Clot-busting drugs appear safe for treating 'wake-up' stroke patients

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Clot-busting drugs may be safe for patients who wake up experiencing stroke symptoms, according to preliminary research presented at the American Stroke Association's International Stroke Conference 2012.

In "wake-up" stroke, the person wakes up with symptoms after going to sleep with none. Not knowing when the stroke began excludes these patients from anti-clotting drugs that must be given within 4.5 hours of the beginning of the stroke.

"Because wake-up strokes are common, occurring in up to a quarter of stroke sufferers, more research is needed on how to treat these patients," said Dulka Manawadu, M.D., lead researcher and a stroke medical consultant at King's College Hospital in London, U.K. "Patients who experience stroke symptoms should call Emergency Medical Services urgently and get to the hospital fast, regardless of the time of onset. This will help specialists decide if novel interventions are appropriate and feasible."

In the study, researchers used a stroke registry to compare clot busting treatments received by 326 patients within 4.5 hours of symptom onset to 68 wake-up stroke patients, with unknown onset.

All the patients were treated in the same London medical center, where 20 percent suffered wake-up stroke. Researchers didn't randomly assign patients to receive different treatments for comparison, which is the gold standard and, thus, a limitation of the study.

"Our study shows that administering clot-busting drugs to patients with wake-up stroke who have the same clinical and imaging features as those treated within current guidelines is feasible and safe," Manawadu said.

Researchers analyzed information on patients who received the clot-buster alteplase, sold under the name Activase, between January 2009 and December 2010. Wake-up stroke patients received clot-busting treatments if their clinical presentation and early stroke changes on CT scan images were comparable to those treated with a known time of onset. Both groups had similar blood pressure, blood sugar levels and scores on the National Institutes of Health Stroke Scale, which is a standardized method used by healthcare professionals to measure the level of impairment caused by a stroke.

After three months, the researchers found the wake-up stroke patients' death rates, risk of bleeding inside the brain, and the proportion that made a good recovery were similar to those patients treated within a known 4.5 hours of stroke onset.

Sometimes, doctors are reluctant to give clot-busting drugs to patients in whom the time of stroke onset is not known, because the risks of bleeding are not known, Manawadu said. However, a significant proportion of patients who have stroke symptoms on waking may have suffered stroke in the early hours of the morning and may still be within the window of time where clot-busting treatments are known to be effective. It is also likely that advanced imaging techniques may help to identify patients with wake-up stroke who have the potential to benefit from clot-busting drugs.

"This is an area of growing importance because it may allow us to extend the indication for this effective treatment," Manawadu said. "Research has been limited to date but the time is ripe to investigate effective treatments in this group of patients."

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