Dementia, Islamic Indication and Scientific Evidence

Seikh Farid Uddin Akter
Associate Professor
Department of Community Medicine

Mohammed Fauzi Abdul Rani
Professor
Department of Internal Medicine

Mohamad Sahari Nordin
Professor
Institute of Education

Jamalludin Ab Rahman
Associate. Professor
Department of Community Medicine

Mohd. Aznan Bin Md. Aris
Associate. Professor
Department of Family Medicine

Mohammad Yousuf Rathor
Associate Professor
Department of Internal Medicine
International Islamic University Malaysia (IIUM), Malaysia

Mohammad Abdur Rashid
Associate Professor
Department of Paediatrics
Universiti Teknologi MARA (UiTM), Malaysia

Abstract

Background: *The increasing prevalence of dementia has dramatic effects on lives of millions of people across the regions and on public health costs. This is a commonly elderly health health problem as indicated in the Holy Qur'an. Although there is no cure yet but much can be done to improve the quality of life of people with dementia.*

Methods: *An extensive review of the literature, including the Holy Qur'an, in several pertinent areas of inquiry that may deleniate the prevalence, potential risk factors related to dementia was under taken.*

Results: *The overall prevalence of dementia for males and females doubled for every five years increase in age after the age of 65. It is largely a disease of older people. Results highlight a number risk factors associated with dementia. Inter alia, these include physical activities, education, occupation, stress, cholesterol and APOE gene. A number risk factors associated with dementia are modifiable.*

Conclusion: *The prevalence of dementia rises as the people ages. The modifiable risk factors may have potential as strategies useful in preventing or delaying dementia among elderly subjects.*

Keywords: Islamic indication**,** dementia, risk factors, elderly people

INTRODUCTION

Islamic indication: Dementia is a non-specific illness characterised by cluster of symptoms and signs manifested by slow progressive loss of brain function notably lapses in memory, disorientation, confusion, mood swings, changes in personality, language problems, such as difficulty in finding the right words for everyday objects, loss of behavioral inhibitions, loss of motivation, and difficulties in problem solving beyond what might be expected from normal aging. It is global health and social crisis.

Besides, there are some warning signs of dementia that one can look out carefully and take certain steps to reduce the risk of dementia. The warning signs are: memory loss that affects day-to-day performance, difficulty in doing familiar tasks, confusion about time and place, problems in communication, difficulty in planning or solving problems, poor judgment, misplacing things, changes in mood, changes in behaviour, changes in personality, withdrawal from work, cessation of social networking. Notwithstanding, anyone may experience similar situations from time to time. The difference with dementia is that these characteristics will progressively get worse and affects detrimentally patient's ability to live and function safely and independently. [1-3] Almighty tells us that He is controlling the affairs of His servants. He is the One Who created them out of nothing, then He will cause them to die. But there are some of them that He allows to grow old, which is a physical weakness, as Allah says:

"Allah is He Who created you in (a state of) weakness, then gave you strength after weakness, then after strength gave (you) weakness (30:54)." [4]

"O mankind! if ye have a doubt about the Resurrection, (consider) that We created you out of dust, then out of sperm, then out of a leech-like clot, then out of a morsel of flesh, partly formed and partly unformed, in order that We may manifest (our power) to you; and We cause whom We will to rest in the wombs for an appointed term, then do We bring you out as babies, then (foster you) that ye may reach your age of full strength; and some of you are called to die, and some are sent back to the feeblest old age, so that they know nothing after having known (much), and (further), thou seest the earth barren and lifeless, but when We pour down rain on it, it is stirred (to life), it swells, and it puts forth every kind of beautiful growth (in pairs) (22:5)." [5]

So that they know nothing after having known meaning, after a person knew things, he or she will reach a stage where one knows nothing because of weakness of mind due to old age and senility. Thus Al-Bukhari, when commenting on this issue, reported a narration from Anas bin Malik that the Messenger of Allah used to pray:

"I seek refuge with You from miserliness, laziness, old age, senility, the punishment of the grave, the Fitnah of the Dajjal and the trials of life and death." [6]

METHODS

Articles and/or pertinent documents included in this review were primarily identified through a Google serach of the terms dementia, prevalence, incidence, risk factors, cause and verses related to old age. Inter alia, studies retained for reviews were generally limited to empirical investigations that provided data related to prvalence, incidence and definitional criteria for the disorder and that specified an interval of observation.

RESULTS

Scientific Evidence: The world wide current prevalence of dementia was estimated to be 30 million people, with 4.6 million people annually which gave an estiamte of about one case every 7 seconds. The number of people affected was predicted to be over 100 million by 2050 with an expection to be double every 20 years.[3,7,8] Based on the studies in developed countires, the overall prevalence for males and females doubled for every five years increase in age after the age of 65. It is largely a disease of older people (Table 1).

Table 1: Incidence and prevalence rates of dementia from the EURODEM meta-analyses for European studies

Age group	Annual incidence per 100		Prevalence %	
	Males	Females	Males	Females
60-64	0.2	0.2	0.4	0.4
65-69	0.2	0.3	1.6	1.0
70-74	0.6	0.5	2.9	3.1
75-79	1.4	1.8	5.6	6.0
80-84	2.8	3.4	11.0	12.6
85-89	3.9	5.4	12.8	20.2
90+	4.0	8.2	22.1	30.8

Source: Alzheimer's disease international (ADI) 2008

ADI commissoned a panel of experts reached a concensus estimate of prevalence in each world region. [3,7] The trend of lower prevalence of dementia in developing countries as opposed to developed countries was also supported by the concensus judgment of the expert panel.

It is evident that the number of new cases of dementia in the Asia Pacific Region was projected to increase 4.3 million new cases per year in 2005 to 19.7 million new cases by 2050. The proportion of people with dementia was expected to increase from 0.38% of the total regional population to 1.4% over the next 45 years. Table 3 displays individual country data for the estimated old and new cases of dementia in Asia Pacific Region. [1,9,10]

Table 3: Estmated prevalence and incidence of dementia by the selected country and the year in Asia Pacific Region.

'000 people	2005		2020		2050	
	Prevalence	Incidence	Prevalence	Incidence	Prevalence	Incidence
Austrlia	195.4	60.2	301.3	91.1	664.1	199.7
China	5,541.2	1,721.0	9,596.3	2,916.7	27,004.4	8,269.0
India	3,248.5	1.026.8	5,541.8	1.714.4	16,290.1	4,974.6
Indonesia	606.1	191.4	1,016.8	314.1	3,042.0	932.0
Japan	1,871.2	570.2	3,251.3	983.4	4,873.1	1,4517.7
Malysia	63.0	20.1	54.6	16.6	117.6	35.5
Pakistan	330.1	107.3	566.6	179.3	1,916.2	584.3
Philipines	169.8	54.8	316.3	99.2	1,158.9	353.9
Singapore	22.0	6.8	52.6	15.7	186.9	56.7
Thailand	229.1	71.4	450.2	137.2	1,233.2	377.0

Risk factors: The risk facors of dementia maybe divided into two categories – nonmodifiable and modifiable. Of the studied **non-modifible** risk factors, age is the best-studied and strongest risk factor for dementia. Other non-modifiable risk factors include gender (more in females), genetic e.g having a first-degree relative with a history of dementia and having the apolipoprotein E4 genotype. [11]

The potentially **modifiable** risk facotrs of dementia include mostly cardiovascular risk factors factors such as hypertension, [12] diabetes mellitus, hypercholesterolemia, [13] vitamin B12 and folic acid deficiency. [14] The life style related factors, inter alia, include diet. [15] Evidence has suggested that regular physical exercise may prevent or delay the onset of dementia in older persons and the risk of developing dementia is higher in individuals who do not execise. Smoking, obesity and alcohol consumption are also modifiable risk factors. [12,15] However, tt has been reported that 15% of people with dementia have a potentially treatable cause, but the prevalence of reversible dementia is only 1%. [16]

DISCUSSION

Epidemiological studies of dementia among eldely people from developing coutries are scarce. [17,18,19] In this, the systematic review of the literature on dementia among people, it is found in strong confomity with Islamic indications [4-6] and it seems that all scientifing evidences throughout the world are trying to echo the stated revealed knoledge. Although it seems likely, it cannot be shown with numbers and/or figures conclusively that dementia is increased in certain population and the trend is on the rise due to the fact that some reports delineated the scenario of dementia country-wise based on assumptive and administrative perspective with estimated projection of incidence and prevalence of dementia, the small scale studies, screening instruments of uncertain cultural validity, diverse sampling techniques, different operational definitions of dementia that differ from study to study yet the explicit relationships with older age is unanimous. [1-3.19,20] The association between dementia/cognitive impairment and lifestyle determinants including plausible biochemical markers and genetic risk factors were less clear and lack in most instances. Interestingly most important predictors of dementia such as hypertension, diabetes and certain vitamins deficiency were also not examined explicitly but age. [1-3,19-26]

CONCLUSION

The increasing prevalence of dementia as the population ages and it has dramatic effects on both provision of health care and the economy in general. A number risk factors associated with dementia are modifiable and there are potential strategies for enabling both elderly subjects to remain cognitively fit and patients with dementia to slow progression.

ACKNOWLEDGEMENT

REFERENCES

1. Alzheimer's Australia (2006). Dementia prevalence and incidence among Australians who do not speak English.
2. Alzheimer's disease International factsheet (2008). The prevalence of dementia worldwide.
3. Alzheimer's disease International (2009). World Alzheimer Report 2009.
4. Verse 30:54. The Holy Qur'an
5. Verse 22:5. The Holy Qur'an
6. Al-Hadith. Narrated from Anas bin Malik. Al- Bukhari.
7. Wimo, A., Winblad, B., Aguero-Torres, H. & Strauss, E-v. (2003). The magnitude of dementia occurrence in the world. Alzheimer Disease and Associated Disorders, 17 (2): 63–67.
8. Ferri, C.P, Prince, M., Brayne, C, Brodaty, H, Fratiglioni, L, Ganguli, M, Hall, K, Hasegawa,Hendrie,H, Huang, Y, Jorm, A, Mathers, C, Menezes P.R, Rimmer, E & Scazufca, M. (2005). Global prevalence of dementia: a Delphi consensus study.Lancet,366:2112-2117.
9. Access Economics PTY Limited (2006). Dementia in the Asia Pacific Region. The pandemic is here.
10. Kow, L.H. (2009). Dementia care in Malaysia. Alzheimer's Disease Foundation Malaysia).
11. Boustani, M., Peterson, B., Hanson, L., Harris, R., & Lohr, K. N. (2003). Screening for dementia in primary care: a summary of the evidence for the U.S. preventive services task force**.** Annals of Internal Medicine, 138, 927-937.
12. National Clinical Practice Guideline Number 42 (2007). Dementia: NICE–SCIE Guideline on supporting people with dementia and their carers in health and social care.
13. Purnell, C., Gao, W.S., Callahan, M., Hugh, C. & Hendrie, M.B. (2009). Cardiovascular Risk Factors and Incident Alzheimer Disease A Systematic Review of the Literature. Alzheimer Disease Associated Disorders, 23 (1).
14. Vogel, T., Dali-Youcef, N., Kaltenbach, G. & Andrès, E. (2009). Homocysteine, vitamin B12, folate & cognitive functions: a systematic and critical review of the literature.International Journal of Clinical Practice, 63(7):1061-7.
15. Whitmer, R. A., Sidney, S., Selby, J., Johnston, S. C., & Yaffe, K. (2005). Midlife cardiovascular risk factors and risk of dementia in late life. Neurology, 64, 277–281.
16. Walstra, G.J.M., Tunisse, S., Van Gool, W.A. (1997). Reversible dementia in elderly patients referred to a memory clinic. *Journal of Neurology,* 244 (1):71–22.
17. Wikipedia,the free encyclopedia.Neurodegeneration.<http://en.wikipedia.org/wiki/Neurodegeneration> (Accessed 25th July, 2010).
18. Winer, R. I. (2007). Dementia diagnosis and treatment. Retrieved September 27, 2008, fromNeurocare Web site:<http://www.gesher.org/Neurocare/Medical Education/ Dementia _Lecture.html> (Accessed 30th July, 2010).
19. Zekry, D, Hauw J.J., and Gold, G. (2002). Mixed Dementia: epidemiology, diagnosis and treatment. *J. Am Geriatr Assoc*.; 50:1431-8.
20. Lin, K. W. (2006). Regular exercise reduces dementia risk. American Family Physician, 74(3).
21. Li, Y. & Grupe, A. (2007). Genetic of late onset Alzheimers disease: progress and prospect. Pharmacogenomics, 8 (12):1747-55. Review. PubMed PMID: 18086004.
22. Entrez Gene (2010). Genes and mapped phenotypes. APOE apolipoprotein E [*Homo sapiens*] lineage. <http:// www. ncbi.nlm.nih. gov/sites/ entrez? Db=gene &Cmd=Show Detail View&TermToSearch=348> (accessed 7/09/2010).
23. Flirski, M. & Sobow, T. (2005). Biochemical Markers and risk factors of Alzheimer's disease. Current Alzheimer Research, 2: 47-64.
24. Hill, J.M., Bhattacharjee, P.S., Neumann, D.M. (May 2007). Apolipoprotein E alleles can contribute to the pathogenesis of numerous clinical conditions including HSV-1corneal disease.Experimental Eye Research, **84** (5): 801–811.
25. Retz, W., Thome, J., Durany, N., Harsanyi, A.,Retz-Junginger, P., Kornhuber, J., Riederer, P. & Rosler, M. (2001). Potential genetic markers of sporadic Alzheimer's disease. Psychiatric Geneticcs, 11:115-122.
26. Ghebranious, N., Ivacic, L., Mallum, J. & Dokken, C. (2005). Detection of ApoE E2, E3 and E4 alleles using MALDI-TOF mass spectrometry and the homogeneous mass-extend technology.Nucleic Acids Research,33: e149.