

Beyond Clean Flexible Endoscope Expert TM:

Common Insertion & Light Guide Tube Damages Part 1: Buckling

Great for Pants, Terrible for Flexible Endoscopes!

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One of the types of damage* we frequently encounter is "buckling," which appears as small ridges on the insertion tube and light guide tube. Buckling is common in both areas but is more expensive to repair when it occurs in the insertion tube. In the insertion tube, damage can take two forms:

- External damage: The buckles (ridges) can sometimes be sharp and stick out from the surface of the tube. This heightens the risk of harm to patients, particularly in areas of the body with thin and delicate walls like the large intestine. The more frequent and pronounced the buckles, the more risk to the patient.
- Internal damage: The pressure exerted by these buckles can cause damage to the internal elements of the insertion tube, like the angulation wires or the biopsy channel. The tight configuration of these components makes them susceptible to damage.

Buckling has two main causes:

- Excessive pulling or twisting of the insertion tube: This damage is typically due to mishandling during manual cleaning. Addressing this issue requires a re-evaluation of cleaning practices, with a particular focus on the Point-of-Use protocol. Review my Precleaning article for more information on this process.
- Mishandling during the procedure, transportation, or manual cleaning: When the internal components of the insertion tube become stretched out or kinked, they will press against the walls of the insertion tube, resulting in the appearance of buckles. If you see angulation damage and/or biopsy channel damage in your repair reports along with the buckling, it's a good indication that the root cause is mishandling.

Healthcare leaders should work with their repair vendor to educate technicians about buckling. Early identification can prevent damage, protect patients, and reduce the impact on the internal components of the endoscope.

^{*}Identified through analysis of tens of thousands of repair reports. This series of expert articles focuses on the output of that research.

Beyond Clean Flexible Endoscope Expert TM Biography:

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Michael Matthews, MBA, CLSSGB, CRCST, CIS, CHL currently serves as the Director of Customer Training and Education for Agiliti. He previously served as Director of Clinical Education and Training for Northfield Medical in addition to former roles of Territory Manager for the Little Rock, Arkansas area, and a Clinical Education Manager for the southeast region. Before working at Northfield, Michael served as the manager for sterile processing at Baptist-Health Medical Center-Conway in Arkansas. During this time, Michael also served as an Infection Preventionist on a PRN basis to consult on reprocessing services throughout the Baptist-Health system. Michael has previously served as a Sterile Processing Technician at Jewish Hospital & St. Mary's Healthcare (Catholic Health Initiatives) (2012-2013), Baptist East Hospital (2011-2012), both in Louisville, KY, and system manager for sterilization and high-level disinfection at Conway Regional Medical Center (2013-2016). He holds three Healthcare Sterile Processing Association (HSPA) certifications for sterile processing. Michael has also served as a subject matter expert and participated in exam development for HSPA. Michael holds an MBA and has also been certified as a Lean Six Sigma Greenbelt. He has published articles in Infection Control Today, Becker's Hospital Review, Healthcare Purchasing News, as well as several LinkedIn articles in the sterile processing community. Michael is a former cohost of the Beyond Clean podcast, the premier podcast for sterile processing professionals throughout the world.

