

Acute kidney injury among African Americans with sickle cell trait and disease

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Sickle cell trait and sickle cell disease are risk factors for experiencing kidney function decline among Black individuals. A new study indicates that the risk of acute kidney injury is also higher in adults with sickle cell trait or disease, and it may play a role in the kidney function decline experienced by these individuals. The findings come from a study that will be presented online during ASN Kidney Week 2020 Reimagined October 19-October 25.

People with sickle cell trait carry 1 copy of an altered hemoglobin gene and rarely have clinical symptoms related to the disease, whereas people with [sickle cell disease](#) carry 2 copies of the altered gene and have chronic, severe anemia, or low hemoglobin levels.

Using medical records from multiple large Boston hospitals, investigators examined the risk for acute kidney injury among Black adults: 8,968 with normal hemoglobin genes, 1,279 with sickle cell trait, and 254 with sickle cell disease. Participants were followed for a median of 7.6 years, and their kidney function was monitored.

"Our study showed that there was an [increased risk](#) for certain types of acute kidney injury in Black people with the sickle cell gene compared with Black people without the sickle cell gene," said lead author Kabir Olaniran, MD (University of Texas Southwestern Medical Center at Dallas). "Furthermore, we examined loss of kidney function over time and found that acute kidney injury increased the risk for faster loss of kidney function in Black people with the sickle cell gene compared with Black people without the sickle cell gene who also experienced acute kidney injury. Both outcomes were worse in sickle cell disease compared with [sickle cell trait](#)."

Dr. Olaniran noted that the study adds important information to the sparse data on the risk for acute kidney injury in Black people carrying the sickle cell gene. "If these findings are supported by future research, then we need to (1) clarify how the presence of the sickle cell gene mediates increased risk for acute kidney injury, (2) determine the best criteria for identifying Black people with the sickle cell gene most at risk for acute kidney injury, and (3) develop protective therapies that lower the risk for [acute kidney injury](#) among Black people who carry the sickle cell gene," he said.

More information: Study: "Acute Kidney Injury among African Americans with Sickle Cell Trait and Disease"

Provided by American Society of Nephrology

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