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Review Article

Concept of Dementia and its Management in Unani System of Medicine: A Review

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Abstract

Dementia, derived from Latin meaning “without mind,” is a significant global health concern and the seventh leading cause of death, characterized by the progressive deterioration of cognitive functions, including memory, thinking, and behaviour. As the global population ages, dementia's prevalence is anticipated to rise dramatically, with an estimated 50 million cases currently worldwide, projected to reach 152 million by 2050. The two primary causes are Alzheimer's disease and vascular disorders. In the Unani system of medicine, dementia, referred to as *Nisyān*, is attributed to the dysfunction of three internal faculties: imagination (*Qūwwate Khayāl*), thought (*Qūwwate Fikr*), and memory (*Qirwwate Zikr*), influenced by factors such as abnormal temperament (*Sū' Mizāj*) and disruptions in structural integrity. Clinical features vary, with early signs including short-term memory loss and disorientation. The condition can be classified into primary (degenerative) and secondary (acquired) dementias. Risk factors include age, family history, and lifestyle choices. Treatment principles in Unani medicine focus on addressing the underlying causes, correcting brain temperament, evacuating morbid matter, and employing dietary, regimental, and pharmacotherapeutic approaches. This holistic framework underscores the importance of traditional medical systems in understanding and managing dementia, advocating for a comprehensive approach to treatment that encompasses both modern and traditional practices.

Keywords: unani system of medicine, Dementia, cognitive decline, Dietotherapy, *su' Mizaj*

Introduction

Dementia is derived from Latin, meaning insanity or a state of mindlessness. ('De' means 'without' and 'ment' means 'mind').¹ It is the seventh leading cause of death and a significant contributor to dependency and disability worldwide.² A person with dementia gradually loses their mental and cognitive capacities due to a chronic neurologically damaging disorder.³ It demolishes the brain cells, that are essential for memory, thinking, and behavioural issues severe enough to interfere with employment, lifelong interests, and social interactions.⁴

The prevalence rate for dementia increases with advancing age. Currently there are about 138 million older adults (aged 60 and above) in India, and this number is expected to increase to nearly 194 million by 2031⁵ Worldwide, around 50 million people currently have dementia, a figure projected to surge to 152 million by 2050.⁶ There are many causes of dementia, but the two most common causes are Alzheimer's disease and vascular diseases.^{7,8}

In the Unani system of medicine (USM), dementia is referred to as *Nisyān* which is caused by dysfunction of three internal faculties *Qūwwate Khayāl* (imagination), *Qūwwate Fikr* (thought) and *Qirwwate Zikr* (memory) the causes of this disorder are categorized into three main factors: *Sū' Mizāj* (abnormal temperament), *Sū Tarkeeb* (structural defect), and *Tafarruq-i-Ittiṣāl* (disruption of continuity), with *Sū' Mizāj* being the most significant. This is because the brain is highly susceptible to coldness (*Burūdat*) and moisture (*Rutūbat*), which can disturb its mental faculties, ultimately leading to dysfunction in all three. When these faculties are compromised, it results in three types of deficits: *Butlaan* (complete cessation), *Nuqsaan* (deficiency), and *Tashweesh* (distortion or improper functioning).¹¹

Nisyān is name of that disease in which derangement of *Hafiza* (Memory), (Thinking) and *Takheel* (Imagination) occur. Forgetting what one sees or hears is a sign and symptom of *Hafiza* malfunction. When a patient has *Fikr* derangement, their cognitive power rate drops to zero and they start having negative ideas. When a patient has

Takheel's derangement, everything they feel and see is lost, and they forget what they see in their dreams. Overall, the source of *Fasad-e-Zikr* is an excess of either coldness and moistness or coldness and dryness, which manifests in the posterior brain. In cases of *Fasad-e-Fikr*, it occurs in mid brain and in cases of *Fasad-e-Takheel*, it occurs in anterior brain.¹²

Dementia can be divided into two main categories: primary (degenerative) and secondary (acquired). The most prevalent degenerative dementias include Alzheimer's dementia, frontotemporal dementia, Parkinson's associated dementia, and Lewy body dementia. Secondary causes primarily encompass vascular issues, central nervous system infections, trauma, metabolic disturbances, and other reversible or treatable conditions.¹³

Risk factors: The primary risk factor for dementia is aging. Other risk factors include a family history of dementia, uncontrolled hypertension, smoking, obesity, uncontrolled diabetes, excessive alcohol consumption, low physical activity, poor sleep, lower education, social isolation, and depression.^{14,15}

Clinical Features of Dementia:

Depending on the underlying etiology of dementia, symptoms can differ significantly. generally, short-term memory loss and forgetfulness are the first signs of dementia. early signs of dementia include getting lost while driving or walking, becoming disoriented in familiar environments, losing track of time, struggling to understand or follow conversations, having trouble with daily duties, and visually misjudging distances to objects are some additional early signs of dementia. A patient with dementia may also experience mood swings, including anxiety, sadness, or agitation due to memory loss, personality and behavioural changes, social isolation, and a loss of interest in other people's emotions.¹⁴

Classification of Dementia in Unani:

1. The first type of memory dysfunction is caused by *Sū' Mizāj Bārid* (an altered cold temperament), along with an accumulation of *Balgham* (phlegm) in the anterior part of the brain, where the center of *Qūwwate Takhayyul* (imagination) is located. Patients affected by this condition retain their long-term memory but struggle with short-term memory loss.
2. The second type affects the midbrain, where *Qūwwate Fikr* (thinking) resides. This dysfunction is triggered by *Ruṭubat Ghalīza* (thick morbid matter) and *Burūdat* (coldness), impairing cognitive thought processes.
3. The third type of memory dysfunction occurs when *Ghalīz Balghamī Mādda* (morbid phlegmatic matter) and *Burūdat* (coldness) interfere with the faculty of memory and recollection. As a result, the patient experiences complete memory loss and an inability to retain or process new information.¹⁶

Etiology:

According to *Abu Al Mansoor Al Qamari*, *Nisyān* is caused by an excess of *Balgham* (phlegm), which leads to increased moisture in the *Muqaddam Dimagh* (anterior part of the brain). This moisture hampers the brain's capacity to retain positive information, similar to how melted wax is unable to hold an impression.¹⁷

According to "*Rabban Tabri*" *Nisyān* may be due to the accumulation of excessive viscous Phlegm (*Lesdaar Balgham*) and fluid (*Ruṭubat*) or excessive cold temperament of the body. When *Nisyān* is caused by excessive accumulation of fluid then *Qūwwate Hafiza* and *Qūwwate Fikr* will be weak.^{18,19}

In modern medicine, the most common cause of dementia is the degeneration of brain cells due to the abnormal accumulation of proteins in the brain, which affects both mental and physical abilities. Additionally, gene mutations or polymorphisms that influence brain function are also recognized as causes of dementia.^{20,21}

Principle of treatment: Since dementia is caused by changes in the brain's temperament toward cold and moist or cold and dry states, the basic principles of treatment for *Nisyān* include:^{11,22,18,17}

- (1) To eliminate the real cause of the disease
- (2) To correct the temperament of the brain (*Tadeel-i Mizāj*).
- (3) To Evacuate the Morbid Matter from the brain (*Tanqia Dimāgh*) with the help of *Munzij* (Concoctive) and *Mushil* (Purgative) drugs.
- (4) After *Tanqia*, *Muqawwi-i-Dimāgh* (Brain tonic) drugs are used.
- (5) To produce exhilaration (*Tafreeh-i-Taba*).
- (6) To relieve pain (*Taskeen*).
- (7) To induce sleep (*Tanwaeem*).
- 8) The disease is commonly due to cold, moist and thick humour therefore evacuation/bio purification of the body is indicated by employing the procedure of *Huqna*(enema) and *Mus'hilat* (purgation).
- (9) If the age, season and strength of the patient are favourable then *Fasd* (venesection) is advised.
- (10) Physical and mental rest (*Sukoon-i-Jismani wa Nafsāni*)

Management of Nisyan:

In Unani medicine, the treatment of dementia primarily involves three approaches: Dietotherapy, regimental therapy, and pharmacotherapy.

Ilaj Bil Ghiza (Dietotherapy)

Ghiza-e-Lateef, *Kasir-ut-Taghzia-wa-Jaiyyad-ul-Kaimus* (attenuated highly nutritious and good chime forming), *Ghiza-e-Saree-un-nafooz* (fast penetrative diet) and *muqawwi ghiza* (vigorous diet) is suitable for the patient of *nisyan*.eg. Meat soup, Semi boiled eggs, Maul Jabn, Maul Laham, Maul Asl, Paneer Maya, Hareera, Sirka, Khardal, Goat meat, sparrow meat, Khurfa, Palak, Kaddu,

nuts like almond, hazelnut, coconut and walnut have been recommended as good foods for people with *Nisyān* etc.²³

Ilaj Bil Tadbeer:

There are several beneficial regimes for managing *Nisyān*, such as; *riyazat* (exercise), *dalk* (massage), *nutool* (pouring), *takmeed* (hot fomentation), *Huqna* (enema), *Atoosh* (sneezing), *Shamoom* (inhaler), *zimad* (paste), *gargarah* (gargle) etc.^{23,12}

Ilaj Bil Dawa: There are numerous single and compound drugs used for memory enhancement.

single drugs include *Brhami* (*Bacopa monnieri*), *Waj* (*Acorus calmus*), *Kundur* (*Boswellia serrata*), *Zanjabeel* (*Ginger officinalis*), *Khardal* (*Brassica nigra*), *Halela* (*Terminalia chebula*), *Balela* (*Terminalia bellerica*), *Amla* (*Emblica officinalis*), *Haldi* (*Curcuma longa*), *Elva* (*Aloe vera*), *Qust* (*Saussurea lappa*), *Saadkofi* (*Cyperus rotundus*), *Jatamansi* (*Nardostachys jatamansi*), *Kabab Chini* (*Piper cubeba*), *Fil Fil Daraj* (*Piper longum*), *Aqarqarha* (*Anacyclus pyrethrum*), *Gilo* (*Tinospora cordifolia*), *Khulanjan* (*Alpinia galangal*), *Asgand* (*Withania somnifera*), *Ustukhuddus* (*Lavandula stoechas*), *Baladur* (*Semecarpus anacardium*), *Darchini* (*Cinnamomum zeylanicum*), *Ood Saleeb* (*Paonea officinalis*), *Zaafan* (*Crocus sativus*), *Qaranfal* (*Syzygium aromaticum*), *Pista* (*Pistacia vera*), *Tulsi* (*Ocimum basilicum*), *Asarron* (*Valeriana wallichii*), *Chilghoza* (*Pinus gerardiana*). Almond (*Prunus amygdalus*).

Compound drugs include Majoon Barhami, Majoon Bolas, Majoon Baladur, Majoon Waj, Majoon Falasafa, Majoon Kundur, Itriphal Sagheer, Itriphal Ustakhuddus, Jawarish Jalinoos, Majoon Najah.^{23,12}

Conclusion:

Dementia, particularly referred to as *Nisyān* in Unani medicine, represents a complex and multifaceted disorder characterized by the gradual decline in cognitive functions such as memory, thinking, and imagination. The increase in the prevalence of dementia, especially among the aging population, highlights the urgent need for comprehensive understanding and effective management strategies. In Unani medicine, dementia is understood through a unique framework that emphasizes the role of internal faculties and the balance of bodily *humors*. The categorization of memory dysfunctions based on temperamental imbalances provides valuable insights into potential therapeutic approaches. These include dietary adjustments, regimental therapies, and the use of specific pharmacological agents that target cognitive enhancement. The holistic treatment strategy, which includes the correction of temperament and the evacuation of morbid matter, aligns well with modern medical principles of addressing underlying causes while managing symptoms.

Furthermore, understanding the various risk factors associated with dementia, such as age, family history, lifestyle choices, and comorbid conditions, is essential for prevention and early intervention. As the global population ages and the incidence of dementia continues

to rise, collaborative efforts between traditional and modern medical practices will be crucial in addressing this public health challenge. Continued research into the efficacy of Unani treatments alongside conventional approaches may yield beneficial outcomes for individuals suffering from dementia, ultimately improving their quality of life and preserving cognitive function for as long as possible.

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