LOW-DOSE ASPIRIN DID NOT REDUCE DEMENTIA RISK IN TYPE 2 DIABETES ADULTS

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ABSTRACT

This study examined the effects of long-term low-dose aspirin use in Type 2 diabetics on dementia risk. Dementia causes memory loss, but the causes vary. Memory loss is generally the first sign of dementia. Aspirin reduces dementia risk in type 2 diabetics. Type 2 Diabetes persons over 50 Years with decreased aspirin intake do not develop dementia. Taiwan was studied. Type 2 Diabetes patients were given long-term low and high aspirin to develop dementia.

Keywords

Intake of aspirin, type 2 diabetes, risk of developing Dementia in adults

INTRODUCTION

Any cognitive region that impairs social or occupational function is dementia. Alzheimer's and cerebrovascular disease cause most dementia. (Arvanitakis, 2019) The WHO estimates 415 million people have diabetes. One projection predicts 82 million dementia sufferers in 2030 and 152 million in 2050. The Alzheimer's Association estimated the 2015 global dementia management expenditure at $818 billion USD, a severe social and economic burden. (Matsumoto, 2019)

Dementia symptoms impair memory, thinking, and social abilities sufficiently to disrupt daily life. Dementia can be caused by many conditions. Memory loss is generally the first sign of dementia. Although several factors cause dementia in adults, Alzheimer's disease is the main cause. The cause of dementia may reverse certain symptoms. Mayo Clinic (2021)

90% of diabetics have type 2, which causes a variety of microvascular and macrovascular issues that harm patients and caregivers. Early detection, screening, and safe, effective medications can prevent or delay consequences. (2017) As recorded, diabetes prevalence has gradually increased in developed and developing nations during the past four decades. Due to meal amount, dietary changes, and inactivity. One in seven pregnancies have gestational diabetes, and 542,000 children worldwide have type 1 diabetes. Trikkalinou et al.(2017) Aspirin's anti-inflammatory properties cause several illnesses. Aspirin decreases brain inflammation and oxidative stress in preclinical humans. Aspirin's pleiotropic actions may prevent dementia. Veronese et al.(2017) Brazier (2020) Type 2 diabetes is caused by insulin resistance, inadequate insulin release, and excessive or inappropriate glucagon secretion. Hyperglycemia in type 2 diabetics is caused by insulin resistance, inadequate insulin secretion, and excessive or inappropriate glucagon production. (2019)

Low-dose aspirin has not caused type 2 diabetic dementia. Long-term low-dose aspirin use by diabetics did not raise their risk of dementia. Aspirin did not affect Dementia risk. Low-dose aspirin really increased dementia risk in Type 2 diabetics, according to a new study. Aspirin daily to prevent heart attack and cardiac blockage does not raise dementia risk.

Literature review

In 2015, Mitchell found no solution for dementia, a degenerative disease. Memory loss, minimal linguistic skills, difficulty to walk, and inability to perform many daily tasks (Mitchell, 2015). Prasad & Groop examined the complex relationship between genetic, epigenetic, and environmental factors in type 2 diabetes. T2D is genetically

complicated. Existing methods for determining its mysterious unknown heritability may be too broad, making genetic factors hard to pinpoint. (2015)

Diabetes increases heart disease. Platelet initiation and aggregation increase cardiovascular events in type 2 diabetes. Low-dose aspirin was indicated for prime avoidance in diabetics over a certain age or with other cardiovascular risk factors in the early 2000s. Low-dose aspirin helped healthy volunteers, hypertensives, and myocardial infarction patients in randomized clinical trials. (2017)

NSAIDs and aspirin do not prevent cardiovascular disease, according to other studies. After these controversial results, aspirin's effects on older individuals and the best dosage should be investigated. (2016) Low-dose aspirin is often used for secondary cardiac inhibition. Research suggests that aspirin, an anti-inflammatory and antiplatelet drug, may prevent or delay dementia. Aspirin may reduce inflammation and discomfort by reducing amyloid plaque development. Aspirin reduces cerebrovascular disease, including strokes, which may prevent vascular dementia. (Ryan, 2020)

Relevance

The cited literature comprises papers and reviews relevant to the study's goal. The results conveyed by these publications and thoughts are that a low amount of aspirin intake on a long-term basis does not increase the risk of developing Dementia in adult individuals who have Type 2 Diabetes.

Purpose of the study

This research aims to investigate the effects of long-term usage of aspirin in adult Type 2 Diabetes patients to develop Dementia, which is memory loss and disability to perform different daily activities. This study is carried to understand that low dosage long term use of aspirin by Type 2 Diabetic patient have potential to develop dementia or not.

Material or Methods of research

A retrospective cohort study with one key outcome measure was planned. Aspirin use and dementia risk are studied in many cohort studies. Taiwan National Health

Insurance Study Database collected research samples from 1997 to 2008. This study used Research Database secondary data. Our study recruited 50-year-olds with type 2 diabetes and no dementia history. 876 took aspirin regularly. The subjects received either 40mg or 80mg aspirin to assess their health over time.

All statistical investigations and technique programming used SAS (9.2). T2D patients who used aspirin consistently and those who didn't were compared demographically using the T-test and Pearson 2 test. Dementia risk increases with aspirin use, type 2 diabetes, and continuous use.

Results

A new study suggests that type 2 diabetics who take aspirin under 40 mg may be less likely to acquire dementia. Aspirin users over 80 mg per day with type 2 diabetes are more likely to develop dementia. Aspirin may reduce dementia in the elderly, according to our research.

This study examined Cox proportional hazard model outcomes for various aspirin doses. Aspirin-taking type 2 diabetics had no statistically significant risk of Alzheimer's disease. In the subgroup of patients given aspirin at an average daily dose of less than 40 mg, dementia risk was generally lower. This study found that patients taking more than 80 mg of aspirin daily were more likely to develop dementia.

Conclusion

This study shows that diabetics who use aspirin regularly don't develop dementia. Aspirin at 40mg per day may reduce the risk of dementia in type 2 diabetic patients. Aspirin use over 80 mg per day increased dementia in type 2 diabetics. This study found that long-term low-dose aspirin reduces dementia risk in adult type 2 diabetics

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