

Fast, accurate test for Alzheimer's

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Scientists at the National Institute for Health Research's (NIHR) Biomedical Research Centre for Mental Health at the King's College London Institute of Psychiatry (IoP) and South London and Maudsley NHS Foundation Trust (SLaM) are the first to use an advanced computer program to accurately detect the early signs of Alzheimer's disease from a routine clinical brain scan. The new scan can return 85 per cent accurate diagnostic results in under 24 hours.

The 'Automated MRI' software automatically compares or benchmarks someone's brain scan image against 1200 others, each showing varying stages of Alzheimer's disease. This collection of images is thought to be the largest of its kind in the world.

Normally in routine clinical practice, brain scans are used to simply exclude diseases that can mimic Alzheimer's disease, but here automated MRI software is being used for the first time in a NHS setting (Memory Clinics) to make an early and accurate diagnosis of the illness.

Early diagnosis

Early diagnosis of Alzheimer's is clinically difficult and patients with the early signs are frequently not treated until their symptoms become stronger. The new scan however can return 85 per cent accurate diagnostic results in under 24 hours.

An early diagnosis allows someone to plan their care before the condition worsens - helping to prevent institutionalisation, dramatically

improving their quality of life. It is also a cost effective and efficient way to manage and organise treatment of the disease.

The scan has been developed by scientists at the IoP, together with colleagues from the Karolinska Hospital in Stockholm.

The system is being 'field tested' over the next 12 months with patients attending SLAM memory services in Croydon, Lambeth and Southwark. The 'field test' will also provide a supply of research grade images, which has important implications for the development of the next generation of drugs for dementia and individualised treatments.

There are 750,000 people with dementia in the UK. The financial cost of dementia to the UK is over £20 billion a year. According to the Alzheimer's Society, in just 15 years a million people will be living with dementia. This will soar to 1.7 million people by 2051.

Provided by King's College London

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