

**EPIDEMIOLOGICAL
PROFILE OF CASES
OF ALZHEIMER'S
DISEASE AND THEIR
RELATIONSHIP
WITH METABOLIC
DISORDERS, IN
PARTICULAR TYPE 2
DIABETESMELLITUS**

Georgia Maria dos Santos Nicoletti

Claretiano-Centro Universitário, Rio Claro

Gabriella Soares de Souza

Claretiano-Centro Universitário, Rio Claro

All content in this magazine is licensed under a Creative Commons Attribution License. Attribution-Non-Commercial-Non-Derivatives 4.0 International (CC BY-NC-ND 4.0).



Introduction: Alzheimer's disease (AD) is a more frequent neurodegenerative pathology associated with age, whose cognitive and neuropsychiatric manifestations result in progressive disability and incapacitation. Its development is associated with functional changes in neurotransmitters, such as acetylcholine, related to memory, and the accumulation of B-amyloid protein. AD happens when the brain tries to protect itself from three threats: inflammation (infection, food or others); lack of nutrients, hormones and other molecules that support brain actions; and toxic substances like metals and biotoxins. Thus, the development of type II diabetes mellitus (DMII), plays an important role for the emergence of neurological dysfunctions that are negatively related to AD, since after the insulin molecules do their due work and decrease glucose, the body needs to break down insulin in some way in order to prevent blood glucose from falling. With that, through the enzyme IDE (insulin degradation enzyme), responsible for degrading the B-amyloid protein fragments in the sticky plates that destroy the synapses, in an attempt to prevent the fall of glucose. However, when IDE breaks down insulin but fails to break down amyloid at the same time, it results in elevated insulin levels, which increase the risk of AD. **Objectives:** To quantify the number of individuals with Alzheimer's disease registered in the Public Health Network of the city of Rio Claro and relate it to the presence of DM II. **Methods:** Retrospective study, based on a data base that contemplates 38 registrations of both sexes in the age group from 60 to 90 years old, in the period of 3 years (2016-2019). The following information was extracted: age; confirmed diagnosis time; presence of DM II and average diagnosis time of DM II. **Results:** Expressed on average for the following variables: age of 88.5 years, time of diagnosis of 4 years,

with all patients who developed AD in both sexes having DM II, with an average time of 11 years. **Conclusion:** Therefore, there is a close relationship between the onset of AD in individuals already with metabolic disease, especially DMII, in particular, with a 7-year period of onset of DM II, due to the inflammatory process associated with a metabolic disorder, in which cells reduce their functioning promoting an increase in inflammatory markers, like: cytokine.