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# Study finds infants prescribed antacids have increased risk of fractures during childhood

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New research being presented at the 2017 Pediatric Academic Societies Meeting found infants prescribed antacids to manage acid reflux, or spitting up, under age 1 had more bone fractures later in childhood.

An abstract of the study, "Early Antacid Exposure Increases Fracture Risk in Young Children," will be presented on Sunday, May 7, at the Moscone West Convention Center in San Francisco.

Acid reflux, also known as gastro-esophageal reflux (GER), is frequently treated with drugs such as proton pump inhibitors (PPIs) and histamine H2-receptor antagonists (H2-blockers) that decrease production of stomach acids. These types of medications have been linked with increased bone fractures in adults, but there has been a lack of research into whether they might have the same effect in children.

Researchers examined the records of 874,447 healthy children born within the Military Healthcare System (MHS) from 2001 to 2013 who received care within the system for at least 2 years. They found approximately 10 percent of the children were prescribed antacids in the first year of life, including H2-blockers such as ranitidine (Zantac) and famotidine (Pepsid) as well as PPIs such as omeprazole (Prilosec) and pantoprazole (Protonix). A small percentage was prescribed both.

Children who used PPIs had a 22 percent increased likelihood of fracture, while children who used both PPIs and H2-blockers had a 31 percent increased likelihood of fracture. Use of H2-blockers was not

associated with an immediate increase in factures, the study found, but there was an increased likelihood of fracture with time.

In addition, the number of bone fractures children experienced increased with the number of days they took these medications. The younger a child first began using antacid medications, the higher the fracture risk. Those started on antacid medications earlier—under 6 months old—had the most increased fracture risk. Children who started using antacids after age 2 years did not have increased fractures as compared to children who were not prescribed antacids in the first five years of life.

Use of antacid medications in infants should be weighed carefully against possible fracture, said U.S. Air Force Capt. Laura Malchodi, MD, lead author of the study and a pediatrics resident at Walter Reed National Military Medical Center.

"With many antacids easily available over-the-counter for adults, these medications may seem benign," Dr. Malchodi said. "However, our study adds to a growing body of evidence suggesting antacid medications are not safe for children, especially very young children, and should only be prescribed to treat confirmed serious cases of more severe symptomatic gastroesophageal reflux disease (GERD), and for the shortest length of time needed."

GER is a common condition that affects roughly 40 to 65 percent of all infants. It usually begins at approximately 2 to 3 weeks of life and peaks between 4 to 5 months. In most babies, GER disappears by about 1 year of age as the upper digestive tract functionally matures. The American Academy of Pediatrics believes it is important for all pediatric health care providers to be able to properly identify and treat children with reflux symptoms, and to distinguish GER from more worrisome disorders so as to avoid unnecessary treatments.

Dr. Malchodi will present the abstract, "Early Antacid Exposure Increases Fracture Risk in Young Children," at 11:45 a.m.

Provided by American Academy of Pediatrics