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Screening Techniques for Alzheimer's Disease

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Alzheimer’s disease is a neurodegenerative disease that affects more than 55 million Americans. By the year 2050, experts project this disease will have increased three fold. Many screening techniques have been investigated to detect this disease early and begin to slow its progression. The purpose of this study was to explore which medical modalities are the most effective for screening of Alzheimer’s disease. This literature review includes three databases, including PubMed, CINHAL, and Cochrane Database of Systematic Reviews. Topics that were researched included: cognitive screening test, neuroimaging, laboratory testing, DNA, and combined studies. All resources were published within the last ten years. Limitations and strengths were considered within each modality. In each category, the following were found to be the most effective in screening for Alzheimer’s disease: cognitive screening tests: MOST and MoCA testing; laboratory diagnostic testing: biomarkers; DNA methylation and APOE genotyping; and combined studies: PET scanning. This review demonstrates that there are many screening modalities available to providers. This allows providers to choose their screening technique based on their site’s availability, provider preference, and cost.

Introduction


• Currently, there is no cure for Alzheimer’s disease and current treatment options have many side effects. The hope with early detection is to give patients a better quality of life with the opportunity of early treatment.

• With each research analysis, the research’s strengths, weaknesses, and findings was compiled into meaningful conclusions.

• This research will enable clinicians and medical facilities to be well versed in the various screening techniques available and be able to provide better care to their patients.

Statement of the Problem

• A key issue with researching Alzheimer’s disease is its difficulty to diagnose.

• Without full understanding the disease, how can practitioners provide effective care and treatment?

• To date, there is no screening test that has been shown to detect this disease with 100% accuracy.

Research Questions

• What are the effective screening options in the detection of Alzheimer’s disease?

• What limitations exist in these screening techniques?

• What are the benefits in the different screening techniques?

Abstract

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Introduction

• Alzheimer’s disease is defined as a chronic neurodegenerative disease (Hoff, J. (2010). Development and validation of the Memory Orientation Screening Test (MOST) for screening diagnosis of early Alzheimer’s disease. Alzheimer Disease & Associated Disorders, 24, 327-331).

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