cians and patients on dialysis to choose the depression therapies that are the best fit for themselves.

"This comparative-effectiveness, randomized controlled trial could allow for informed decision-making by patients and physicians based on preference, cost, and availability," he said.

Assimon agreed that patient preferences are key in depression treatment. She noted that some patients may find it more convenient to take medication than undergo CBT.

"[The trial] is a step in the right direction, because it shows, again, that the drug is efficacious," said Assimon. However, she cautioned the study is likely not large enough to assess safety.

### SSRI heart risks

Use of SSRIs in patients on dialysis who have depression will likely increase because of a new quality metric in Medicare's ESRD Quality Incentive Program that promotes depression screening and treatment, noted Assimon. But some drugs in the class have been associated with prolonged QT intervals in electrocardiograms of patients taking the medications, according to a drug safety communication from the US Food and Drug Administration (FDA). Prolonged QT intervals can lead to potentially deadly heart rhythm abnormalities, according to the FDA. Such adverse effects may be particularly concerning for patients on dialysis who are at increased risk of heart problems.

"The general consensus is that end stage renal disease creates a proarrhythmic environment," Assimon said.

To assess the heart risks of SSRIs, Assimon and her colleagues looked at 2007–2014 data from the United States Renal Data System on patients on dialysis enrolled in Medicare. They compared the risk of sudden cardiac arrest in the first year of taking citalopram and escitalopram, which have greater QT-prolonging effects, with the risk while taking fluoxetine, fluvoxamine, paroxetine, and sertraline, which have more modest effects on QT intervals. The study included 65,654 patients. Taking citalopram or escitalopram was associated with an increased 1-year risk of sudden cardiac death (adjusted hazard ratio 1.14; 95% CI: 1.05–1.25) compared to the SSRIs with lower QT-prolonging potential. Women, patients age 75 or older, and those with structural heart disease or taking additional QT-prolonging medications were particularly at risk.

"Our results suggest that SSRI therapy selection should be individualized, and clinicians should consider the differential QT-prolonging properties," Assimon said. For example, they should consider factors like age, gender, existing heart conditions, and concurrent medications when prescribing SSRIs. They may want to consider monitoring patients with ECGs.

Mehrotra also urged caution about potential QT-prolonging drugs, including SSRIs.

"It is important to be careful when using drugs that prolong QTc (whether SSRIs or others) in patients with end-stage renal disease," he said. "A significant proportion of patients undergoing dialysis have baseline QTc, and a longer QTc does increase risk for sudden cardiac death, the most common cause of death in patients undergoing dialysis."

He noted that he and his colleagues considered cardiac risk during the design phase of the trail. They chose sertraline because it has been used in large clinical trials of patients with congestive heart failure and coronary artery disease and was not associated with a higher risk of cardiac events.

"This reassured us when selecting the drug," he said.

"Comparative Efficacy of Therapies for Depression for Patients Undergoing Hemodialysis " Oral abstract 148

"The Comparative Cardiac Safety of Selective Serotonin Reuptake Inhibitors (SSRIs) in the Hemodialysis (HD) Population" Oral Abstract 093

# AKI Increases Long-Term Dementia Risk

By Bridget M. Kuehn

Patients who've recovered from acute kidney injury (AKI) have a 3-fold higher risk of developing dementia than hospitalized patients who avoid AKI, according to a study presented at Kidney Week 2018.

Patients who experience AKI may face long-term health complications even if they completely recover. Previous studies have shown that experiencing AKI increases the risk of developing chronic kidney disease (CKD) and cardiovascular disease. But the long-term consequences of AKI for brain health weren't clear.

"We used to think that almost all cases of AKI would have complete recovery, but now realize that many people have later development of CKD," said Hamid Rabb, MD, medical director of the Johns Hopkins Kidney Transplant Program in Baltimore. "Clinicians should be aware that AKI could have important kidney as well as non-kidney distant organ long-term effects, and therefore follow patients closely even after seeming resolution of AKI."

To assess the potential long-term effects on the brain, Jessica Kendrick, MD, associate professor at the University of Colorado School of Medicine, and her colleagues looked at 2082 patients without a history of dementia treated in an integrated health system in Utah between 1999 and 2009. During the study, which followed patients for a median of 5.8 years, 97 patients developed dementia. Those who had AKI were more likely to develop dementia than those who didn't (7.0% vs 2.3%). The hazard ratio was 3.4 (95% CI 2.14–5.40). The magnitude of the dementia risk was comparable to the risks of other long-term complications, noted Kendrick.

The study was "provocative" and needs to be confirmed by others, Rabb said. He noted it is not surprising that AKI might lead to an increased risk of dementia.

"AKI is well known to cause clinical changes in brain acutely, and some of these could lead to chronic changes," Rabb said.

Exactly how AKI might contribute to an increased risk of dementia is not clear. Kendrick noted it may be related to endothelial dysfunction after AKI. Now, she and her colleagues are looking at whether AKI may change cerebrovascular dynamics.

Rabb noted that patients with AKI may have other risk factors for dementia, such as diabetes, vascular disease, older age, or hypertension. Additionally, AKI is known to cause dysfunction in distant organs. Rabb suggested it might affect the blood-brain barrier, microglial activation, or protein leakage in the brain, which might contribute to dementia as well. He said it would be interesting to look at the renal function in patients who developed dementia compared with those who didn't, because it is possible they did not completely recover kidney function after AKI.

Kendrick noted it is also not clear how AKI contributes to other long-term complications like CKD or cardiovascular disease.

"It's an area that really needs to be investigated," she said.

Kendrick said it is important to research whether changes in the way hospitals care for patients with AKI could help prevent long-term complications, for example, whether more monitoring of kidney function after AKI would help identify patients' persistently elevated proteinuria.

"Even when people do well and recover, it's still associated with significant adverse outcomes," she said. "It would be nice to have something to offer them to hopefully prevent these complications from developing."

"Acute Kidney Injury is Associated with an Increased Risk of Dementia" (Abstract 3024328).