RELATIONSHIP BETWEEN PLASMA LIPIDS AND THE RISK FOR SPORADIC LATE-ONSET ALZHEIMER'S DISEASE IN A TUNISIAN POPULATION

K. Limem\textsuperscript{1}, M.A. Smach\textsuperscript{1}, B. Charfeddine\textsuperscript{1}, L. Ben Othman\textsuperscript{1}, T. Lammouchi\textsuperscript{2}

\textsuperscript{1}Biochemistry, Faculty of Medicine, \textsuperscript{2}Neurology, Sahlool Hospital, Sousse, Tunisia

Cholesterol and cholesterol metabolism have been increasingly linked to Alzheimer's disease (AD), yet evidence remains seemingly inconsistent. The aim of this study was to investigate the serum lipids concentration in patients with probable AD, as well as possible correlation between serum lipids concentrations, apoE, and AD.

Our cross-sectional study included 93 patients with probable AD and 116 age and sex matched control subjects (C). Subjects with probable AD had significantly lower serum Triglyceride (\(p< 0.001\)), HDL-Cholesterol (\(p< 0.001\)), and ApolipoproteinA1 levels (\(p< 0.001\)) compared to the control. We did not observe significant difference in Total Cholesterol level between patients with AD and control subjects. There were no difference in the TG, TC, LDL-C and HDL-C levels between subjects with ApoE \(\varepsilon4\) and subjects without this allele. HDL-C and TG concentrations were not associated with AD. A significant correlation between HDL-C and MMSE in patients with AD was observed (\(r = 0.55; p< 0.001\)).