Symptoms [40,41,42]

| Type of palpitation | Subjective description | Heartbeat | Onset and termination | Trigger situations | Possible associated symptoms |
|---------------------|--|--|-----------------------|-------------------------------|--|
| Extrasensory | Skipping/missing a beat', 'sinking of the heart' | Irregular, interspersed with periods of normal heartbeat | Sudden | Rest | — |
| Tachycardiac | 'Beating wings' in the chest | Regular or irregular, markedly accelerated | Sudden | Physical effort, cooling down | Syncope, dyspnoea, fatigue, chest pain |
| Anxiety-related | Anxiety, agitation | Regular, slightly accelerated | Gradual | Stress, Anxiety attacks | Tingling in the hands and face, lump in the throat, atypical chest pain, sighing dyspnea |
| Pulsation | Heart pounding | Regular, normal frequency | Gradual | Physical effort | Asthenia |

Unani clinical features:

Ibn Sina (Avicenna) described palpitations as the rhythmic beating of the heart caused by a substance originating from the heart, its membranes, or adjacent organs, leading to distress in the heart. This substance could stem from imbalances in humor, a disturbed temperament, inflammation, infection, or intense fear. [5] If palpitations are caused by a simple imbalance in temperament (*Su'-i Mizaj Sada*) and impact the overall bodily condition, they can lead to weakness. According to renowned Unani physician *Zakaria Razi* (850–923 A.D.), when weakness affects the heart and persists, it can lead to anxiety. In response to this problem, the heart may react with palpitations to expel stress or stimuli and return to its normal state. If palpitations become severe, they may progress to *ghashi* (syncope) [28].

Types: [6]

Azam Khan, in his book *Iksir-A'zam*, has mentioned the following types of palpitations, which can be differentiated according to the type of pulse:

- *Khafaqān Damvī*: Pulse is significantly rapid; urine is red and thick.
- *Khafaqān Safrawī*: The pulse is rapid, regular, and strong. Urine shines with colorful brilliance and fire.
- *Khafaqān Balghamī*: The pulse is extremely soft, and the urine is white.
- *Khafaqān Sawdavī*: Distress, fear, and anxiety are present. Breathing is shallow, and senses are blurred, and this condition resembles like Malencholic patient.
- *Khafaqān Rīhī*: Mild palpitation with a very slight variation in the pulse is present.
- *Khafaqān suddī*: There is a significant difference in the strength and weakness of the pulse, and if there are no signs of swelling in the body, it is referred to as *khafaqān suddī*.

Diagnostic Evaluation:

1. Primary care providers are often unable to accurately assess patients who present with palpitations based solely on history and physical examination. It is essential to rule out a cardiac cause, necessitating additional investigations.
2. **ECG:** The standard diagnostic procedure is a complete 12-lead ECG taken during palpitations. However, it should still be conducted even if the palpitations have subsided. This test can reveal an irregular heart rate and help identify its type. Additionally, it may detect abnormalities indicative of structural heart diseases like ischemia, hypertrophy, or cardiomyopathy. It can also identify occasional ectopic beats that may not currently cause symptoms, as well as incomplete heart block. Notably, Wolff-Parkinson-White syndrome and Lown-Ganong-Levine syndrome can show a short PR interval, with the former displaying a delta wave. Finally, the ECG should rule out a long or short QT interval.
3. **Blood Test:** Routine blood tests should include CBC, TFTs, LFTs, and HbA1c.
4. **Ambulatory ECG:** If the diagnosis cannot be established through the ECG, the frequency of symptoms will dictate the most suitable method for recording an episode. Primary care should arrange ambulatory ECG monitoring if available or through specialist referral. A 24-hour or 48-hour Holter monitor may be employed for frequent events, while an event monitor or self-activated recorder is necessary for less frequent symptoms.
5. **Echocardiogram:** An echocardiogram is necessary if cardiomyopathy is suspected or if abnormal heart sounds are present [29].
6. **Exercise testing:** If the issue is exercise-related, a treadmill ECG or stress echocardiogram is necessary. Occasionally, irregularities present at rest can be suppressed during exercise, and these are typically less concerning than irregularities that occur during exercise. Stress testing is also essential for athletes and individuals suspected of having coronary heart disease [30].

Usul-i-Ilaj (Principles of Treatment)

The basic modes of treatment in Unani medicine include use of

- Dietotherapy (*'Ilājbi'l Ghidhā'*).
- Pharmacotherapy (*'Ilājbi'l Dawā'*)
- Regimenal therapy (*'Ilājbi'l Tadbir*)
- Surgery (*'Ilājbi'l Yad*)

It is essential for the treatment of palpitations to identify and address the underlying cause. If palpitations are caused by an abnormal simple temperament (Sui mizaj Sada), only symptomatic adjustment is sufficient. For example, use cooling agents for palpitations in a hot temperament and calorific agents for palpitations in a cold temperament [6].

Dietotherapy (*'Ilājbi'l Ghidhā'*)

include recommending heart-supporting or heart-strengthening foods, as well as soft foods or foods that are easily absorbed. Reduce the amount of food consumed, stick to light meals, and abstain from alcohol if congestion is the source of your palpitations. Diets rich in nutrients and blood-forming foods, such as goat meat or chicken meat, are recommended if hemorrhage is the cause [28, 8].

Pharmacotherapy: [31]

Ibn Sina (Avicenna) mentioned several cardiac drugs in his booklet, '*Risala-Adwiyah al-Qalbiya* (The Treatise on Cardiac Drugs).

| S.No | Unani Name | English Name | Scientific Name |
|------|------------------------|--------------------|------------------------------------|
| 1. | <i>Abresham</i> | Silk Pod | <i>Bombyx mori</i> |
| 2. | <i>Amla</i> | Indian goose berry | <i>Embllica officinalis</i> |
| 3. | <i>Utruj / Turanj</i> | Citron | <i>Citrus medica</i> Linn |
| 4. | <i>Aas</i> | Myrtle | <i>Myrtus communis</i> Linn |
| 5. | <i>Ushna</i> | Rock moss | <i>Parmelia perlata</i> |
| 6. | <i>Ustukhudus</i> | Lavender | <i>Lavandula stoechus</i> Linn |
| 7. | <i>Armaak/Kewda</i> | Fragrant Screwpini | <i>Pandanus odoratissimus</i> Roxb |
| 8. | <i>Azaryun</i> | Sunflower | <i>Helianthus annuus</i> Linn |
| 9. | <i>Anfha</i> | Rennet | <i>Seriparium</i> |
| 10. | <i>Badranjboya</i> | Balm Mint | <i>Melissa officinalis</i> Linn |
| 11. | <i>Busd Ahmar</i> | Coral | <i>Corallium rubrum</i> |
| 12. | <i>Badrooj</i> | Sweet Basil | <i>Ocimum basilicum</i> Linn |
| 13. | <i>Behman</i> | Behman | <i>Centaurea behen</i> Linn |
| 14. | <i>Baiza Murg</i> | Egg | <i>Gallus domesticus</i> |
| 15. | <i>Bisfaij</i> | Common Polypody | <i>Polypodium vulgare</i> |
| 16. | <i>Jadwar</i> | Zedoary | <i>Delphinium denudatum</i> |
| 17. | <i>Daroonaj</i> | Doronicum | <i>Doronicum hookeri</i> |
| 18. | <i>Darchini</i> | Cinnamon | <i>Cinnamomum</i> |
| 19. | <i>Haleela Kabuli</i> | Myrobalan | <i>Terminalia chebula</i> |
| 20. | <i>Ward</i> | Rose | <i>Rosa damascene</i> Mill |
| 21. | <i>Zafran</i> | Saffron | <i>Crocus sativus</i> |
| 22. | <i>Zaranbad</i> | Long Zedoary | <i>Zingiber zerumbet</i> |
| 23. | <i>Hajar-e-Armani</i> | Armenian Bole | <i>Lapis arminium</i> |
| 24. | <i>Tabasheer</i> | Bamboo Manna | <i>Bambusa arundinacea</i> |
| 25. | <i>Tarkhshaqooq</i> | Chicory | <i>Cichorium intybus</i> Linn. |
| 26. | <i>Gil-e-Makhtoom</i> | Sealing Clay | <i>Terra segellata</i> |
| 27. | <i>Yaqoot</i> | Ruby | Corundum |
| 28. | <i>Kundur</i> | Fran Kincense | <i>Boswellia glabra</i> |
| 29. | <i>Kahruba</i> | Yellow Amber | <i>Vateria indica</i> |
| 30. | <i>Kafoor</i> | Camphor | <i>Camphora officinarum</i> |
| 31. | <i>Kishneez Khushk</i> | Coriander | <i>Coriandrum sativum</i> |
| 32. | <i>Kummasra</i> | Pear | <i>Pyrus communis</i> |

| | | | |
|-----|-------------------------|------------------|--------------------------------|
| 33. | <i>Gaozaban</i> | Bugloss | <i>Borago officinalis</i> |
| 34. | <i>Lajward</i> | Lazuli | <i>Lapis lazuli</i> |
| 35. | <i>Lulu</i> | Pearl | <i>Mytilus margaritiferus</i> |
| 36. | <i>Laham</i> | Meat | - |
| 37. | <i>Mushk</i> | Musk | <i>Moschus moschiferus</i> |
| 38. | <i>Momiyaee</i> | Mineral Pitch | Asphaltum |
| 39. | <i>Nimam/Kali Tulsi</i> | Rosary | <i>Ocimum canum Sims</i> |
| 40. | <i>Nilofar</i> | Water Lily | <i>Nymphaea lotus</i> |
| 41. | <i>N'una</i> | Mint | <i>Mentha arvensis</i> |
| 42. | <i>Sausan</i> | Iris | <i>Iris florentina</i> |
| 43. | <i>Saleekha</i> | Cassia bark | <i>Cinnamomum cassid</i> |
| 44. | <i>Sumbul-ut-Teeb</i> | Nard | <i>Nardostachys jatamanasi</i> |
| 45. | <i>Saad</i> | Indian Cypress | <i>Cyperus rotundis</i> |
| 46. | <i>Sazij</i> | Cassia Leaves | <i>Cinnamomum cassia</i> |
| 47. | <i>Ambar</i> | Ambergris | <i>Ambra grasea</i> |
| 48. | <i>Ood</i> | Aloe Wood | <i>Aquilaria agallocha</i> |
| 49. | <i>Fizza</i> | Silver | Argentum |
| 50. | <i>Faranjmushk</i> | Basil | <i>Ocimum gratissinum</i> |
| 51. | <i>Fawania</i> | Poeny | <i>Paeonia officinalis</i> |
| 52. | <i>Fustaq</i> | Pistachio | <i>Pistacia vera</i> |
| 53. | <i>Sandal</i> | Sandal Wood | <i>Santalum album</i> |
| 54. | <i>Qaqlah</i> | Greater Cardamom | <i>Amomum subulatum</i> |
| 55. | <i>Rewand</i> | Ribes | <i>Rheum emodi</i> |
| 56. | <i>Rumman</i> | Pomegranate | <i>Punica granatum</i> |
| 57. | <i>Shaqaqul</i> | Secacul | <i>Asparagus racemosus</i> |
| 58. | <i>Tuffah</i> | Apple | <i>Pyrus malus</i> |
| 59. | <i>Tamar Hindi</i> | Tamarind | <i>Tamarindus indica</i> |
| 60. | <i>Khairbua</i> | Small Cardamom | <i>Elettaria cardamomum</i> |
| 61. | <i>Zahab</i> | Gold | Aurum |
| 62. | Ghareqoon | White Agaric | <i>Polyporus officinalis</i> |
| 63. | Zarnab | Silver Fir | <i>Abies alba Linn</i> |

The recent evaluation of 63 cardiac drugs identified by Ibn Sina for treating Amraz Qalb revealed that these drugs primarily act directly on the heart or affect the entire cardiovascular system.

These drugs were observed to primarily affect the heart or blood vessels, especially those used for cardiovascular disorders such as Muqavvi-e-Qalb, Mufarreh-e-Qalb, Muharrike-Qalb, Musakkin-e-Qalb,

Mufatteh-e-Urooque, and Mudir, among others. They also demonstrated effects such as being anti-hypertensive and anti-hyperlipidemic. The key properties of these 63 drugs, namely Muqavvi-e-Qalb and Mufarreh-e-Qalb, can be correlated with their mechanisms of action, such as cAMP modulators, Na/K-ATPase Enzyme Inhibitors, peripheral β blockers, calcium channel blockers, autacoids, nitric oxide donors, potassium channel openers, centrally acting β receptor agonists, and diuretics, used in various cardiovascular diseases.

Ibn Sina's cardiac medications are incorporated into different formulations such as 'Dawaul Misk Motadil Sada', 'Safoof Daroonaj', 'Khamira Abresham Sada', 'Khamirah Aabresham Ood Mastagi Wala', 'Khamirah Aabresham Sada', 'Khamirah Aabresham Sheerah Unnab Wala', 'Khamirah Gaozaban Ambari', 'Khamirah Gaozaban Ambari Jadwar Ood Saleebwala', 'Khamirah Gaozaban Sada', 'Khamirah Khas', 'Khamirah Marwareed', 'Khamirah Marwareed Ba Nuskha Kalan', 'Khamirah Marwareed Ba Nuskha Khas', 'Khamirah Sandal Sada', 'Khamirah Sandal Tursh Warq-e-Tila Wala', 'Khamirah Yaqoot', 'Khamirah Yashab', 'Khamirah Zamarrud', 'Khamirah Zehar Mohra'. In the Greco-Arab system of medicine (Unani), there exists a perspective advocating for the use of Unani drugs in compound formulations to enhance their potency, effectiveness, and safety [32].

Compound formulations

Khamiras typically function as cardio-tonic, benefiting vital organs like the brain, liver, and stomach. It is also employed to address various ailments such as palpitations, heart weakness, weakness in key organs, cough, cold, catarrh, and respiratory as well as nervous disorders [33,34]. The active ingredients found in these khamiras have demonstrated cardioprotective properties. Ischemic heart diseases continue to be a leading cause of mortality in many developed nations, as observed over the past twenty-five years. Therefore, reducing mortality rates and preventing myocardial infarction (MI) are crucial priorities [35].

Khamiras Used in Cardiac Disorders:

| S.no | Name of Compound | Action | Uses | Dose |
|------|---|---|--|---------------|
| 1 | Khamira Aabresham Hakeem Arshad wala [36:37] | Muqavvi-e-Aam (General Tonic) Muqawwi-e-Qalb (Cardiac Tonic) | Khafqan (Palpitaions), Zauf-e-Aza-e-Raisa (Weakness of Principal organs: Heart, Brain, and Liver) , Malikhoolia (Malencholia), Naqahat (Asthenia) | 3-6 g |
| 2 | Khamira Aabresham sada [36] | Muqawwi-e-Qalb (Cardiac Tonic) Muqawwi-e-Dimag (Brain Tonic) | Khafqan (Palpitaions) Zauf-e-Qalb (Weakness of Heart),, Karb (Distress), Malikhoolia (Malencholia),Zauf-e-Basarat (Asthenopia) | 5-10g |
| 3 | Khamira Aabresham Sheerah Unnab Wala [36:37] Khamira Aabresham Ood Mastagi Wala [37] | Muqawwi-e-Qalb (Cardiac Tonic), Muqavvi-e- Dimagh (Brain Tonic) | Khafqan (Palpitaions), Zauf-e-Hafiza (Weakness of memory power), Zauf-e-Maida (Weakness of Stomach), Sil wa Diq (Phthisis and Tuberculosis), ASual Khushk (Dry Cough) | 5-10g 5-7g |
| 4 | Khamira Sandal Sada [36:38] | Muqawwi -e-Qalb (Cardiac Tonic), Musakkin (Soothing), Mubarrid (Frigorific) | Khafqan (Palpitaions), Zauf-e-Qalb (Weakness of Heart), Atash-e-Mufrif (Polydipsia) | 5-10g |

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|----|--|--|--|-------|
| 5 | Khamira Sandal Tursh Warq-e-Tila Wala [37] | Muqawwi –e-Qalb (Cardiac Tonic), Musakkin (Soothing), Mubarrid (Frigorific), Mane Qai (Antiemetic) | Khafqan (Palpitaions), Zauf-e-Qalb (Weakness of Heart), Qai (Vomiting) | 7g |
| 6 | Khamira Gaozaban Sada [39] | Muqavvi-e-Aam (General – Tonic) | Khafqan (Palpitaions), Zauf-e-Qalb (Weakness of Heart), Zauf-e-Dimagh (Weakness of Brain), Zauf-e-Basharat (Asthenopia), Malikhooliya (Melencholia), | 10g |
| 7 | Khamira Gaozaban Ambari Jawahar Wala [39] | Muqavvi-e-Aam (General – Tonic) | Khafqan (Palpitaions),), Zauf-e-Qalb (Weakness of Heart), Zauf-e-Dimagh (Weakness of Brain), Malikhooliya (Melencholia), Karb (Distress), Zauf-e-Aasab (Neurasthenia), Nazla Muzmin (Chronic Catarrh) | 3-5g |
| 8 | Khamira Marwareed [36,39] | Muqavvi-e-Aam (General – Tonic) | Khafqan (Palpitaions), Zauf-e-Qalb (Weakness of Heart), Zauf-e-Dimagh (Weakness of Brain), | 3 |
| 9 | Khamira Yaqoot [36,37] | Muqavvi-e-Aam (General – Tonic), Muqawwi –e-Qalb (Cardiac Tonic), | Khafqan (Palpitaions), Zauf-e-Qalb (Weakness of Heart), Zauf-e-Dimagh (Weakness of Brain), Malikhooliya (Melencholia) | 3-5g |
| 10 | Khamira Yashab [39] | Musakkin (Sedative/Soothing), Qabiz (Constipation) | Khafqan (Palpitaions), Is-hal (Diarrhoea), Sailan-ur-Rehem (Leucorrhoea) | 5-10g |
| 11 | Khamira Zamarrud [37] | Muqawwi –e-Qalb | Khafqan (Palpitaions) | 3-4g |
| 12 | Khamira Khas [37] | Muqawwi –e-Qalb (Cardiac Tonic) | Zauf-e-Qalb (Weakness of Heart), Khafqan (Palpitaions) | 5-7g |
| 13 | Khamira Marwareed Ba Nuskha Khas [37] | Muqavvi-e-Aam (General – Tonic) | Khafqan (Palpitaions), Zauf-e-Qalb (Weakness of Heart), Zauf-e-Aasab (Neurasthenia), Zauf-e-Dimagh (Weakness of Brain), Atash-e-Mufrit (Polydipsia) | 3g |

Regimental therapy:

Regimental therapy (Ilaj bit tadbeer) for treating palpitations may involve utilizing various methods such as aromatherapy (Shamum), inhalation (Lakhlakha), venesection (Fasd), purgation (Ishal), emesis (Qai), and liniment application (Zimad). Specifically, sandalwood (Santalum album Linn) and camphor

(Cinnamomum camphora Linn.) are employed for aromatherapy, inhalation, and liniment application [40]. In cases of palpitations caused by congestion, Fasd-I-Basliq (bloodletting through the left basilica vein) is performed [40,28].

INSTRUCTIONS:

According to the weather, dress the patient in clean and warm clothing. If the patient feels warm, they can wear light and airy clothing and camphor-infused attire. The patient should be provided with a clean, spacious, and well-ventilated room where there is no noise or commotion for their comfort. Keep the patient away from worry, anxiety, and distress. Encourage morning walks and outdoor leisure activities in open fields. Avoid stimulants and hot beverages such as alcohol, tea, and coffee. Ensure the patient is saved from excessive reading, excessive intercourse, and excessive exertion [36]. If palpitations are caused by an abnormal substantial temperament (*Sui mizaj maddi*), then regulate the diet, reduce intake, and avoid heavy foods. Refrain from alcohol. If palpitations are accompanied by a fever, do not overlook cooling measures either [6].

Complications:

If palpitation extends to its extreme, it will lead to syncope. [6] Sudden death occurs because the heart contracts and does not relax, body temperature decreases instinctively, and in such a condition, breathing becomes absent [28]. Palpitation can lead to headaches [28]. The intensity of palpitation leads to a decrease in vision [6].

Conclusion:

In conclusion, this review paper sheds light on the efficacy of Unani cardioprotective drugs in managing palpitations. Through a comprehensive analysis of available literature, it is evident that Unani medicine offers promising remedies for palpitations, leveraging a holistic approach that combines herbal formulations, dietary recommendations, and lifestyle modifications. However, further clinical trials and research are warranted to validate these findings and establish standardized protocols for integrating Unani interventions into mainstream cardiology practice. Embracing the synergistic potential of traditional Unani therapies alongside modern medical advancements holds great promise for addressing palpitations and promoting cardiovascular health.

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