**Utilizing Antihypertensive Medications to Slow the Onset of Dementia**

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**Abstract**

In this narrative literature review, the effectiveness of the antihypertensive medication utilization method in slowing the development of dementia will be examined. Dementia is a condition with no current cure. Therefore, it is important to trial a variety of methods in preventing its onset. The relationship between the predictor and outcome variables will be observed through peer-reviewed articles that support this claim. It is hypothesized that antihypertensive medications help lessen and slow the development of dementia within elderly patients. Many studies have been conducted on this topic and most support the idea that this type of medication can play a role in preventing cognitive impairments as people age.

**Disclaimer**

The purpose of the writing is to fulfill course requirements for BBH 411W and to stand as a personal writing sample, but the findings should not be treated as generalizable research.

 Dementia includes a cluster of negative symptoms that are extremely common among many elder adults. It is something that gradually progresses over time and it includes a significant decline in mental functioning. Due to the decrease in mental capabilities, dementia greatly impacts an individual’s daily life and how he/she may interact with other people. In order to combat this condition and prevent the progression within those who are at risk for developing dementia, many researchers have discovered that providing patients with anti-hypertensive medications may aid in doing so. They believe this to be true due to past studies that have been conducted utilizing cognitive ability examinations and blood pressure. In this literature review, the relationship between the predictor and outcome variable will be examined through peer-reviewed articles that support this claim.

 The articles discussed within the literature review were found utilizing Penn State Library’s database system, as well as Google Scholar search engine. The search terms focused around the terms, “anti-hypertensive medication”, “dementia”, and “prevention”. Articles have been compiled from these search results.

 Before looking at ways that prevent dementia from occurring, the article, one describes the fact that those with high blood pressure are at high risk for developing dementia due to the decline in cognitive functioning. A longitudinal study following 1,373 individuals between the ages of 59 to 71 years was conducted and high blood pressure was considered anything above 160/95 mm Hg. To test cognitive ability, the Mini-Mental State Examination was utilized and a decline was measured as a losing more than four points. It was found after four years; those with hypertension had declined a significant amount in cognitive functioning. This shows that high blood pressure can lead to conditions such as dementia (Tzourio et al., 1999).

In another article,the researchers seek to find out if certain drugs that prevent hypertension are independent risk factors for dimension in those who have diabetes mellitus. The study that was conducted looked at a group of United States veterans with diabetes who were 65 years or older. Part of the study examined blood pressure, the anti-hypertensive drugs that were administered, and the presence of dementia. It was found that a specific anti-hypertensive drug class, Renin-Angiotensin system can be a protective factor for dementia; however, more research was suggested to be conducted in order to further support the claim (Johnson et al., 2009).

 In another article, the authors discuss the importance of working to lower systolic blood pressure among individuals who are at risk for developing dementia. In the study, subjects included 8006 Japanese American men born between 1900-1919 and were followed since 1965. Out of this sample, 41.3% of the participants were taking anti-hypertensive medications at the time of the study. One group in the study was the reference group who had normal levels of systolic blood pressure, as well as less risk for cardiovascular disease. It was found that 27% of cases of dementia could be described because of high levels of systolic blood pressure (Launer et al., 2010).

 One article describes a study where 60 years or older patients without dementia were randomly assigned to either a control or experimental group. The control group did not receive treatment, whereas experimental group did. The treatment included antihypertensive medication. After a follow-up with the participants, it was found that both systolic and diastolic blood pressure were both lower in the treatment group. Researchers have concluded that this type of treatment can protect older adults in developing dementia (Forette et al., 2002).

 When looking at another research article, it was shown that the authors recognize that dementia is something that is a huge problem within medical society because there is no cure for it once it onsets. This article dives into the multiple methods of prevention strategies in order to combat the onset of the condition. Antihypertensive therapy is discussed as one of the top methods of prevention. The article further explains that hypertension is something that is gradual and occurs after many years of bad health habits. It is stressed that regulating blood pressure through these types of drugs is not safe for elder adults and should be used as a preventive measure for middle aged adults (Korczyn and Vakhapova, 2007).

 An article written by Laurin supports the idea that physical activity can improves one’s overall health, which could then help with preventing the development of dementia. Clinical evaluations were completed for randomly selected women and men who participated in the 1991-1992 Canadian Study of Health and Aging. Since physical activity correlates with having a lower and healthy blood pressure, promoting exercise is a positive action that helps with lowering the amount of dementia cases among the elder population, as well as cognitive decline, in general (Laurin et al., 2001).

Another article describes different methods of dementia prevention including cognitive exercises, physical activity, and social engagement, as well as medication. Many lifestyle factors can help prevent the onset of dementia, which includes lowering blood pressure. When blood pressure is lowered through medication and through a eating a healthier diet, this helps a person prevent dementia from occurring in the future, or at least slows the development of the condition. Anything to better cardiovascular health is something that is positive for the human brain and body (Middleton and Yaffe, 2009).

A final article provides more information on the fact that lowering blood pressure can improve cognitive ability and lessen affects of dementia or help prevent it, overall. This article focuses on studies with people of different decent and that antihypertensive medications have improved cognitive ability all over the world. Three studies including one with elderly African Americans, one with Italian participants, and one in a geriatric facility in South Carolina all support the claim that these medications help prevent dementia (Qiu, Winblad, and Fratiglioni, 2005).

 Overall, there is moderately strong evidence to support the idea that anti-hypertensive medications can delay or even prevent the onset of dementia among those at risk. Many studies have been conducted in order to provide this evidence through real-life data. This antihypertensive medication may not be a complete cure for the condition; however, it has shown that it does have somewhat of an effect on individuals at risk for developing dementia.

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