Neuroimaging in dementia: A brief review

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Abstract

Dementia is a clinical syndrome that manifests itself with impairment in cognitive functions owing to various neurodegenerative etiologies causing severe disability in the older population. Although the diagnosis is largely dependent on clinical examination, biomarkers can significantly aid in early diagnosis of dementia, especially in those without any clinical evidence of neurocognitive impairment. These biomarkers can be discovered in cerebrospinal fluid (CSF) or can be assessed by neuroimaging. Our goal was to discuss and assess the role of different neuroimaging techniques in the early diagnosis of relatively common etiologies of dementia.

We used PubMed as search engines to look for helpful articles; most of the sources used were peer reviewed. We discussed the utility of various neuroimaging techniques, such CT, MRI, positron emission tomography (PET) scan, and single-photon emission computed tomography (SPECT), in the diagnosis of dementia. We concluded that various modern neuroimaging techniques prove to be very helpful in early identification, diagnosis, and differentiation between subtypes.

However, the actual clinical utility of these tests in terms of their cost-effectivity and availability remains to be seen. Ongoing research is required to further develop biomarkers for early identification and monitor the progression of different etiologies of dementia.

Biography:

Dr Dipanjan Banerjee has completed his MBBS from Nil Ratan Sircar Medical College and Hospital, Kolkata, India and is currently working as an internal medicine trainee in NHS, England,he possesses special interest in psychiatry and radiology and has been involved in multiple quality improvement projects.

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