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Perception of Alzheimer Disease in Iranian Traditional Medicine

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Abstract

Context: Alzheimer disease (AD) is the most common cause of dementia. In regards to the world's aging population, control and treatment of AD will be one of the major concerns of global public health in the next century. Alzheimer disease was not mentioned with the same phrase or its equivalent in traditional medical texts. The main of present paper was to investigate symptoms and causes of alzheimer disease from the view point of Iranian traditional medicine.

Evidence Acquisition: In this qualitative study, we searched reliable sources of Iranian traditional medicine such as Canon of Medicide by Avicenna (Al-Quanon fi- tibb), Aghili cure by Aghili's (Molajat-E-aghili), Tib-E-Akbari, Exire -E-Aazam and Sharh-E-Asbab and some reliable resources of neurology were probed base on keywords to find a disease that had the most overlap in terms of symptoms with alzheimer disease. By taking from the relevant materials, the extracted texts were compared and analyzed.

Results: Findings showed that alzheimer disease has the most overlap with Nesyan (fisad-e-zekr, fisad-e-fekr and fisad-e-takhayol) symptoms in Iranian traditional medicine. Although this is not a perfect overlap and there are causes, including coldness and dryness of the brain or coldness and wetness that could also lead to alzheimer disease according to Iranian traditional medicine.

Conclusions: According to Iranian traditional medicine, The brain dystemperement is considered the main causes of alzheimer disease. By correcting the brain dystemperement, alzheimer can be well managed. This study helps to suggest a better strategy for preventing and treating alzheimer in the future.

Keywords: Alzheimer Disease, Medicine, Traditional, Iran

1. Context

Alzheimer disease (AD) is the most common cause of dementia and the most important degenerative disorder of the brain (1). Based on statistical analyses, it has been estimated that more than 5 million people in the United States have dementia and that it will, increase to 13 million by the year 2050 (2). Prior research has estimated that rates of dementia and alzheimer disease increase exponentially with age (3, 4).

In the United States, the cost of treating AD patients had been estimated to be more than 145 billion $ in 2009 (5). In regard to the world's aging population, control and treatment of AD will be one of the major concerns of global public health in the next century (6, 7).

The primary symptom of this disease is the gradual deterioration of memory and its significant feature is a progressive decrease of cognitive abilities, leading to social or job disability (8, 9).

AD patients are recognized with chronic and progressive impairment of memory along with language deterioration and deterioration of spatial orientation and performance. The diagnosis of the disease is difficult at its primary stages and the correct diagnosis is made when cognitive skills are completely disturbed (10, 11). Therefore, addressing this disease from the viewpoint of traditional medicine, such as Iranian traditional medicine, which is one of the richest ancient medical schools, might provide a better understanding of this disease. Alzheimer disease was not mentioned with the same phrase or its equivalent in traditional medical texts. The purpose of this article was to compare the symptoms of alzheimer disease with known disease in ancient medical books. Finding the equivalent disease might suggest a better way for preventing, treating, and reducing the complications of alzheimer disease in the future.

2. Evidence Acquisition

In this study, traditional resources of different ages, such

as The canon of Medicine by Aviccena (10th and 11th centuries), Aghili cure by Aghili's (18th century), Zakhire kharazmshahi by jorjani (11th and 12th centuries), Tib-E-Akbari (11th and 12th centuries), Exire-E-Aazam (18th and 19th centuries) were firstly selected according to expert panel of judge. Databases like PubMed, Scopus and some Iranian database like SID were searched base on keywords to find probable Alzheimer's symptoms. As alzheimer is called Nesyan and it is considered as one of the brain diseases. At first studied the subject of brain, and then we collected data about alzheimer definition, etiology, symptoms, signs and classified the results based on causes. All data were discussed in lots of research meeting including reading and reviewing data, clarifying the subjects that were not clear in the translated paraphrases, and further explanations of additional parts when required. All authors were involved in the process of data analysis. The interpretation was discussed with research team. The authors consulted with each other to select clear words and phrases for labeling topic.

3. Results

3.1. Overview of the Iranian Traditional Medicine Perception of Alzheimer Disease

3.1.1. Definition and Types of Nesyan From the Perspective of Traditional Medicine

Nesyan means to forget things that the person has learned previously or is learning. Accordingly, Nesyan is of different types including fisadezekr, fisadefekr and fisadetakhayol. Although, all three types are memory disorder (afat-e-zehn) (12).

3.1.2. Fisad-e-zekr

Avicenna and most scholars discussed that Fisad-e-zekr is one of the types of Nesyan in which all senses are well and all things that the person hears and sees and all dreams are consistent with the external realities. But, the problem is that all heard or seen things are forgotten immediately (12-16).

3.1.3. Fisad-e-fekr

In Traditional book explained that all things the patient remembers are incorrect (fased) and in fact his/her thinking is confabulation. In this condition, the patient is not able to think about issues in a way that tells things that are not deserved telling and refuse to tell things that are not deserved abstinence. The patient asks things not deserved and is not able to do his/her intended work (12, 13, 15, 16).

3.1.4. Fisad-e-takhayol

In its mild condition, the patient has very little night dream and even he/she has some, cannot remember them. The patient is not able to remind things that he/she sees. In sever condition, there has no night dream and if has, cannot remember it at all. The patient forgets all things that he/she sees very soon in the case of their absence. For example, the patient immediately forgets whatever he/she has said or whatever has seen as soon as it becomes absent. In fisadetakhayol, the patient tells and does things that are not good and admirable and imagines things that have not external reality. For example, sees headless human or a face which is half horse and half human (12-16).

3.2. Etiology and Clinical Manifestations of Nesyan From the Perspective of Traditional Medicine

3.2.1. Su-e-mizaj (Derangement in Temperament)

According to the Iranian Traditional Medicine the term mizaj (temperament) is used to describe the normal biochemical equilibrium of the cells, tissues, organs and body as a whole. Any change in this equilibrium is termed as su-e-mizaj or derangement of temperament (dystemperament) (17). In Iranian traditional medicine, most of brain disorders are the result of coldness (borodat). The etiology of alzheimer disease is coldness and wetness or coldness and dryness on brain. The most common cause of it is resulted from coldness and wetness and in a few cases is resulted from brain edemas.

Too much sleep, Head heaviness and runny nose, watering eye, forgetting past happenings and remembering current memories more than past happenings, dizziness, altered pulse rate and white urine are because of the coldness and wetness brain.

Insomnia and mucus dryness of nose, mouth and eye, remembering past happenings, difficulty in remembering current happenings and continuous talking, choked feeling in throat, retropulsion, rosy brown body color and clear white urine are due to coldness and dryness.

In Iranian traditional medicine, anxiety in patients with Nesyan is because of hotness. Brain coldness might be in itself or accompanied with dryness or wetness (12-16). When coldness is the only cause, symptoms are numbness and vertigo.

Note: If a healthy person comes down with forgetfulness, it is an alarm for the occurrence of severe brain diseases like stroke or epilepsy (14).

3.3. Definition of Alzheimer and its Types From the Perspective of Modern Medicine

After the first introduction of alzheimer's disease in the early 20th century by a German physician named Alois alzheimer, it became an essential public health problem around the world. The most important feature of alzheimer disease is dementia; even though, this syndrome has some causing conditions other than alzheimer. For this reason, alzheimer disease is often considered as alzheimer's dementia that is the major cause of dementia and is responsible for more than the half of patients with

dementia. The most important feature of dementia is memory loss with age increase as its most important and unique risk factor (18).

3.4. Etiology and Clinical Manifestations of Alzheimer From the Perspective of Modern Medicine

Similar to other common chronic diseases, alzheimer's disease is believed to be a multi-factorial disease. Neurons' injury can be led to alzheimer's disease or other dementias. Extracellular accumulation of protein beta-amyloid in the brain (beta-amyloid plaques) and intracellular accumulation of protein tau (tau tangles) are some of the alterations in the brain that are thought to cause alzheimer's disease. In this disease, synaptic information transfer disturbs, the number of synapses decreases and finally neurons die. Beta amyloid accumulation causes cell death through interfering synaptic communication of two neurons, while Tau tangle exerts its effect through blocking transport of nutrients and other essential molecules in the neuron. In advanced stages, brain shrinkage occurs that is due to cell death and remains of dead neurons. Gene mutation has been known as the only cause of alzheimer's disease. Alzheimer's disease presents differently and since neurons of the brain regions that are related to new memories are usually the first affected neurons. The most common symptom starts with gradual deterioration of the patient's ability to remember new information. With developing neurons' death to other regions of brain, other problems arise.

Common symptoms:

- Memory loss disturbing daily life
- Difficulty in planning and problem solving
- Problem in doing home tasks, job duties
- Loosing time or place
- Difficulty in perception of images and spatial relationships
- Reduced ability in judgment
- Quitting work or social activities
- Mood and personality alteration (19)

3.5. Comparison of Alzheimer Disease and Nesyan Clinical Features

We compared the various signs and symptoms of Nesyan with alzheimer disease (Table 1).

Table 1. Comparison of Alzheimer Disease and Nesyan Clinical Features

Alzheimer Disease	Nesyan
Early Stage/Presentation	Fisad-e-zekr
Short term memory distortion	Difficulty in remembering current happenings (coldness and dryness)
Relative presentation of remote memory	Remembering past happenings (coldness and dryness)
Word-finding problems (mildly)	All heard or seen things are forgotten
Problem in planning, judging and organizing	-
Relatively preserved social behavior	All senses are well and all things that the person hears and sees and all dreams are consistent with the external realities
Intermediate Stage	Fisad-e-Fekr /Fisad-e-takhayol
Failure in logical, reasoning, planning and organizing activities	All things the patient remembers are incorrect (fased)
Impaired remote memory	Forgetting past happenings and remembering current memories more than past happening (coldness and wetness)
More serious word-finding and language problems	Difficulty in continuous talking
Being distracted easily	-
Unaware of the disease	His/her thinking is confabulation
Inability in using appliances and dressing	The patient asks things not deserved and is not able to do his/her intended work
Disturbed spatial orientation	
Delusions	The patient tells and does things that are not correct
Visual hallucinations	Admirable and imagines things that have not external reality
Emotional control deficit, anxiety	Anxiety (hotness)
Inattention to appearance and hygiene	-
Sleep disorders	Too much sleep (coldness and wetness brain) /Insomnia (coldness and dryness) (12-17)
Late Stage	
Severe deterioration of all cognitive modalities	-
Near-mutism	
Urinary and bowel incontinence	
Myoclonus and epileptic seizures (19)	Epilepsy and stroke (14)

4. Conclusions

Although we have not found in our review of ITM texts a disease exactly like alzheimer's disease, some diseases like Nesyan, fisad-e-zekr, fisad-e-fekr and fisad-e-takhayol seem to be similar with Alzheimer diseases. In ITM, alzeimer disease is a temperamental disease. The etiology of this disease is coldness and wetness or coldness and dryness on brain. The most common cause of it is resulted from coldness and wetness.) (12-16). This review helped us to identify causes of Alzheimer disease from ITM perspective and to provide a practical classification of its causes. ITM as a holistic approach has paid special attention to the etiology of diseases. In this medicine treatment depends on removal of the cause of disease and changing life style. Since ITM differs with other traditional medicines, we did not review other traditional medicine schools and this can be considered as one of the limitations of our study. Moreover, due to the lack of enough papers on ITM, our review was limited to just original text books. Our review of wise perspective of ITM healers on conditions similar to alzheimer's disease is of a great help to find a more efficient strategy in prevention, treatment and reducing complications resulted from this disease.

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Footnotes

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