

**COMPARISON BETWEEN CONCEPT AND TREATMENT OF ALZHEIMER'S
DISEASE IN UNANI MEDICINE WITH MODERN MEDICINE**

Adnan Mastan*, Farah Naaz**, Mohd Abid*

*Research Associate, Central Council for Research in Unani Medicine, New Delhi.

****Corresponding Author: Dr. Farah Naaz**

Research Associate, Central Council for Research in Unani Medicine, New Delhi.

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ABSTRACT

Alzheimer's disease (AD) is a progressive and the most prominent old-age debilitating disease which had a notable growth in recent years. In Unani medicine disease is described under the heading of Nisyan or Humuq. Objective of this paper was to codify the concept of Nisyan or Humuq and compare it with that of AD. Classical Unani literature was searched for traditional terms of dementia/amenia (Nisyan, Fisad-e-Zikr, Faramoshi, Humuq). Modern text was searched through books & journals via authentic websites. Comparison between signs and symptoms and management of each kind of traditional dementia with that of AD indicates that there is strong similarity between the two. Our findings showed that the concept of Nisyan/Humuq is in agreement with novel medical information.

KEYWORDS: Alzheimer's disease, Nisyan, Humuq, Dementia, Amnesia.**INTRODUCTION**

Alzheimer's disease (AD) is the commonest dementia, a progressive neurodegenerative disease accounting for over 65% of dementia in any age group.^[1] It is characterized by cognitive dysfunction with memory impairment and behavioral dysfunction.^[7-8] The number of individuals with cognitive deficit is about 36 million and the number will triple by 2050.^[9] The costs for this disease are so high that one percent of global GDP is spent on Alzheimer disease's consequences.^[10] Patients diagnosed with AD usually die after 5 to 7 years.^[11] In Unani manuscripts disease in which forgetfulness is the main symptom is described under the heading of Nisyan or Humuq. Nisyan (Amnesia)/Faramoshi or Humuq (Dementia) is a condition in which memory is lost or disturbed.^[15]

The cardinal features of the disease are; progressive loss of ability to learn, retain and process new information (i.e. memory loss), Decline in language i.e. difficulty in naming and understanding what is being said, apraxia i.e. impaired ability to carry out skilled motor activities, agnosia i.e. failure to recognize objects, behavioral change like agitation, aggression, wandering.^[1-6] On the similar lines in Unani classical literature disease, occurs due to deficit in Quwwat-e-Hafiza (Memory power), Quwwat-e-Fikr (Power of analysis), Quwwat-e-Khayal (Imaginative power, cognitive power).^[15]

OBJECTIVES

In this review paper, we tried to compare old concept of Nisyan/Humuq in Unani Medicine with modern

understanding, providing possible explanations and exploring previous studies for scientific validation of effect of Unani drugs in the disease.

MATERIALS AND METHODS

Classical Unani literature including Al-Hawi (Rhazes, 10th Century), Canon of Medicine (Avicenna, 11th Century), Zakhira Khawarzamshahi (Jorjani, 12th Century), Moalijat Sharah Asbab (Samarqandi, 12th Century) Exir-e-Azam (Azam Khan, 18th Century) were searched for traditional terms of dementia/amenia (Nisyan, Fisad-e-Zikr, Faramoshi, Humuq). Modern texts were searched through books & journals via authentic websites.

DISCUSSION

AD is a dementing illness in which amnesia is a dominant symptom. Risk factors include advancing age, family history, diabetes mellitus, hypertension, cardiovascular disease, and head trauma.^[2] As far as the cause is concerned there are so many theories that explain the cause of the disease. Cholinergic theory says that a reduction in the synthesis of the neurotransmitter acetylcholine may result in the disease. Secondly the plaque and the tangle theory propose that Alzheimer's disease may be due to accumulation of β amyloid protein in the spaces between nerve cells and deposition of protein τ that accumulate inside the nerve cells.^[18] In Unani literature four types of nisyan have been described namely Butlan-e-Takallum, Butlan-e-Tahreer, Ishara, Fisad-e-Fiqr.^[15] Comparison between signs and symptoms of each kind of traditional dementia with

those of AD indicates that there is strong similarity between the two (Table 1).

Table 1: Comparison between sign and symptoms Nisyan/Humuq with AD

S. No.	Types of Nisyan ^[15]	Modern Sign & Symptoms of AD
1.	Fisad-e-Zikr	Loss in memory power i.e. Loss of ability to learn, retain and process new information ^[1]
2.	Fisad-e- Fikr	Loss of analysis power: Impairment in handling complex tasks & reasoning abilities ^[2]
3.	Fisad-e-Takheel	Cognitive Inability: Impairment in learning and retaining new information ^[2]
4.	Butlan-e-Takallum	Aphasia: Difficulty with language and speech ^[5]
5.	Butlan-e-Tahreer	Impaired ability to carry out skilled motor activities ^[1]
6.	Ishara	Visio-spatial impairment ^[3]

Management of AD is mostly supportive, some evidence suggests that participation in cognitively demanding activities in later life may protect against or delay the onset of dementia.^[1] Treatment with antioxidants, Anticholinesterase inhibitors and memantine, have shown to slow, if slightly, the rate of cognitive decline in AD.^[2]

Diet plays an important role in the management of the disease; some studies on multi-nutrient diets have shown that it has a preventive effect on AD.^[17,19] Consumption of cholesterol and UFA (Unsaturated fatty acids) has a positive role in AD prevention.^[20] In Unani system of medicine there is emphasis on dietary consideration. Recommended food groups include meats (Chicken, sparrow), Egg yolks, Nuts (Walnut, hazelnut, sweet almond), Fruits (Raisin, currant, dried fig, coconut).^[12-16] Recently, it has been revealed that these compounds can act against AD through inhibition of oxidative stress, A β generation and aggregation, and abnormal τ aggregation.^[21]

Lifestyle modifications included in Unani Medicine have also been supported by new findings. Mild exercise, increasing brain activities, music advised in Unani Medicine for dementia.^[13] and recent studies have substantiated the effects of exercise and music against AD.^[22-23]

Other than dietary and lifestyle modification, drug therapy is also envisaged for treatment of dementia. Almost all the drugs advised for dementia possess antioxidant activity. Herbs including Waj-e-Turki (*Acorus calamus* Linn.) Sumbul-ut-Tib (*Nardostachys jatamansi* Dc.), Kalonji (*Nigella sativa* Linn.), Ispand (*Peganum harmala* Linn.), Dar-e-Filfil (*Piper longum* Linn.), Filfil Siyah (*Piper nigrum* Linn.), Bhilawan (*Semecarpus anacardium* Linn.), Post Halela (*Terminalia chebula* Retz.), and Zanjabeel (*Zingiber officinale* Rosc.) show AChEI activities (24-28); and a few of them act through NMDA blockage or A β inhibition.^[29-30] When these herbs are put together (for example in a formulation), they can comprehensively fight against the disease.

CONCLUSION

Unani classical literature suggests that ancient healers had the understanding of Alzheimer's disease. Modern concept of the disease related to clinical features, causes and management are based on similar lines as described by the ancient healers in Unani Medicine which have been scientifically validated and developed now with the available modern scientific techniques.

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