BECKER'S HEALTHCARE OLYMPUS

Managing GI bleeding in the ASC: How tech is driving efficiency + safety for endoscopy

The volume and variety of procedures performed in ambulatory surgery centers (ASCs) is on the rise.

Among Medicare-certified, single-specialty ASCs, endoscopy is the most common focus, and more than one-third (37%)[1] of certified multi-specialty ASCs have an endoscopy service line. Patient volumes for endoscopy are only expected to grow, especially since the U.S. Preventive Services Task Force now recommends adults begin colorectal cancer screening at age 45[2].

However, gastrointestinal bleeding is a serious challenge during endoscopic procedures, involving considerable mortality between 2% and 10%[3], as well as high management costs. For ASC physicians who may experience a bleed during a colonoscopy or polypectomy, Olympus offers several solutions to help better manage patient outcomes, costs and efficiencies.

To learn more about the risks and challenges associated with endoscopic procedures and the benefits that Olympus provides, Becker's Healthcare recently spoke with three experts: Robert Barrett, Senior Product Manager, Core GI Procedures, and Christian Stroupe, Marketing Director, Core GI Therapeutics, both from Olympus Corporation of the Americas; and Ahmed Saeed, MD, Gastroenterologist, HCA Midwest Health in Kansas City, Mo.

Hemostasis during endoscopic procedures is now fast and easy with tech

Olympus has developed an innovative, two-step solution that may enable physicians to quickly identify and control gastrointestinal bleeding. The Olympus EVIS X1™ endoscopy system includes an imaging mode called Red Dichromatic Imaging (RDI™) technology, which improves the visibility of bleeding points within the mucosa and enhances the visibility of deep blood vessels compared to white light[4].

Once a bleeding point has been identified, physicians can then use Olympus' EndoClot® Polysaccharide Hemostatic System (PHS) – an advanced powder hemostatic agent – to control it.

Typically, physicians use white light for inspection during endoscopic procedures. The Olympus CV-1500 video system center has five LEDs – violet, blue, green, amber and red – which together create white light. For RDI technology, the red, green and amber LEDs are turned on in continuous sequence.

Red and amber light penetrate deeply into human mucosal tissue, compared to the shorter wavelength of blue light," Mr. Barrett said. "This allows physicians to see underlying, deep blood vessels more clearly. Amber light is also highly absorbed by hemoglobin, so RDI technology provides increased contrast between blood, which contains hemoglobin, and the surrounding mucosa, which doesn't."

If an active bleed occurs during an endoscopic procedure, there's a high concentration of blood and hemoglobin compared to the surrounding areas. With RDI™ technology, the bleeding point appears darker to the clinician.

RDI technology can also be used proactively during endoscopic procedures to minimize large bleeds. With RDI technology, physicians can assess the area around lesions in the colon before making incisions, resections or snaring to confirm there are no underlying blood vessels that could introduce significant bleeding.

According to Dr. Saeed, RDI technology can be utilized to identify exposed blood vessels at the base of a resection site.

"It's quick and effective in pinpointing blood vessels that need to be pre-treated with coagulation, whether closure is planned or not. It also can efficiently localize actively bleeding vessels in a resection site to treat with coagulation," Dr. Saeed said.

Once a bleed is detected using RDI technology, EndoClot® PHS can be applied to control gastrointestinal bleeding in the lumen.

According to Mr. Stroupe, EndoClot PHS is a powder-based hemostatic agent that is applied endoscopically through a catheter. Once the powder comes in contact with the blood, it absorbs the water from the bleeding site and accelerates the clotting cascade with red blood cells and platelets.

"Many physicians use EndoClot PHS for post-polypectomy bleeds, peptic ulcer bleeds and even malignant tumor bleeds," Mr. Stroupe said. "It allows them to intervene quickly and efficiently and may reduce the need for mechanical interventions like clips as well."

This gives physicians greater flexibility with the application of hemostasis interventions.

Although the ASC setting is typically used for less complex procedures like screening and surveillance colonoscopy, Dr. Saeed mentions that he still does find large polypectomies and endoscopic mucosal resections.

"EndoClot PHS can be used on its own or as an adjunct technique for hemostasis and applied to control bleeding after a large polypectomy or endoscopic mucosal resection when conventional techniques like clips fail or are difficult to apply," Dr. Saeed said. "It's safe to apply and can add efficiency when conventional hemostasis techniques fail."

Better management of GI bleeding translates into higher ASC quality and efficiency

Olympus's RDI™ technology and EndoClot® PHS may give both physicians and patients peace of mind during and after endoscopic procedures. If an emergency bleed occurs in the ASC setting, physicians can act quickly to control it, so the patient can be safely transferred to another site of care.

"When there's a large bleed during an endoscopic procedure at a community hospital or academic medical center, the option exists to transfer the patient to surgery or bring in another physician," Mr. Barrett said.

For less severe bleeds, these tools from Olympus may also give physicians confidence that patients can be sent home without the fear of a re-bleed.

From an economic perspective, unexpected bleeds can be costly because they may extend the length of ASC procedures. "ASCs are very specific in that they allocate a certain amount of time per procedure," Mr. Stroupe said. "Anything out of the ordinary, like a GI bleed, can extend a case, which delays the next patient and could delay the rest of the day's cases too. That may result in overtime for staff."

Dr. Saeed added that controlling bleeding can significantly increase the efficiency in an ASC, as well. "RDI technology and EndoClot PHS have the advantage of improving efficiency of endoscopic procedures in ASCs," he said.

Clips are a fairly common tool for treating a large bleed during an endoscopic procedure. However, these are relatively high-value items. Placing a clip in the right place the first time is essential for keeping procedure costs down. RDI technology can help since it may give physicians improved visibility compared to traditional white light.

"If a physician is using white light during an endoscopy procedure, they may struggle to see exactly where the active bleed is located," Mr. Barrett said. "They may try to place a clip, but they fail to find the right location because their vision is obscured. If they end up placing two, three or four clips, the cost of the procedure increases and it takes longer, since they must reload the clip and make another attempt, constantly flushing and suctioning."

Olympus offers ASCs the training and support needed to deliver patient care safely

With any new technology, there's a learning curve. Olympus recognizes this and has a comprehensive team in place to help ASCs adopt endoscopy innovations like RDI technology and EndoClot PHS. "Our endoscopy account managers, clinical endoscopy specialists, field service engineers and endoscopy territory managers support ASCs and may eliminate barriers to new technology adoption," Mr. Barrett said. Seamless training and support from Olympus instructs the ASC physicians on how to navigate, utilize and deploy hemostasis solutions.

"With Olympus technologies like RDI technology and EndoClot PHS, ASCs can differentiate themselves from their competition," Mr. Barrett said. "They can show the local community that they are providing high quality care."

1 Saver, C. (2024, June 24). Ambulatory endoscopy management: Strategies to keep patients and finances healthy. *OR Manager*. https://www.ormanager.com/ambulatory-endoscopy-management-strategies-keep-patients-finances-healthy/

2 Centers for Disease Control and Prevention. (n.d.). Colorectal cancer screening. CDC. Retrieved October 30, 2024, from https://www.cdc.gov/colorectal-cancer/screening/index.html

3 Mendelson, A. H., & Fink, S. E. (2023). Upper gastrointestinal bleeding. In StatPearls. *StatPearls* Publishing. https://www.ncbi.nlm.nih.gov/books/NBK470300/

4 Data on file with Olympus (DC00489968).

RDI™ technology is not intended to replace histopathological sampling as a means of diagnosis.

EndoClot® PHS is only indicated for use in GI procedures and is not indicated for use in surgical or trauma applications.

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