

Delirium in general hospital as a marker of undiagnosed dementia: evaluation of pragmatic methods for screening and follow-up

research
into ageing fund

age UK
Improving later life



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Overview

The project is funded by a Joint Age UK-Research into Ageing Fund and BGS Clinical Fellowship

Our research project

Why study this problem/subject?

Dementia is a progressive disease of the brain affecting over 800,000 people in the UK today. This number will rise steadily in future years. It is devastating both to the sufferer and their family as it involves memory loss, confusion, problems with speech and understanding and functional decline. At present it is diagnosed by tests of memory and thinking as well as charting functional decline. Dementia is in fact present in **at least 40% of older people** in hospital yet less than half of these patients to date have a diagnosis either before or during their time in hospital. This is highly detrimental both to their immediate care in hospital and any after care programme.

Delirium is a serious and distressing condition in which a person suffers a severe and acute decline in memory, thinking and other mental functioning. It is often caused by infections, acute illnesses or side-effects of prescription drugs. People with dementia are highly prone to delirium. Indeed, two-thirds of hospital patients with delirium also have dementia.

Appropriate testing therefore needs to be constructed if these patients are to receive the best care for their condition. In our investigation we will for the first time use valid methods to measure the presence of delirium as a marker to prompt further investigation of dementia. Results of our study should therefore secure improved care for all dementia sufferers.

Current understanding of the problem/subject

However, there is little research on how best to detect dementia in patients with delirium:

- Tests of memory and thinking are not possible in this context.
- History from a known individual is more useful but very time consuming. Moreover they are usually conducted by psychiatrists due to the level of skill involved and few are available for this work.
- Use of short, standardised questionnaires instead is highly promising, but studies evaluating their use in this group of patients are lacking.

Purpose of this project

This project will evaluate and validate existing simple informant questionnaire-based methods of detecting dementia in older hospital patients with delirium. We are focusing on patients with delirium, because screening tools for patients with dementia but with no delirium are already available.

What the project will investigate

The main questions are:

- Are simple informant-based rating scales valid for detection of dementia in patients with delirium?
- Is it feasible to select patients with possible dementia as detected by our protocol for follow-up in outpatient clinics?

We will also use the opportunity afforded by the study to analyse which blood tests predict worse outcomes for patients with delirium superimposed on dementia. This offers considerable added value because studies like this are rare.

What will the research achieve?

Validation of simple and rapid methods of detection of dementia in older hospital patients with delirium would have the potential to have a large clinical impact. It would open up a new major route to improve dementia diagnosis rates in general. Equally importantly, people with dementia would have better care while they were in hospital.

Impact

[Open all sections](#)

Publications

Maclullich AM, Anand A, Davis DH, **Jackson T**, Barugh AJ, Hall RJ, et al. New horizons in the pathogenesis, assessment and management of delirium. *Age Ageing*. 2013 Nov;42(6):667-74

Jackson TA, Naqvi SH, Sheehan B. Screening for dementia in general hospital inpatients: a systematic review and meta-analysis of available instruments. *Age Ageing*. 2013 November 1, 2013;42(6):689-95.

Poster Presentations

British Geriatrics Society Spring Meeting 17th-19th April 2013 Belfast: Is delirium a marker for undetected chronic cognitive impairment?

Abstracts

T. A. Jackson, P. Nicolson, B. Sheehan. Is delirium a marker for undetected chronic cognitive impairment? *Age Ageing* (2013) 42 (suppl 3): iii27-iii28 doi:10.1093/ageing/aft108

Invited talks

Delirium as a risk factor for dementia: Invited talk at Alzheimer Scotland Dementia Research Centre, 17/5/13

Other output

NIHR specialty group newsletter "[Study of the month \(http://www.crnc.nihr.ac.uk/NR/exeres/535E71B0-345F-4086-8FEE-678D117D0870.frameless.htm?NRMODE=Published\)](http://www.crnc.nihr.ac.uk/NR/exeres/535E71B0-345F-4086-8FEE-678D117D0870.frameless.htm?NRMODE=Published)".

Managing Delirium Out of Hours – A short teaching video for junior doctors, invited to produce by AEME (Academy of Elderly Medical Education).

Adobe Flash Player or QuickTime is required for video playback. [Get the latest Flash Player](#) [Get the latest version of QuickTime](#)

Is the Abbreviated Mental Test Score the best we've got? Blog post on BGS blog discussing recently published systematic review.

Scientific abstract

Dementia is common in older inpatients but only half will have a previous diagnosis of dementia. Delirium is a common, severe, inpatient acute neuropsychiatric syndrome. Two-thirds of cases of delirium occur in patients with dementia. Delirium, therefore, provides an opportunity to identify undiagnosed dementia.

However, because delirium affects cognition, detecting dementia is problematic.

Aims

To determine if, in older hospital inpatients with delirium:

- There is dementia
- Simple informant questionnaires can identify dementia

To determine if key clinical factors, routine blood tests or putative endocrine or immune biomarkers predict poorer outcomes in patients with delirium.

Methods

230 patients aged over 70 years with delirium will be assessed through detailed carer interview for the presence pre-existing DSM-IV dementia (gold standard). This will be compared with (blinded) assessments of dementia using simple, clinically pragmatic informant questionnaires. Key clinical variables and putative prognostic endocrine and immune indicators of prognosis will be measured. Participants will undergo a home visit at 3 months to confirm presence/absence of dementia.

Expected Outcomes

Validation of informant questionnaires for detection of dementia in delirium will provide a pragmatic method of detecting undiagnosed dementia in general hospitals, potentially benefiting tens of thousands of patients in the UK per year.

Staff

Supervisors

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