Abstract

Introduction. Alzheimer's disease is a multifactorial disease affecting around twenty million people worldwide. Multiple variables seem to increase the risk of developing this devastating neurological disorder. Among the risk factors, diabetes mellitus, and the 4 isoform of the APOE gene have been amply demonstrated as increasing the risk of developing this disease. We report here studies aimed at investigating a potential correlation between APOE, diabetes mellitus and Alzheimer's disease in a specific group of patients from the province of Antioquia, Colombia. Objective. To determine whether there is a correlation between APOE genotype, diabetes mellitus and Alzheimer's disease in a group of patients from Antioquia- Colombia. Materials and methods. Clinical studies were carried out by surveying the clinical history of the patients; commercially available methods were used to determine whether the patients had diabetes; and restriction enzyme-based genotyping was used to determine the APOE genotype of the individuals involved. Results. In this study we analyzed forty-three AD cases and 43 control subjects, paired according to their age and gender. The most common non-neurological comorbidities were: arterial hypertension, acute myocardial infarction, chronic obstructive pulmonary disease and hypothyroidism. Conclusions. From the many variables investigated, two were conclusive: i) the presence of Alzheimer's disease seems to be higher in patients with Diabetes mellitus, and ii) a correlation between late-onset sporadic Alzheimer's disease and APOE in the target population was not found. It is important to indicate that a study involving a larger population should be carried out to determine any potential correlation with the APOE genotype.

Keywords

Alzheimer's disease, diabetes mellitus, apolipoprotein E, dementia, pulmonary disease, chronic obstructive.