### Purpose

Describe the use of the Padlock Clip® system to manage patients with anastomotic dehiscence post anterior resection.

### Key Points

#### Disease Background
- A serious complication of anterior resections is an anastomotic dehiscence or an anastomotic leak.
- ~6% of anterior resections will develop a leak that will require surgery. Symptomatic anastomotic leaks are associated with 6-22% mortality.
- There is no ‘gold standard treatment’ in managing anastomotic leaks. Traditionally, an anastomotic leak was managed by surgically diverting the GI tract away from the leak site utilizing a temporary or permanent stoma.
- The physicians in this study previously used Endosponge therapy to endoscopically manage anastomotic leaks.
- With Endosponge therapy, patients often need up to 9 endoscopic sessions and up to 6 weeks to heal the defect.

#### First Patient
- 60-year-old male was readmitted with sepsis 1 week after low anterior resection for rectal cancer.
- A 2.5cm wide x 5cm deep defect was identified via colonoscopy and Endosponge therapy was started to manage sepsis and reduce the defect.
- After 3 weeks of Endosponge treatment, the defect was reduced to 1.5 x 2cm. The Padlock Clip® defect closure system closed the defect, utilizing a grasper and suction to recruit tissue.
- The patient was asymptomatic post-procedure, allowing chemotherapy to begin as planned.
- The defect was satisfactorily healed in <4 weeks, and completely resolved at 3 months.

#### Second Patient
- 59-year-old male was readmitted with fever and lower abdominal pain 2 weeks after laparoscopic anterior resection for upper rectal cancer.
- A 4-mm defect was found in the anastomosis, and was closed with the Padlock Clip® defect closure system along with placement of a percutaneous drain.
- The drain was removed after 1 week, and within 10 days of the procedure, the defect was healed, and adjuvant chemotherapy was started shortly after.

#### Third Patient
- 56-year-old male presented with sepsis 3 weeks after discharge from a low anterior resection and ileostomy for rectal cancer.
- A small defect was noted in the anastomosis, and the Padlock Clip® defect closure system was used to successfully close the defect, along with placement of a CT guided drain, so the patient could start adjuvant chemotherapy in a timely manner.

### Conclusions

“The Padlock Clip® system proved to be a very useful adjunct in the management of anastomotic dehiscence. Following our success in more than one case, we would recommend such treatment is good, repeatable with no specific complications and cost effective in our centre. To further improve patient’s outcome following AL, to shorten their journey and with more cost-effective treatment, we introduced a new endoscopic technique, the Padlock Clip® defect closure system, to close the defect combined with minimally invasive treatment. Such technique proved to be successful and proved to be an important step in management.”