Abstract SAGES2021.2270818

BARIATRIC SURGERY: IMPROVE VISIBILITY AND REDUCE DURATION WITH IN SITU LAPAROSCOPIC LENS CLEANING

Matthew Brunson Martin, MD, FACS

OBJECTIVE

When surgeons perform laparoscopic bariatric surgeries, the scope is their sole means of visualizing the internal anatomy so they can work with safety, precision and efficiency. As they work, blood, oil, smoke and vapor collect on the lens, blurring or obscuring their view. At that point, the scope is removed, a technician cleans the optics, and the scope is re-inserted. This process, which can be even more challenging for the novice camera tech, disrupts the surgery flow. Because it is repeated throughout the procedure, it extends the duration of surgery and anesthesia time. The delay can be longer for very obese patients because it may take longer to remove, reinsert, and reposition the scope.

To determine if an *in situ* lens cleaning device (ClickClean, Medeon Biodesign) would allow surgeons to maintain visualization during bariatric surgery, reducing scope removals and surgical time, 8 bariatric procedures were performed using the device.

SOLUTION

ClickClean is an in situ lens cleaning device comprised of a sheath, a trigger box, and a transparent, biocompatible film that slides in front of the laparoscopic tip. The surgeon sees a normal, clear view through the film. When blood, oil, smoke or vapor soils the lens, the surgeon clicks the trigger and the device slides a clean length of film into place. Visualization is restored in seconds without removing the scope, so the surgeon can maintain a clear view without blurring or delay.

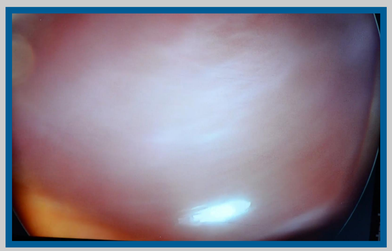
RESULTS

In 2020, three surgeons performed eight bariatric procedures using ClickClean. Six patients underwent a gastric sleeve procedure, while two patients had gastric bypass. Surgeons performing gastric sleeve used ClickClean roughly 5 times per procedure. During gastric bypass surgery, ClickClean was used an average 6 times per procedure.

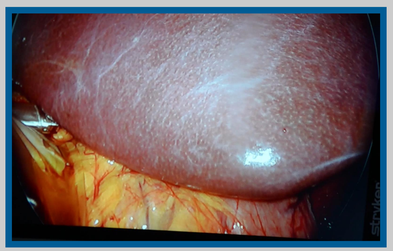
Users noted that ClickClean was easy to assemble, “performed very well,” saved several minutes of cleaning time per use, provided clear visibility, allowed surgery to continue uninterrupted, required less skill from camera operators, and often required only one click to attain a clear view.

CONCLUSIONS

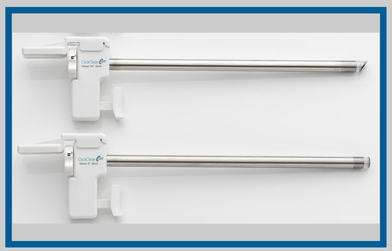
ClickClean performed well during bariatric surgery, with all surgeons expressing appreciation for the clear view it provides very quickly. Users reported saving a few minutes for each use, which is a significant savings in OR time when multiplied by 5-6 uses per surgical procedure. ClickClean is an effective *in situ* cleaning device for the laparoscopic lens that reduces the duration of bariatric surgery and allows surgeons to work uninterrupted with continuously clear visualization.



Before Cleaning

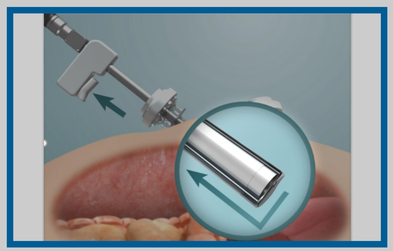


After Cleaning

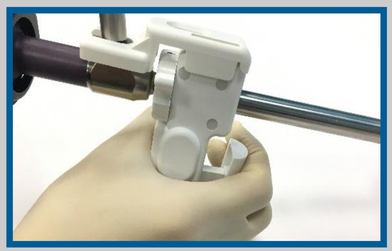


CLICKCLEAN™ Laparoscope Cleaning Device





Advancement of Transparent Film



Trigger Bottom to Restore Laparoscopic View