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## **A STUDY TO ASSESS THE ASSOCIATION BETWEEN ALCOHOL USE AND DEMENTIA IN THE ELDERLY MALES AT SELECTED AREAS OF KERALA**

**Mr. Jibin John, Prof. Dr Pradeep V.S**

<sup>1</sup>Research Scholar, Malwanchal University, Indore

<sup>2</sup>Research Supervisor, Malwanchal University, Indore

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### **1. INTRODUCTION**

Alzheimer's disease and alcoholism are linked in a complex way. Moderate alcohol consumption may protect against the development of dementia, according to a new study. However, it has been linked to an increased risk of dementia in the elderly if consumed in excess. The societal impact of alcohol abuse or dependence among the elderly is significant, given that anywhere between 2 percent and 10 percent of them engage in it. As a result, researchers must be aware of their patients' alcohol consumption and how it may affect their cognitive functioning. The purpose of this paper is to define alcohol consumption and to describe the relationship between alcohol use and various forms of dementia. There is also discussion of the clinical presentation of alcoholism, as well as relevant investigations and interventions. Please be aware that our current knowledge in this area is incomplete, and this affects our final judgments and suggestions.

The amount of alcohol a person consumes has an impact on whether it is beneficial or harmful. Tolerance levels in the elderly are lower than in the young. Many factors contribute to a higher blood alcohol content in the elderly, including decreased metabolic rate, decreased blood flow, decreased lean body mass, and decreased water retention in the tissues of the body. For some reason, women's metabolisms are slower than men's, so they have a lower tolerance for caffeine than men do. Two factors make it difficult to compare data when reviewing the literature. According to various studies, excessive alcohol consumption is defined in a different way. In addition, the age range of 50 to 75 years can differ in the definition of elderly. One to three drinks a day is considered light to moderate drinking. While in the India two or more drinks per day is considered heavy drinking, five or more drinks per day is considered very heavy drinking. Furthermore, a standard drink is defined differently depending on the country where the study was carried out, with a range of eight to 13 grammes of alcohol being considered a "standard drink."

A complex and little-understood link exists between alcoholism and the development of dementia. In the case of alcohol-related dementia, dementia can be caused directly by alcohol use, or it can be secondary to alcohol use in the case of secondary alcohol use. Osolin came up with this idea and tested it out. Alzheimer's disease is defined as the "significant deterioration of cognitive function sufficient to interfere with social or occupational functioning." ARD is classified as either probable or possible based on the presence of both alcohol use and symptoms, as well as other data, such as physical and neurological signs and symptoms. Multiple etiologies and alcohol can also play a role in the development of mixed dementias, which are included in the definition of the disease. Alzheimer's disease and dementia are two of the most common forms of dementia, but alcohol use can be both protective and risky

ARD has a wide range of etiologies, according to the current literature<sup>6</sup>, some of which will be discussed in this article. Symptoms of Wernicke Korsakoff syndrome include delirium, memory deficits, confusion, and clinical signs such as ophthalmoplegia or ataxia. It is the most common form of alcohol-related dementia. Wernicke Korsakoff syndrome, on the other hand, does not always present in a typical manner. As a rare disorder associated with low levels of vitamin B3, Pellagra first manifests as physical discomfort or depression in its early stages. Confusion, hallucinations, paranoia, spastic weakness, and a positive Babinski sign are more conclusive symptoms. This disease, which affects primarily men, causes the corpus callosum to degenerate and has a wide range of symptoms. CT and MRI scans help to clarify the presentation of this condition, but diagnosis is typically made postmortem. All of these health problems can be traced back to nutrient deficiencies brought on by excessive alcohol consumption. Dementia that is directly linked to alcohol consumption is also included in ARD, though there is some debate as to whether this phenomenon exists. As a result of the lack of a specific neuropathology and the inability to clinically define this type of dementia as distinct from the Korsakoff symptom spectrum, this is the case.

The amount of alcohol consumed has a bearing on its effect as a risk factor for other forms of dementia. Dementia risk was lower when people drank one to three drinks per day than when they abstained. In some studies, heavy drinking has been linked to an increased risk of dementia, but this has not been confirmed in all. Studies on alcohol consumption and Alzheimer's disease have found no clear link between heavy drinking and an increased risk of developing Alzheimer's disease. Heavy drinking has been linked to an increased risk of vascular dementia. Research into genome sequencing, however, has come up empty. Although the opposite was observed in other studies, those with an ApoE4 genotype who drank heavily were shown to be at greater risk of dementia than those who were negative for the genotype<sup>13</sup>. Mention should be made of a study conducted in Bordeaux which found

that up to four glasses of wine per day reduced the risk of dementia. Cervilla also made similar findings. Resveratrol, a compound found in wine, is the most likely explanation for this apparent contradiction, given that heavy alcohol use would be considered a violation of this rule.

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## 2. ALCOHOLISM SYMPTOMS AND SIGNS

It is defined by DSM IV-TR that an individual who experiences problems in various domains, such as work, interpersonal relationships and the law as a result of their drinking behaviour continues to use alcohol despite these problems. Drinking alcohol in spite of persistent or recurrent psychological or physical problems is indicative of alcohol dependence, as are tolerance and withdrawal symptoms. Retired and somewhat isolated elderly people who are still drinking may find these criteria difficult to apply. Heavy drinking has numerous negative consequences, both immediate and long-term. When a patient's presentation raises suspicion about alcohol abuse, researchers need to be familiar with these. Cirrhosis of the liver, hypertension, cardiac disease, gastro-intestinal disorders, and certain types of cancer are all signs and symptoms of alcoholism. Cerebellar atrophy is associated with peripheral neuropathy and wide-based gait. Anxiety, depression, and sleep deprivation are all common side effects. Vitamin B12 and folate levels can be affected by nutritional deficiencies caused by dietary neglect. When a person falls frequently while intoxicated, he or she is more likely to suffer head injuries and fractures.

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## 3. METHODOLOGY

Case study design was used to find out the association between alcoholism and dementia among elderly males residing in Kerala. 100 samples were selected based on inclusion criteria. Settings were selected areas of Kerala state. Duration of data collection was six months. The sampling technique employed was convenience sampling.

Tools Alcohol Use Disorders Identification Test (AUDIT) was used to the degree and disorders related to alcoholism

Scoring Rules for the AUDIT Screening Questionnaire

Item 1 0 = Never

1 = Monthly or less

2 = Two to four times a month

3 = Two to three times a week

4 = Four or more times a week

Item 2 0 = 1-2 drinks

1 = 3-4 drinks

2 = 5-6 drinks

3 = two to three times a week

4 = four or more times a week

Item 3-8 0 = Never

1 = Less than monthly

2 = Monthly

3 = Weekly

4 = Daily or almost daily

Item 9-10 0 = No

1 = Yes, but not in the last year

2 = Yes, during the last year

Maximum possible score = 40

A score of 8 or more indicates a strong likelihood of hazardous or harmful alcohol consumption, and warrants

more careful assessment and The Mini-Cog [Borson et al. 2000] was used for assessing dementia. It is a very short test (3 min) suitable for primary care screening for dementia. It incorporates the clock-drawing test, adding a three-item delayed word recall task. It showed comparable sensitivity and specificity to the Mini-Mental State Examination (MMSE) in classifying community cases of dementia.

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#### 4. INTERPRETING THE MINI-COG® SCORE:

Add the 3-item recall and clock drawing scores together. A total score of 3, 4, or 5 indicates lower likelihood of dementia but does not rule out some degree of cognitive impairment. The Mini-Cog® is not a diagnostic test for Alzheimer's disease or any other dementia or cause of cognitive impairment. Diagnosis of brain disorders that cause cognitive impairment requires a medical examination and additional examinations

After tabulating the data, descriptive and inferential statistics were used to analyse it

##### Results

Results revealed that Individuals who develop alcoholism later in life (after the age of 45) have different characteristics than those who develop it earlier in life (before the age of 25). When compared to early-onset alcoholics, the late-onset alcoholics were more successful at achieving abstinence, requiring fewer detoxifications, and consuming less alcohol. These differences contribute to a better outcome for treatment.

Chi square tests used to assess the association between alcoholism and dementia among elderly males, the chi-square value was 23 it is greater than the table value (12.58) hence it reveals that there is significant association between alcoholism and dementia among elderly males and also shows significant association between demographical variables like age, Duration of alcoholism, family history of Dementia.

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#### 5. RECOMMENDATIONS

Alcohol abuse treatment for the elderly may be beneficial, according to a small amount of research. Inpatient treatment is recommended due to the likelihood of co-occurring disorders and the severity and length of withdrawal symptoms compared to those seen in younger patients.

Medical stabilisation, including the use of thiamine to prevent Wernicke Korsakoff syndrome, should be included in acute management. As part of withdrawal management, benzodiazepines are also recommended. Psychological treatment should begin as soon as a patient is stabilised, whether in a residential or outpatient setting. Meetings of Alcoholics Anonymous (AA) may also prove beneficial.

Both abstinence and harm are acceptable options. reduction (decreased consumption) is selected depending on an individual's ability to control their alcohol intake. Polypharmacy and possible interactions between the metabolism of alcohol and other drugs necessitates a psychoeducational approach for older adults. It's important to note that cognitive impairment often shows some degree of reversibility once a person is able to achieve abstinence.

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#### 6. CONCLUSIONS

Further investigation is clearly needed to resolve inconsistencies, develop more accurate assessments, and better understand the long-term consequences of alcohol use. Moderate alcohol consumption may not occur the onset of Alzheimer's disease and Parkinson's disease. But Heavy drinking increases the risk of Alzheimer's disease and Parkinson's disease.

Drinking excessive amounts of alcohol can lead to a wide range of physical consequences. In order to treat alcoholism, treatment strategies that could lead to a significant improvement in cognition and physical symptoms should be employed. The diagnosis and treatment of alcoholism in the elderly should be on the radar screens of all researchers.

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#### REFERENCES

- [1] Alexopoulos G., Abrams R., Young R.C., et al. (1988a) Cornell scale for depression in dementia. *Biol Psychiatry* 23:271–284 .
- [2] Alexopoulos G., Abrams R., Young R., et al. (1988b) Use of the Cornell scale in non demented patients. *J Am Geriatr Soc* 36: 230–236 .
- [3] American Psychiatric Association (APA) (2000) *Diagnostic and Statistical Manual of Mental Disorders*. 4th Ed. Washington: APA .
- [4] Antonelli Incalze R., Cesare M., Pedone C., Carosella L., Carbonin P.U. (2003) Construct validity of the abbreviated mental test in older medical inpatients. *Dement Geriatr Cogn Disord* 15: 199–206 .
- [5] Appels B., Scherder E. (2010) The diagnostic accuracy of dementia-screening instruments with an administration time of 10 to 45 minutes for use in secondary care: a systematic review. *Am J Alzheimer Dis Other Dement* 25: 301–316 .
- [6] Borson S., Scanlan J., Brush M., Vitaliano P., Dokmak A. (2000) The Mini-Cog: a cognitive vital signs measure for dementia screening in multi-lingual elderly. *Int J Geriatr Psychiatry* 15: 1021–1027 .

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- [7] Borson S., Scanlan S., Chen P., et al. (2003) The Mini-Cog as a screen for dementia: validation in a population-based sample. *J Am Geriatr Soc* 51: 1451–1454 .
- [8] Brodaty H., Low L., Gibson L., Burns K. (2006) What is the best dementia screening instrument for general practitioners to use? *Am J Geriatr Psychiatry* 14: 391–400 .
- [9] Brodaty H., Moore C. (1997) The Clock Drawing Test for dementia of the Alzheimer's type: a comparison of three scoring methods in a memory disorders clinic. *Int J Geriatr Psychiatry* 12: 619–627 .
- [10] Brodaty H., Pond D., Kemp N., Luscombe G., Harding L., Berman K., et al. (2002) The GPCOG: a new screening test for dementia designed for general practice. *J Am Geriatr Soc* 50: 530–534 .
- [11] Brooke P., Bullock R. (1999) Validation of a 6 item cognitive impairment test with a view to primary care usage. *Int J Geriatr Psychiatry* 14: 936–940 .
- [12] Brown J., Pengas G., Dawson K., Brown L.A., Chatworthy P. (2009) Self administered cognitive screening test (TYM) for detection of Alzheimer's disease; cross sectional study. *BMJ* 338: b2030. .