
EMBARGOED 2 May, 2014

Sydney's Prince of Wales Hospital world-first in delirium diagnosis

A groundbreaking new test developed at Prince of Wales Hospital is hoped to save lives through the early detection of delirium in dementia patients.

The Journal of the American Medical Directors Association (JADMA) has published a paper by the hospital's Director of Geriatric Medicine, Associate Professor Gideon Caplan, who has developed a transcranial Doppler ultrasound test to diagnose delirium in patients with dementia.

Currently, delirium is diagnosed by using questionnaires and critical examination, but is only approximately 50 per cent accurate.

A/Prof Caplan said the new test, which only takes a few minutes, works using an ultrasound probe placed on the side of the head which detects the velocity of blood flow in the middle cerebral artery under the brain.

"The early detection of delirium will lead to a better prognosis and reduced mortality in dementia patients around the world," A/Prof Caplan said.

"Evidence increasingly shows that the mental and physical effects of delirium linger and can take a terrible long-term toll on those who can least afford to lose cognitive ground. Patients can grow confused and irrational and sometimes even violent during hospital stays and in a few days, the delirium passes and people return to themselves.

"Episodes of delirium are not only very distressing for patients, their families and caregivers; they can have a detrimental impact on long term health."

A/Prof Caplan said delirium can frequently be cured once the underlying medical problem can be identified.

"The most common causes of delirium are medication, surgery and anaesthetic, infection, dehydration, metabolic derangement, hormone imbalance, and frequent change in environment," he said.

"These things can trigger delirium, and can often be treated by adjusting medications, treating infection, ensuring metabolic stability for example ensuring electrolyte and sodium levels are right and ensuring the patient is not dehydrated."

A/Prof Caplan said the world-first reproducible test is non-invasive, non-toxic, and could easily be made available to patients around the world.

He is working with biomedical engineers to develop a user friendly machine which could be used by nurses on wards.

"Every hospital would have ultrasound machines that can be immediately put into practice, but ideally we will develop a hand held machine that any nurse can use on the ward," A/Prof Caplan said.

South Eastern Sydney Local Health District

Media contact: Jane Grljusich, 02 9382 8398, or on-call number: 0409 973 612

healthdirect AUSTRALIA – providing expert health advice 24 hours a day to NSW residents – Tel. 1800 022 222