

Sickle cell patients should be better monitored for constipation prevention

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Not all patients with sickle cell disease receive laxatives after being treated with narcotics, despite recommendations from a collaborative panel of pediatric experts. These are the findings from a Nationwide Children's Hospital study examining patients from 29 pediatric hospitals, and appearing in *Pediatric Blood & Cancer*.

Narcotic-related adverse events are the most common adverse drug events in hospitalized children and constipation is a frequent narcotic-associated adverse drug event. In 2008, an expert panel of 14 freestanding children's hospitals met as part of the Reducing Narcotic-Related Adverse Drug Events in Children improvement collaborative and recommended that laxatives and stool softeners be proactively used when narcotics are prescribed.

Sickle cell disease patients are commonly prescribed narcotics to help manage vaso-occlusive pain crises, painful events that occur when blood flow is blocked to an area because the sickled cells have become stuck in small blood vessels. There are few studies discussing the impact of constipation on sickle cell disease and no studies have addressed the use of laxatives in these hospitalized patients.

"Besides causing discomfort to the patient, the development of constipation can negatively affect other aspects of inpatient care in patients with sickle cell disease," said Sarah O'Brien, MD, MSc, the study's lead author and principal investigator in the Center for Innovation in Pediatric Practice in The Research Institute at Nationwide

Children's Hospital. "The abdomen is a well-known site of sickle cell pain. Abdominal pain due to constipation may be misinterpreted as a worsening vaso-occlusive crisis with subsequent higher doses of narcotics and therefore worsening constipation."

Dr. O'Brien, a hematologist in Hematology/Oncology and Blood & Marrow Transplantation at Nationwide Children's, and her colleagues used the Pediatric Health Information System, a multi-institutional, geographically diverse database to collect information on pediatric inpatients with sickle cell disease who received a narcotic medication during a 12-month period. They then investigated which of these patients received medications used to prevent and treat constipation during their hospitalization.

The study showed that one-third of sickle cell disease patients receiving narcotics were not prescribed concomitant laxatives or stool softeners as recommended by the Child Health Corporation of America quality improvement collaborative.

"We also discovered unexpected variability in the use of constipation medication," said Dr. O'Brien, also an assistant professor of Pediatrics at The Ohio State University College of Medicine. "While one would expect a diagnosis of constipation and increased length of stay to impact the use of laxatives, we also discovered that unrelated variables such as patient age, type of admission and hospital sickle cell disease patient volumes were associated with constipation medication use."

Older children were more likely to receive laxatives. Dr. O'Brien says that perhaps this is because they are better able to articulate symptoms of constipation. Patients with medical admissions were four times more likely to receive laxatives than patients with primarily surgical admission.

"Our findings demonstrate that increased attention needs to be paid to constipation prophylaxis in sickle cell patients, particularly in younger children and surgical admissions," said Dr. O'Brien.

Provided by Nationwide Children's Hospital

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