

Acute Care

ISMP Medication Safety Alert!®

Educating the Healthcare Community About Safe Medication Practices

SAFETY briefs



Misconnection between cecostomy and gastrostomy.

An 8-year-old patient was inadvertently given three liquid medications (acetaminophen, lansoprazole, and sucralfate) through a cecostomy instead of a gastrostomy (G-tube). The “button” cecostomy was in place to manage baseline constipation at home with saline flushes. The cecostomy was attached to an extension set for the flushes. The patient also had a gastrostomy button for her G-tube. Buttons are low profile devices that are anchored with a balloon to the abdominal wall (Figures 1 and 2), whereas cecostomy and gastrostomy tubes extend for several inches and need to be taped to the abdomen between use. Also, button devices are not visible under cloth-



Figure 1. A Mic-Key device with balloon anchor.

ing. Common button devices include the Mic-Key button (Avanos; often pronounced “micky,” Figure 1) and the Applied Medical Technology (AMT) MiniONE.



Figure 2. A Mic-Key gastrostomy button for an infant.

In this case, when a nurse went to the patient’s bedside to administer medications, an extension set was hooked up to the cecostomy and not the G-tube. It looked the same as the G-tube when set up for medications, including a medication port and a larger port for fluids and feedings. None of the medication ports have Luer lock connectors, so oral syringes and feeding bag tips can only push into the ports. Medications are best absorbed in the small intestine, not the large intestine that is past the cecum, so medications administered via a cecostomy would not be absorbed very well. The provider was notified that the

medications were administered via the cecostomy and not the G-tube. The nurse was instructed to readminister the medications at two-thirds of the normal dose, per pharmacy recommendations.

As a preventive measure, ENFit extension sets are available for use with both the Mic-Key gastrostomy buttons (www.ismp.org/ext/707) and the AMT devices (www.ismp.org/ext/708). To prevent mix-ups like the one above, medications could be provided by the pharmacy in ENFit syringes, which could then be used with ENFit extension sets. The cecostomy button could have legacy extension tubing and would not connect with ENFit syringes, thus preventing misconnections and misadministration of the drug doses via the wrong tube. Button devices are also available for jejunostomies and gastrojejunostomies, as is ENFit extension tubing.

A word from GEDSA on ISMP’s May 2021 Safety Brief:

Medical device misconnections aren’t always brought out into the news, sometimes they aren’t even correctly credited as the cause of an injury or even death.

Patient safety is at risk so long as hospitals, healthcare systems, DMEs, suppliers, patients, caregivers, etc., are missing the opportunity to deploy new patient safety standards in enteral feeding devices.

In just May 2021, we have heard of two misconnections, the one above and one that will not be disclosed, both caused while using legacy devices.

The ISO 80369 standard was created to prevent small bore medical device misconnections. The -3 standard brought about the design of ENFit®. ENFit’s success in the European Union, Australia and New Zealand, the ongoing transition in Japan and Brazil, and the US Conversion Schedule, may be the reasons behind the United States’ recent pick-up in conversion, but unfortunately misconnections are clearly still occurring, begging the question - are all U.S. hospitals aware of the problem and its available solution?

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