Natureza do trabalho: Resumo

TÍTULO

THE ADVANCEMENT OF DIAGNOSTIC METHODS FOR AD AND THE CHALLENGE OF EARLY DIAGNOSIS IN DISEASE PREVENTION AND TREATMENT

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RESUMO

Introduction: This study is a theoretical framework on the evolution of diagnosis for Alzheimer's disease (AD), since the discovery of X-ray to nuclear medicine. The most notable advancement in diagnosis occurred with the advent of computers. The technological innovation of digital images made it possible to transform information received through photos into diagnostic reports of various diseases, including AD. A primary goal of neuroimaging is to provide doctors with the tools to detect AD before the arrival of symptoms and provide patients with an early diagnosis. Such diagnoses allow doctors to slow the disease and improve the quality of life of the patient, since Alzheimer's disease is a progressive cognitive impairment without positive prognostic, leading to the patient's death. **Literature Review:** It is essential to work with more efficient methods of early diagnosis for a correct initiation of treatment, slowing the brain degeneration of the individual, improving the quality of life of patients and their families. The diagnosis of AD is based on clinical features suggestive, using systematic criteria, laboratory tests and neuroimaging. This study is a descriptive literature review, which aims to analyze the different types of diagnosis for AD pathology in a comparative study between the images taken in the first tests and captured in the current exams. It was accomplished by using key words such as images, medical imaging and Alzheimer diagnosis. **Conclusion:** This research proves that the evolution of diagnostic imaging in Alzheimer's disease allows clearer images of brain regions responsible for cognitive functions of the individual. When evaluating images with nonstandard changes, it is possible to classify the type of dementia that affects the patient, even before the onset of symptoms, enabling early treatment and consequently delay the onset of AD in its most severe form.