The 48th Conference of the German Society for Endoscopy and Imaging Procedures (Deutsche Gesellschaft für Endoskopie und Bildgebende Verfahren, DGE-BV) took place on March 15-17, 2018 in Munich, Germany. Dr. A. Braun, SRF, Klinikum der Universität, Freiburg, presented personal data on OTSC application for emergency treatment of acute hemorrhage. Between 2011 and 2017, 48 patients (29 female, median age 55.5 years (61-92)) each received one OTSC clip for first-line treatment of acute gastrointestinal hemorrhage. All patients had shown acute hemoglobin decrease and secure bleeding signs such as hematemesis, melena or hematochecia. Bleeding was located in the upper GI tract in 14 cases (4 Forrest Ia, 7 Forrest IIa) and in the lower GI tract in 14 cases (4 Forrest Ia, 7 Forrest Ib and 3 Forrest IIa). Patients with upper GI bleeding received peri-interventional PPI medication (80mg i.v. bolus, 320 mg i.v./12 h). For placement of the OTSC in some cases an endoscopic fororos was used to grasp tissue. No further local therapies were applied. All OTSC applications were performed by one single endoscopist. OTSC application and primary hemostasis were successful in all cases. Maximal procedure time was 20 minutes. No relapse hemorrhage occurred. 26 patients (15 Forrest Ia, 9 Forrest Ib) received follow-up endoscopy on day 1 to 4, which showed the clip in situ and no bleeding stigma. The other 22 patients received no follow-up examination. The clinical course was uneventful in all cases. The author concludes that OTSC application for emergency endoscopic treatment of acute hemorrhage is safe and very effective. Primary hemostasis is achieved in a large fraction of patients, which makes reduction of the mortality rate of acute gastrointestinal hemorrhage possible. OTSC application is related to short procedural time. Endoskopische Behandlung von akuten Blutungen mit einem over-the-scope clip (OTSC). Braun A (2018)

March 2018 | One step application of OTSC for salvage hemostasis and simultaneous perforation closure
El Douahy Y et al., Department of Internal Medicine, Staten Island University Hospital - Northwell Health System, Staten Island, New York, USA, reported on a case of active bleeding from a gastrointestinal artery pseudoaneurysm and simultaneous perforation, which was treated by deployment of a single OTSC-Clip.

The 61-year-old male patient with history of duodenal ulcer and angiographic embolization of a gastrointestinal artery pseudoaneurysm presented in the emergency room for bright red blood per rectum with signs of upper GI bleed. In esophagogastroduodenoscopy two vessels were identified at the base of an ischemic ulcer correlating with the previous endoscopy. At the time elected to inject epinephrine and apply electrocautery which resulted in an arterial pulsatile bleed and a perforation. The field of vision was extremely compromised in addition to the difficult location. Munting of a cap on the gastroscope to improve stability of the scope and applying point pressure to decrease bleeding, as well as vigorous water irrigation permitted the identification of the exact bleeding site. Then, an OTSC was deployed in a single attempt which resulted in immediate adequate hemostasis and closure of the perforation. The authors emphasize that deployment of the OTSC requires pin-point precision to achieve satisfactory hemostasis. They rate the use of the over-the-scope clip simple yet veryeffective. The device was not only a rescue tool for hemostasis from a recurrent actively bleeding GDA pseudoaneurysm, but also for simultaneous perforation closure. The video can be viewed directly from the GIE website or by using the QR code below.

OTSC_hemostasis_update 2

February 2018 | OTSC prevents re-bleeding in over 70% of high-risk GI bleeding cases
J Brandler and colleagues, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota, USA, performed a study on 67 patients with gastrointestinal bleeding from high-risk lesions who were treated with the OTSC System.

The definition of high-risk lesions was lesions situated in the area of a major artery and larger than 2 mm in diameter and/or a deep penetrating, excavated fibrotic ulcer with high-risk stigma, in which perforation could not be ruled out or thermal therapy would cause perforation, or lesions that could not be treated by standard endoscopy (epinephrine injections, hemoclip, coagulation). Between 12/2011 and 02/2015, data from 67 patients with high risk non-variceal gastrointestinal bleeding, of which 49 received OTSCs as primary and 18 as rescue therapy, was collected and prospectively analysed. Clinical severity was determined based on the Rockall score and a modified Blatchford score. Out of 67 patients, 47 (70.1 %) remained free of re-bleeding at 30 days after OTSC placement. No difference was found in the re-bleeding rate of patients with or without primary or rescue therapy (hazard ratio: 0.69; 95%CI: 0.84 – 4.86; P=0.665). Only 9 re-bleeding events were linked clearly to OTSCs and required intervention, indicating an OTSC success rate of 81.3%.

The authors concluded that OTSCs have a valuable role in managing and averting high-risk radiologic or surgical interventions for non-variceal gastrointestinal bleeding, despite the presence of high risk of adverse outcome and severe prognostic scores.

Efficacy of Over-The-Scope Clips in Management of High-Risk Gastrointestinal Bleeding

November 2017 | 96% hemostasis with OTSC as first-line treatment in patients with gastrointestinal bleeding: an Italian multicentric study comprising 201 consecutive patients
Mangiafico S et al., Azienda Ospedaliero, University of Modena, Italy, presented at the 25th UEG week (October 28 – November 1, 2017, Barcelona) data from 9 Italian tertiary referral centers comprising a large series of patients

July 2018 | Large single center experience presented: Establishment of the OTSC clip in daily endoscopic routine
Honegger C and colleagues, Division of Gastroenterology and Hepatology, University Hospital Hospital Zürich, Switzerland, presented data on 262 OTSC placements in a total of 233 interventions. Since 2009, the placement of OTSC has been established at the University Hospital Zürich for the entire spectrum of indications. OTSC has become de rigueur for daily practice. A retrospective study now presents data of all patients treated with the OTSC device at the institution, focussing on indications, anatomic site of OTSC deployment, complications, and immediate and 30-day success rates. Patient age ranged from 14 to 93 years with a median of 61 years. 51.5% were male. Immediate success of OTSC treatment was observed in 87.1% of all sessions (203/233). The success rates per indication were as follows: spontaneous bleeding 84.8% (28/33); iatrogenic bleeding 100% (20/20); acute perforation 80.3% (65/72); prophylaxis for perforation 100% (24/24); anastomotic leakage 61.1% (11/18); fistulae 80.7% (46/57); diameter reduction of the gastro-jejunal anastomosis 100% (6/6); and stent fixation 100% (3/3).

At 30-day follow-up, the overall success rate was 67.4% (158/233). The success rates per indication were as follows: spontaneous bleeding 69.7% (23/33); iatrogenic bleeding 90% (18/20); acute perforation 86.1% (62/72); prophylaxis for perforation 100% (24/24); anastomotic leakage 33.3% (6/18); fistulae 29.8% (17/57); diameter reduction of the gastro-jejunal anastomosis 83.3% (5/6); and stent fixation 66% (2/3).

The authors concluded that the treatment with an OTSC is safe and feasible in clinical routine, with high immediate success rates with sustained clinical success at 30-day follow-up. Establishment of Over-The- Scope-CIps (OTSC) in daily endoscopic routine Honegger C, Valli PV, Wiegend N, Bauerfeind P, Gubler C (2016)


June 2018 | Breaking news: Ovesco OTSC Clip superior to standard hemostatic therapy in randomized-controlled trial
OTSC has long been described in the scientific literature as a highly effective device for the treatment of upper GI hemorrhage. Now a randomized-controlled trial at 9 academic centers in Germany, Switzerland and Hong Kong) has proven OTSC to be superior to standard methods. The trial, published by Dr. Arthur Schmidt, Ludwigswurg, Germany, enrolled 66 patients with recurrent bleeding and randomized them to receive either OTSC therapy or the standard techniques (a combination of 2 methods from through the scope clipping, injection or electrical coagulation).

Persistent bleeding after per-protocol hemostasis was observed in 42.4% of patients in the standard therapy group and 6.0% in the OTSC group (P=0.001). In descending order, the rebleeding occurred in 57.6% in the standard therapy group and 15.2% in the OTSC group (absolute difference, 42.4%; 95% CI: 21.6-63.2; P<0.001).

with non-variceal upper and lower gastrointestinal bleeding lesions in whom OTSC was used as first-line endoscopic treatment. Over a period of three years (01/2014 - 01/2017), data on 201 consecutive patients (mean age 68 years, range 28-89 years), who underwent emergency endoscopy for severe acute nonvariceal gastrointestinal bleeding and were treated with OTSC as primary first-line therapy, was prospectively collected and analyzed. 106/201 patients were treated with the a version of the OTSC system while in 95/201 patients the t clip was preferred. Indications for OTSC treatment included duodenal ulcer (n=59) and gastric ulcer (n=35), gastric ulcer Forrest 1a (n=19) and Forrest 1b (n=28). Mallory Weiss (n=19), Deulofy's lesion (n=9), post gastric-ESD bleeding (n=14), post EMR bleeding (n=15), post ESD bleeding (n=12), traumatic rectal ulcer (n=2), colonic diverticulum (n=4), and surgical anastomosis bleeding (n=15). Technical success was achieved in all cases (100%). Primary hemostasis was achieved in 193/201 patients (96%). In the remaining 8 patients hemostasis was obtained with radiological vascular embolization (n=5) or surgery (n=3). Early re-bleeding (within the first 24 hours) occurred in 9/201 patients (4%) and it was treated with epinephrine injection with or without use of through the scope clips or radiological vascular embolization. No late re-bleeding was observed in the series. The authors concluded that the use of OTSC as first-line therapy in acute high-risk gastrointestinal bleeding is safe and highly effective.High efficacy of OTSC as first-line endoscopic treatment in patients with gastrointestinal bleeding: an Italian multicentric experience in a large cohort of patients. Mangiafico S, Russo S, Lupo M, Caruso A, Grande G, Zito F, Bertani H, Conigliaro R, Pisani A, Gemanisa B, Galloro G, Grande L, Mangiafico B, Bassotti G, Mutignani M, Manta R (2017). November 2017 | Recommendation for OTSC as first-line therapy in non-variceal upper gastrointestinal bleeding  Chaen SM and Lau JYW, Prince of Wales Hospital, The Chinese University of Hong Kong, Hong Kong, China, published in Endoscopy International Open on the question: “Can we recommend OTSC as first-line therapy in case of non-variceal upper gastrointestinal bleeding?” The authors explicate that 8 to 15 % of patients with non-variceal upper GI bleeding (NVUGIB) continue to bleed after endoscopic hemostasis and acid suppression therapy. Further bleeding remains one of the most important predictors of mortality. These facts make research on methods to improve endoscopic hemostasis so important. The authors list several limitations to conventional hemostatic methods such as the impossibility to consistently seal large vessels with thermoagulation, the difficulty of tangential application of hemostatic clips, the frequent dislodgement of the clips and the difficulty of clip application in chronic ulcers with a fibrotic base. The authors argue that the Over-the-Scope-Clip, with a wider jaw and greater strength, has the advantages of a firm grip over a larger amount of tissue. Clip retention is almost universal. The editorial names the study from Wedi et al with 100 patients with NVUGIB and first-line OTSC management as the first line success rate for primary hemostasis. Besides, the study of Richter-Schrag et al is cited, including 100 patients with both NVUGIB and lower GI bleeding and showing similar results. However, the paper also names problems that can lower the success of OTSC hemostasis, namely tangential approach for OTSC deployment with scope in retroflexion (when ulcers are located in the lesser curve or the posterior wall of the duodenal bulb). The text offers a solution to this problem: usage of a smaller OTSC and an anchoring device to puncture near the bleeding site to guide the OTSC. Second, pretreatment with adrenaline injection is recommended to improve visualization in case of actively bleeding ulcers. The authors propose to eagerly await the publication of the STING trial, which randomized patients with refractory bleeding to OTSC or conventional treatment. They propose an RCT comparing OTSC as primary treatment to current standards. In summary, the editorial recommends the application of OTSC in patients with hemodynamic instability, comorbid illness, with active bleeding ulcers, large ulcers and ulcers at posterior duodenum and lesser curve. The authors speculate that the added cost in managing further bleeding after standard treatment likely outweighs the cost of OTSC. Can we now recommend OTSC as first-line therapy in case of non-variceal upper gastrointestinal bleeding?  July 2017 | Video case report: OTSC hemostasis in patients with refractory bleeding due to chronic peptic ulcer. Xiao X and Lau JY, Department of Surgery, Chinese University of Hong Kong, Hong Kong, published an article on VideoGIE, the official video journal of the American Society of Gastrointestinal Endoscopy, showing OTSC treatment in two patients with refractory peptic ulcer bleeding. The first patient was an 89-year-old woman admitted with fresh hematemesis and a hemoglobin of 4.8g/dl. Endoscopy revealed bleeding from a 2-cm chronic bulbar ulcer. She was treated by angiographic embolization to her right gastroduodenal artery (GDA). Three days later, she again experienced massive bleeding. A pulsatile vessel at the ulcer base was discovered and treatment with an OTSC clip induced. The cap was adjusted to encompass the vessel, and a trip string was pulled to deploy the OTSC. The patient was discharged 4 days later without further bleeding. Patient two was a 76 year old man presenting with fresh melena and a haemoglobin of 7.5 g/dl. He reported on a history of recurrent bleeding from a chronic gastric ulcer. Additionally, he had previously been on warfarin therapy for the treatment of deep vein thrombosis complicated by pulmonary embolism. Endoscopy revealed bleeding from a chronic ulcer at the angle incisura of the stomach. The first attempt to stop the bleeding with heatprobe and hemoclips failed. Then an OTSC anchor device was used to target the ulcer base and deploy an OTSC clip without suction. Complete hemostasis was achieved and the patient had an uneventful recovery. The authors concluded that OTSC is useful in the treatment of chronic peptic ulcerations with refractory bleeding. The OTSC anchor tool allows accurate targeting of the bleeding artery Over-the-scope clip treatment of refractory peptic ulcer bleeding  Xiao X, Lau JY (2016) Gastroint Endosc. 2016 Feb;83(2):458-9. doi: 10.1016/j.gie.2015.05.040. https://www.youtube.com/watch?v=G6u_szn_Qec&featu re=youtu.be  309 June 2017 | 80 % success in endoscopic closure of post-surgical gastrointestinal leaks Manta R, et al., Niguarda Ca Granda Hospital, Milan, Nuccio S, Agostino Hospital, Modena, Nuovo Regina Margherita Hospital, Rome, Baggiovara Hospital Modena and Federico II University of Naples, Naples, Italy, published a large series on patients with post-surgical gastrointestinal leaks managed with endoscopy as initial approach. A total of 76 patients underwent endoscopic treatment for a leak either in the upper (47 cases) or lower (29 cases) gastrointestinal tract. The first attempt for leak closure was the application of one or more OTSC clips. Fibrin glue was used as an adjunctive treatment to close the gap between the two OTSCs where needed. A covered self-expanding metal- stint (SEMS) was applied when the closure was considered incomplete at endoscopy. When dehiscence characteristics were not fitting for OTSC positioning, a SEMS was directly used. Endoscope was the first line therapy, when an abscess cavity was present beyond the anastomotic leak. Leak closure was successful in 39 patients with upper GI leaks (83%) and 22 patients with lower GI leaks (75.9%), accounting for an overall 80.3 % success rate. Leak closure failed in 15 (19.7 %) patients, and the surgical approach was successful in all 14 patients who underwent re-intervention, whilst one patient died due to sepsis at day 7 post-op. The authors conclude that an endoscopic approach is successful and safe in the majority of patients with anastomotic gastrointestinal leaks. Therefore, endoscopic treatment should be attempted before resorting to more invasive, costly and risky re-interventions. Endoscopic management of patients with post-surgical leaks involving the gastrointestinal tract: A large case series. Manta R, Caruso A, Cellini C, Sica M, Zullo A, Mirante VG, Bertani H, Frazzoni M, Mutignani M, Galloro G, Conigliaro G. United European Gastroenterology Journal 0(0) 1–8 DOI: 10.1177/2056463615626051...
OTSC® hemostasis update 3 | research & clinical trials

November 2016 | Large single-center experience with 101 OTSC applications in patients with severe hemorrhage, perforations and fistulae: 89 % overall primary clinical success

Wedi E and colleagues, Stanford University Hospitals, Stanford, CA and Innsbruck Central Hospital, Innsbruck, Austria.

The technical success rate of OTSC was 100% (10/10). All patients with ulceration with refractory bleeding after failed angiographic treatment of refractory peptic ulcer bleeding, presented two cases in which OTSC was used to treat chronic peptic ulcerations with refractory bleeding after failed angiographic embolization and endoscopic treatment respectively. Dr. Lau concluded that, “Endoscopists should consider the use of OTSC when tackling challenging bleeding lesions especially when other standard treatments have failed and certainly before referring your patients to surgery.”

February 2016 | OTSC as successful last resort before surgery for challenging bleeding lesions

Endoscopedia, the official blog of “GIE: Gastrointestinal Endoscopy” recently published a video on OTSC use by Dr. James Y. W. Lau. The video, called “Over-the-scope clip treatment of refractory peptic ulcer bleeding”, presented two cases in which OTSC was used to treat chronic peptic ulcerations with refractory bleeding after failed angiographic embolization and endoscopic treatment respectively. Dr. Lau concluded that, “Endoscopists should consider the use of OTSC when tackling challenging bleeding lesions especially when other standard treatments have failed and certainly before referring your patients to surgery.”

June 2016 | OTSC vs. cSEMS for intestinal leakage: clipping associated with significantly higher clinical success rates

A retrospective study comparing over-the-scope clips (OTSC) and covered self-expanding metal stents (cSEMS) for upper gastrointestinal perforation or leakage was conducted by Prof. Dr. med. H. Farnik, university hospital Frankfurt am Main, and colleagues in four German tertiary endoscopy centers (Frankfurt, Tübingen, Jena, Dortmund).

The technical success rate of OTSC was 100% (10/10). All patients with ulceration with refractory bleeding after failed angiographic treatment of refractory peptic ulcer bleeding, presented two cases in which OTSC was used to treat chronic peptic ulcerations with refractory bleeding after failed angiographic embolization and endoscopic treatment respectively. Dr. Lau concluded that, “Endoscopists should consider the use of OTSC when tackling challenging bleeding lesions especially when other standard treatments have failed and certainly before referring your patients to surgery.”

February 2016 | Use of Over-The-Scope Clip for treatment of refractory upper gastrointestinal bleeding: high technical and clinical success rates reported

Chen SM, Chiu PWY, Teoh YB and Lau JYW from the Department of Surgery, Prince of Wales Hospital, Chinese University of Hong Kong, China, reported about a prospective case series to evaluate the safety and efficacy of the Over-The-Scope Clip in patients with refractory GI bleeding.

Chan and colleagues discuss that in 810 patients, the bleeding was located in difficult positions, where application of conventional clips would have been complicated as the endoscopic approach to the ulcer would have been at a deep angle. The OTSCs allowed a larger amount of tissue to be captured for compression compared to common clips while avoiding the possibility of thermal injury with its high risk of perforation, as can happen with thermal hemostasis methods.

As numerous methods of endoscopic hemostasis have been developed, the authors recommend considering the OTSC System in refractory gastrointestinal bleeding before conventional clips, surgery or angiographic embolization.

Use of Over-The-Scope Clip for treatment of refractory upper gastrointestinal bleeding: a case series


January 2016 | OTSC as successful treatment of massively bleeding jejunal varix, which had resisted previous interventions

S Kothari, T Kothari and V Kaul of the Center for Advanced Endoscopy, Division of Interventional and Interventional Hepatology at the University of Rochester/Strong Memorial Hospital in Rochester, NY, USA presented a case of successful treatment of massive gastrointestinal bleeding from a jejunal varix with OTSC after several other treatment options had failed. The 67-year old male patient had a medical history of coronary artery disease, chronic renal insufficiency and Laenec’s cirrhosis before he was admitted for a laparoscopic left radial nephrectomy for renal cell carcinoma. Afterwards, the patient suffered from several complications, including superior mesenteric vein thrombosis, melena with a significant drop in hematocrit and clinical signs of bleeding, which led to identification and unsuccessful treatment of several possible bleeding sites. The patient underwent coagulation, a tagged red blood cell scan, angiography, coil-embolization, repeat mesenteric angiography and repeat (push) enteroscopy. The patient also received a total of 38 units of packed red cells, 13 units of thawed plasma, 9 units of fresh frozen plasma, 3 units of platelets and 2 units of cryoprecipitate. Due to multiple comorbidities, he was deemed as a high-risk patient unfit for surgery.

Finally, a tortuous, varix-like, prominent blood vessel with a central small ulceration, bleeding actively, was identified in the proximal jejunum. Ethanolamine injection into the varix did not achieve hemostasis. Finally, a size 12R OTSC clip was placed over the actively bleeding jejunal varix using a pediatric colonoscope. Instant and complete hemostasis was achieved with this single clip. No additional transfusions were required and his hematocrit stabilized over the next few days. Due to his overall poor prognosis and multiple medical problems, the patient was discharged on conservative measures only and he passed away several days later. The authors emphasize the fact that they were able to quickly and effectively treat a massively bleeding jejunal varix, which had resisted multiple evaluations and courses of treatment. They deem the OTSC device a major advance in endoscopic management of high-risk patients in a variety of challenging clinical settings, especially in case of poor candidates for surgical intervention. They also note that endoscopic perforation management with the OTSC clip may avoid the cost and morbidity of surgery and other interventions.

The Over-The-Scope Clip Device: An Indispensable Tool in the Interventional Endoscopist’s Armamentarium


August 2015 | Clinical experience with OTSC shows high success rate for recurrent bleeding and complex resections

Wedi E and J Hochberger of the Department of Hepato-Gastroenterology at the University Hospital of Strasbourg, France, reported on clinical experiences with the over-the-scope clip system and its application aids such as the OTSC Tracker and OTSC Anchor for coarse tissues.

They present a review of 14 clinical studies on OTSC use and add their own experiences with 84 patients (101 OTSC applications). All Strasbourg patients suffered from recurrent bleeding/leakages of perforations and fistulae or post-operative leakage. 78 out of 84 cases (92.8%) could be successfully treated.

The report notes that misapplication and complications are rare (<3% according to the literature) when using OTSC. If they occur, they include narrowing of the organ lumen in case of small passageways and comprehensive aspiration of tissue. The authors remark that this should be kept in mind, especially in narrow sections of the esophagus or bowel.
They also maintain, however, that OTSC is often a good option for achieving quick closure in case of acute perforations or severe bleeding. Possible complications might then be compensated in a subsequent procedure, e.g. through dilation of a stenosis. They also report isolated cases of a grasper getting caught in the OTSC clip. However, if the clip is deployed before the grasper is pulled back fully into the cylinder, this complication is extremely unlikely in clinical practice.

The authors report that a device for cutting the clip for later removal as well as other instruments based on the OTSC concept show promising results in experiments. The authors conclude that OTSC, as an asset in interventional endoscopy, especially in case of complex endoluminal resections. According to the literature, OTSC is especially useful for closure of perforations of up to 1.3 cm (and much larger in individual cases) and bleeding lesions with a high risk of rebleeding, e.g. in coagulopathic patients or treatment of acute Forest enters hemorrhage.

The authors describe the use of the OTSC System in the management of a Dieulafoy lesion. A 74-year-old man suffered from a recurrent, obscure, life-threatening gastrointestinal bleeding. EGD revealed a non-bleeding Dieulafoy lesion at the lesser gastric curvature. Due to the large size and difficult position of the lesion, conventional through-the-scope clips were not used, but an OTSC clip was successfully deployed. Novel treatment of a gastric Dieulafoy lesion with an over-the-scope clip

Klinische Erfahrungen mit dem Over-the-Scope Clip (OTSC)

Wolfgang E. Hochberger J (2014)
Endo-Praxis, 30.1, 14–17

April 2015 | Study identifies OTSC as effective and safe endoscopic therapy for acute gastrointestinal bleeding

In an observational retrospective case series, Dr. Matthew Skinner, Dr. Juan P. Gutierrez, Dr. Helmut Neumann, Dr. C. Mel Wilcox, Dr. Chad Burski and Dr. Klaus Mönkkönen of the Basel I. Hirschowitz Endoscopic Center of Excellence, Department of Gastroenterology, University of Alabama, Bir-mingham, USA, evaluated the efficacy and safety of OTSC clip placement in patients with upper gastrointestinal bleeding after traditional endoscopic methods had failed. The study was conducted at a large tertiary care hospital, comprising 12 patients (8 male, 4 female), mean age of 59 years (range: 29–86) with ongoing upper gastrointestinal bleeding despite endoscopic therapy, so that the lesion was ful y engaged inside the transparent cap before the clip was released. In two patients with post-bulbar ulcers, a wire or a wire placed inside a feeding tube was advanced into the distal duodenum and the scope advanced alongside the wire. These measures helped to prevent small-bowel luminal occlusion, which had previously been reported as a major adverse event.

The authors conclude that the OTSC System provides tissue apposition far superior to traditional clipping and can function as a “rescue therapy” in patients with severe bleedings. Possible complications have been avoided, avoiding more invasive procedures such as embolization or surgery. They point out that the OTSC System appears promising for the treatment of bleeding lesions with large-diameter visible vessels or those located in awkward positions, such as the greater curvature of the stomach or the posterior duodenal wall, which may not always be amenable to treatment with standard endoscopes and endoscopic clips. *Any bleeding occurring more than 72 hours after therapy is usually regarded as a new incident.

Over-the-scope clip placement is effective rescue therapy for severe acute upper gastrointestinal bleeding

Endoscopy International Open 2014; 02: E37–E40

March 2015 | JFHOD Congress, France: OTSC in hemostasis – high success rate in anticoagulated patients

Paris, March 19–22: The JFHOD Congress – Journées Francophones d’Hépato-Gastroentérologie et d’Oncologie Digestive 2015 – the major French clinical congress on gastroenterology, hepatology and GI oncology was held under the presidency of Prof. Jean-Christophe SAURIN. The group around Prof. J. Hochberger presented their data on OTSC in the treatment of severe gastrointestinal hemorrhage. Dr. E. Wedi, Dept. Of Gastroenterology and Digestive Endoscopy, University Hospital, Strasbourg, France summarized cases addressed to emergency care due to severe GI bleeding. All patients had Hb <7g/dl upon admission. According to the literature (16), 80% were under concomitant anticoagulation or antiplatelet therapy. In 87.2% (48/55) bleeding was from a gastrointestinal peptic ulcer, and the remaining from various other causes. OTSC clips were placed. The overall clinical success rate without recurrence was 83.6% (46/55). In 32.7% OTSC was placed as a salvage treatment due to prior ineffective ness of other techniques. 12.7% (n=7) had to undergo surgical treatment. Out of these 7 patients died, giving a total mortality rate of 17.2% in this highly challenging case series. According to the report, OTSC in patients with a high Rockall score can profit from OTSC treatment, especially patients with anticoagulative or antiplatelet therapy.

July 2014 | Retrospective study confirms safety and effectiveness of OTSC in the endoscopic treatment of GI bleeding, perforation and fistula

Dr. Vijay Jayaraman and colleagues, Cedars Sinai Medical Center, Los Angeles, recently presented a retrospective study on their experience with the OTSC System in the treatment of GI bleeding, fistula and perforation. Their case series consisted of 24 consecutive patients treated between January 2011 and April 2012 (mean age 70 years) included the following indications for OTSC placement (29 clips): perforation (13), post-surgical enterocutaneous fistula (n=10), spontaneous perforation (n=1), anastomotic leak (n=4), perforation after mucosal resection (n=3), prophylactic closure of mucosal defect after EMR (n=1), postpolypectomy bleeding (n=2), postendoscopic perforation (n=2), tracheoesophageal fistula (n=1) and leakage from a percutaneous jejunostomy site (n=1). Instruments or modalities used to grasp the tissue were dedicated devices (OTSC Twin Grasper and OTSC Anchor) in 16 and nondedicated devices (rat tooth/haemorrhage forceps or suction alone) in 15. Median follow-up time was 2.9 months; mean defect size 10 mm (range 5–2.5 mm). The overall success rate was 61%. In their experience the success rate of closure of an acute defect is higher compared to chronic fistula. 9 out of 24 lesions were chronic (>1 month) in this series which might explain the lower overall success rate in comparison to the literature (72–100%). Furthermore, a trend towards higher success rate was noted in defects <10 mm compared to defects >10 mm. Patient reported any complications associated with OTSC placement.

Endoscopic therapy is still the initial choice before any surgical intervention to manage GI bleedings, fistulae, perforations and leaks. As through the scope clips are limited by their smaller wing span and low force of closure leading to subtotal results, the OTSC clip provides a safe and effective endoscopic alternative.

Clinical Application and Outcomes of Over the Scope Clip Device: Initial US Experience in Humans
Jayaraman V, Hammerle C, Lo SK, Jamil L, Gupta K
DiaGh Endosc. 2013;2013:381873

June 2014 | Three case reports on surgery-sparing uses of the OTSC clip in multiple indications

Three different case reports lately published by Dr. V. Gómez et al., Dept. of Gastroenterology and Hepatology, Mill-Clinic, Jacksonville, USA, Dr. S. Singhal et al., Div. of Gastroenterology, The Brooklyn Hospital Center, New York, USA and Dr. J. Albert, Center of Internal Medicine, Johann Wolfgang Goethe University Hospital, Frankfurt/Main, Germany illustrate the broad spectrum of indications for which placement of OTSC clips can be useful. The first case report describes the use of the OTSC System in the management of a Dieulafoy lesion. A 74-year-old man suffered from a recurrent, obscure, life-threatening gastrointestinal bleeding. EGD revealed a non-bleeding Dieulafoy lesion at the lesser gastric curvature. Due to the large size and difficult position of the lesion, conventional through-the-scope clips were not used, but an OTSC clip was successfully deployed. Novel treatment of a gastric Dieulafoy lesion with an over-the-scope clip

April 2014 | Conference report | 44th DGE-BV Congress, Hamburg

The 44th DGE-BV Congress of the German Society for Endoscopy and Imaging Procedures/Diagnostics was held in Hamburg, April 3–5, 2014 under the presidency of Prof. Dr. Thomas Rösch. Again a significant number of both oral presentations and posters have been featured at this year’s event. In summary they all reported their mostly positive experiences with the OTSC System in all main indications. In addition our products were featured in several hands-on courses alongside the conference (Chairs: Hochberger J., Maisj J., Kraus F.). Ovesco presented their new products, the DC Clip Cutter and the FTRD device which are both to be launched later this year. The reaction of the medical world was very positive:

• **New Clips for Blutung und Verschlusschirurgie**
  
  Caca K, Ludwigsburg, Germany
  
  K. Caca gave a talk on “New tools for the treatment of GI-hemorrhage and perforation”. Even though also mentioning other devices he mainly elaborated on the OTSC System. In his summary of clinical cases his take home message was: “the OTSC device achieves hemostasis more quickly than all other devices and is more effective particularly regarding acute, difficult and heavy bleedings.” For the treatment of perforation OTSC was the standard choice. Also, he showed first experiences with the all new DC Clip Cutter device as an important tool for removing the OTSC which will be launched later this year.

• **Update Endoskopie – meine Toppapers**
  
  Hähner M, Vienna, Austria
  
  M. Hähner updated the plenary session on recent papers on GI hemorrhage. There he cited two papers by Manta et al. (2013) and Chan et al. (2014) where OTSC had proven to be safe, effective and efficient also in severe bleeding when other procedures had already failed.

• **Over-the-scope clip (OTSC) represents an effective endoscopic treatment for acute GI bleeding after failure of conventional techniques**
  
  
  Surg Endosc. 2013 Sep;27(9):3162-4

• **Use of Over-The-Scope Clip for treatment of refractory upper gastrointestinal bleeding: a case series**
  
  Chan SM, Chiu PW, Toh SY, Auy LL
  
  Endoscopy. 2014 May;46(5):428-31
OTSC® hemostasis update 3 | research & clinical trials

- Clip-Karussel
  Groth S, Hamburg, Germany
  G. Clip-Karussel is on the endoscopist’s option once it comes to use clips. Interesting enough he exempted the OTSC from the rest of all products stating that OTSC is playing in a different league.

Comment by Ovesco: the comparator of OTSC is surgiclipe.

Altogether five posters were dealing with OTSC:

- Over-the-Scope Clip System (OTSC) – One Therapy for Safety Closure

Leonhardt K, Ohse A, Bauer B, Repp M, Altenburg, Germany report their 3.5-year experience with our system regarding the three major indications: hemorrhage, acute perforation, and chronic fistula/anastomotic leakage where they achieved a 85.7%, 84.6%, and 60% success rate.

33 patients were included in this retrospective analysis. Average age was 69 years (41–92 ys). Three patients received two clips at once. Across the GI tract the number of patients was equally distributed, except for Jejunum and ileum with only one patient each. The authors conclude that OTSC is a useful and effective tool for the endoscopist sparing the surgeon in many cases.

- Endoscopic treatment of acute bleedings with an Over-The-Scope Clip (OTSC)

A. Braun et al. investigated the role of OTSC in the treatment of acute GI hemorrhage in an emergency setting. Between 2011 and 2013 they treated 16 patients (median 75.5 ± 10, y; 9, 9+7) with OTSC for upper and lower GI bleeding (8 each). Patients with upper-GI bleeding received high PPI medication simultaneously. 7 patients were classified F Ia, 7 F Ib, and 2 F IIa. All patients presented with an acute decrease of hemoglobin, with hematemesis, melena, and hematochezia. The clip was applied by using a standard forceps. Technical success was achieved in all 16 patients (100%) with immediate primary hemostasis, except for Jejunum and ileum treated with only one patient each. The authors conclude that OTSC is a useful and effective tool for the endoscopist sparing the surgeon in many cases.

- Endoskopische Behandlung von akuten Blutungen mit einem Over-The-Scope-Clip (OTSC)

Braun A, Richter-Schrager H, Fischer A, Freiburg, Germany

March 2014 | OTSC: easy to use with good results, decreasing morbidity and mortality in diagnostic and therapeutic endoscopy

In the quest to describe the usefulness and clinical applications of OTSC System in an environment where endoscopic and surgical techniques are increasingly more complex and frequent Singhal et al. have searched and analysed the literature using the key words "endoscopy" and "over-the-scope clip" in order to identify human studies evaluating the application of OTSC from January 2001 to August 2012. The indications, efficacy, complications, and limitations were recorded. The overall success rates of OTSC based on the current literature are in the range of 75% to 100% for closure of intracranial gastrointestinal perforations, 38% to 100% for closure of gastrointestinal fistulas, 50% to 100% for anastomotic leaks, and 71% to 100% for bleeding lesions. OTSC has shown 100% success rates in managing postbariatric surgery weight gain secondary to dilation of the gastro-jejunostomy. The authors conclude that OTSC is easy to use with good results decreasing the morbidity and mortality associated with complications secondary to both diagnostic and therapeutic endoscopy and avoiding surgery in many situations.

Over-the-Scope Clip: Technique and Expanding Clinical Applications

Singhal S, Changlea K, Papanaglakasis H, Anand A, Krishnaiah M, Duddemudip S

- February 2014 | New case series on use of OTSC for treatment of refractory upper GI bleeding

Apart from using the OTSC System in acute and chronic perforations (i.e. perforations, anastomotic leakage, fistulae) the authors of the renowned Institute of Digestive Disease, Department of Surgery, Chinese University of Hong Kong are reporting of patients in whom OTSC was used for endoscopic management of refractory upper gastrointestinal bleeding from lesions in the gastroduodenal tract between 1 July and 31 December 2012. Nine patients were included (median age 72.5 years, range 39–91) with bleeding gastric ulcers (n=2), bleeding duodenal ulcers (n=5), bleeding gastrointestinal stromal tumor in the stomach (n=1), and bleeding from ulcerative carcinoma of the pancreas (n=1). The median size of the ulcers was 2.5 cm (range 1–4). Six of the nine patients had undergone previous endoscopic hemostasis. Technical success (defined as hemostasis achieved at index endoscopy) was achieved in all patients and the clinical effectiveness was 77.8% (defined as technical success with no rebleeding). All procedures were carried out by two experienced endoscopists. Those two patients that experienced rebleeding suffered from complex duodenal ulcer. One of them had a history of previous therapy for residual disease after resection of common bile duct cholangiocarcinoma. After several additional EGDS, transarterial embolization, and one surgical intervention which all failed to stop the bleeding, the patient died eventually. The second patient bled from the inferior pancreaticoduodenal artery and needed arterial embolization as well.

The authors discuss a meta-analysis of 1156 patients in 15 randomized trials where endoclips were shown to be superior to the standard therapy as effective as heater probe treatment. The overall rate of rebleeding in those conventionally treated patients ranged between 7.1% and 9.5% though. Since rebleeding correlates with the adverse outcome of this indication they speculate that control of bleeding would have a positive impact on patient outcome. Even though the study was carried out in patients with complex duodenal ulcer and underlying malignancies the technical success rate of OTSC was 100%. They also point out that usually in cases like these the application of conventional techniques failed for example the application of heater probe being associated with a higher risk of perforation. Whereas the application of OTSC allows for larger amounts of tissue and constitutes a quite durable treatment (OTSC in situ after a median of 28 days in this study. The authors conclude that the use of OTSC is a safe and effective method of endoscopic hemostasis for major bleeding from miscellaneous upper gastrointestinal causes and should be considered in refractory bleeding after conventional endoscopic hemostasis, before surgery or angiographic embolization.

Comment by Ovesco: a prospective controlled randomized multicenter trial with 64 patients with recurrent upper GI bleeding is recruiting in Germany (Endoscopic Treatment of Recurrent Upper GI Bleeding: OTSC [Over the Scope Clip] Versus Standard Therapy (STINoG)).

- Use of Over-The-Scope Clip for treatment of refractory upper gastrointestinal bleeding: a case series

Chan SM, Chiu PW, Teoh AY, Lau JY

Endoscopy, 2014 Feb 6. [Epub ahead of print] 162

February 2014 | Retrospective study on efficacy and safety of the OTSC System in the treatment of GI bleeding, fistula and perforation: primary technical success rate 91.3%, durable clinical success rate 82.6%

Dr. Noriko Nishiyama and colleagues, Dept. of Gastroenterology and Neurology, Kagawa University, Japan, recently presented their retrospective study on efficacy and safety of the OTSC System in endoscopic closure of gastrointestinal bleeding, fistulas and perforations, concluding that the OTSC System is a highly effective device that can be implemented in everyday practice. Their case series consisted of 23 consecutive patients treated between November 2011 and September 2012 (mean age 77 years) included the following indications for OTSC placement: stopping GI bleeding (n=9), closing perforation (n=10), closing fistula (5) and prevention of post-endoscopic submucosal dissection (EDS) duodenal ulcerous perforation (n=1). One patient had a perforation that formed a fistula. Lesions were located in the esophagus (n=1), the stomach (n=10), the duodenum (n=4), the small bowel (n=2), the large bowel (n=2) and in the rectum (n=4). In 8 patients other therapies preceded OTSC application (e.g. conventional hemostatic clips, local injections, hemostatic coagulation forceps). Median follow-up time was 67 days. The primary technical success rate was 91.3% (21/23). In two cases application of the OTSC clip was not possible due to stiff, fibrotic lesion edges. The overall clinical success rate (complete closure by using only OTSC clips) was 82.6%. Major contributing factors for OTSC failure were a large lesion size (greater than 20 mm) and a delayed diagnosis (more than 1 week). No patient reported any complications related to OTSC clip application and the OTSC is an interesting and novel device that enhances the armamentarium of therapeutic gastroenterologists.

Efficacy and safety of over-the-scope clip: including complications after endoscopic submucosal dissection bleeding

Mori K, Repp M, Altenburg, Germany

November 2013 | OTSC in endoscopic treatment of acute GI bleeding after failure of conventional techniques: primary hemostasis of 97%

The OTSC System can overcome the limitations of conventional clips in the treatment of patients with acute GI bleeding by providing compression of large amounts of tissue, leading to a more efficient hemostasis. Dr. R. Manta and colleagues, Gastroenterology and Endoscopy Unit, New S. Agostino Hospital, Modena, Italy draw this conclusion on the basis of a retrospective analysis of a consecutive case series of 30 patients with severe acute GI bleeding treated with the OTSC System after failure of conventional techniques.

Two patients had six high-volume endoscopy units in a period between December 2011 and September 2012. All 30 patients suffered from bleeding lesions unresponsive to saline/adenaline injection and through-the-scope clipping located in the upper and lower GI tract in 23 and 7 cases, respectively. Bleeding lesions included duodenal ulcer (n=15), esophageal Hemangioma (n=2), Dieulafoy (n=2) and surgical anastomosis (n=1) in the upper GI tract and endoscopic mucosal resection (n=5), endoscopic submucosal dissection (n=1) and colonic diverticulum (n=1) in the lower GI tract.

Primary hemostasis with OTSC was achieved in 29 of 30 cases (97%). Rebleeding in two cases was successfully treated with injection of saline and adrenaline. Endoscopic follow-up after 2–4 days and after 1 month revealed correct placement of the OTSC clip and no procedure-related complications. This indicates that the OTSC clip is an effective and safe device for treatment of acute GI bleeding and represents a useful adjunct to the therapeutic armamentarium in endoscopic emergencies.

- Over-the-scope clip (OTSC) represents an effective endoscopic treatment for acute GI bleeding after failure of conventional techniques


Surg Endosc. 2013 Sep;27(9):3162-60

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- October 2013 | Efficacious OTSC hemostasis in Dieulafoy’s gastric lesion resistant to conventional endoscopic treatment

Dr. B. Mangiavillano and colleagues, Gastrointestinal Endoscopy, Azienda Ospedaliero San Paolo University,
Hospital-University of Milan, Italy, present a case study of a 69-year old woman with an episode of melena. EGD showed a Dieulafoy’s bleeding lesion in the proximal portion of the posterior wall of the stomach. The lesion was treated with an epinephrine injection and application of two conventional working-channel delivered metallic clips and the patient was discharged two days later. After three days the patient again presented with melena. Blood transfusions were necessary. An EGD was performed, showing no sign of an actively bleeding ulcer. The patient was admitted to hospital and suffered from another episode of melena with hemodynamic shock. The now actively bleeding Dieulafoy’s lesion was then treated with an OTSC clip, stopping the hemorrhage completely and persistently. Endoscopic follow-up after 30 days displayed correct placement to the OTSC and no signs of further bleeding.

Successful treatment with an over-the-scope clip of Dieulafoy’s gastric lesion resistant to conventional endoscopic treatment


October 2013 | OTSC successful in providing hemostasis in posterior duodenal ulcer bleeding after failure of conventional clips

Ulcer bleeding is one of the key indications for the OTSC System. In a case series of 102 patients with posterior duodenal ulcers, Klaus Mönkemüller and colleagues, Dept. of Internal Medicine, Gastroenterology and Infectious Diseases, Marienhospital Bottrop, Germany add to the growing clinical experience in using the OTSC System to control massive gastrointestinal bleeding and achieve life-saving hemostasis. All four patients (mean age 84.5) presented with hypotension and mean hemoglobin of 9 g/dL. After initial fluid resuscitation an emergent EGD displayed actively oozing ulcers in the posterior duodenum. As an initial endoscopic treatment injection of epinephrine-saline solution and standard clip placement failed and all patients suffered from re-bleeding, the decision to apply the OTSC System was made. Hemostasis was attained successfully and all patients discharged in stable conditions. Even in difficult located ulcers in the posterior duodenum the placement of the OTSC is easy and effective to obliterate bleeding vessels resulting in life-saving hemostasis.

Utility of the “bear claw”, or over-the-scope clip (OTSC) system, to provide endoscopic hemostasis for bleeding posterior duodenal ulcers


[Epub 2012 Nov 20]

July 2013 | Recommendation of OTSC System in complex GI bleeding

In an overview article the authors are referring to the current guideline therapies available and new developments. They report that other new three-dimensional clips seem to be even less efficacious than normal hemoclips. Thus, the authors conclude that obviously one of the key elements to successful hemostasis is the strength of the jaws of a clip and the amount of tissue captured. They state that this is obviously fulfilled by the design of the OTSC System which allows for the capture of a large amount of tissue and is more secure than other clips in the experimental setting. Thus the OTSC System is best recommended and used in complex GI bleeding. According to Leuging & Lau a single clip suffices for most circumstances and therefore the procedure is shorter when compared to multiple applications of hemoclips.

Comparison by Ovesco:

In a recently published series of 83 patients with severe and complicated GI bleedings (e.g. relapses after conventional endoscopic hemostasis or indication for a surgical intervention) the success rate was close to 93% with OTSC (Krat T et al., Poster DGE-BV meeting, Munich 3/2013)

April 2013 | Conference report | OTSC at German Endoscopy Conference (DGE-BV 2013 in Munich)

OTSC was well-covered in the scientific programme of this year’s German Endoscopy Conference in Munich. Clinical presentations confirm efficacy of OTSC clipping in a range of indications

Munich, March 14–16, 2013. The 43rd German Endoscopy Congress, DGE-BV, was held under the presidency of Prof. Dr. Christoph F Dietrich. A significant number of presentations had clinical data of OTSC clipping as their topic and confirmed clinical efficacy and safety in the primary indications of the product, hemostasis, closure of acute lesions/perforations and cutting of a clip hinge .

Large single center OTSC cohort with hemostatic and organ wall closure indications

Wedi E, Menke D, and Hochberger J, Strasbourg (France) reported about a cohort of 84 patients with OTSC clipping for GI bleeding, fistula and GI wall insufficiency. 101 OTSC clips have been placed. Table 1 shows clinical success in 92.8% of cases, a persistent bleeding and an early relapse bleeding in 3.6% and a late relapse bleeding (>72 hrs) in 3.0% of patients. OTSC clipping was seen as an ultima ratio and as an alternative endoscopic therapy and in 13.3% for failure of other methods in the same treatment session. In 35.1% of cases patients had undergone other hemostatic techniques before the OTSC clipping or had been candidates for surgical hemostasis.

2 complications were encountered: 1 inadvertent clipping of an instrument with OTSC and fixation of the instrument to the tissue and one perforation of the sigmoid with the OTSC cap. The authors state that OTSC application is an effective procedure to deal with endoscopic situations that otherwise would require a surgical approach.

D. Wiedenhehn, Dr. H. Dietrich, Dr. Osendorff, Dr. I. Trabandt, Dr. R. Schreiber, Dr. P. Dietrich

Large single center cohort on OTSC hemostasis in severe GI bleeding

Krat T, Stüker D, Fräpfer F, Kürper M, Wichmann D, Königsrainer A, Tübingen, showed data from their cohort on severe OTSC indications (n=3) and non-effective OTSC indications (n=3) and severe relapse bleeding (n=2) and non-effective OTSC indications (n=2). The bleeding location was in the upper GI tract in 63% (21% peptic gastric ulcers and 40% peptic duodenal ulcers) and in the lower GI tract in 37% (mostly bleeding after polypectomy in the rectum).

The characteristics of the cohort underline the severity of bleeding: life-threatening bleeding (28.4%), patient in hemorrhagic shock (31.1%), immediate blood transfusion (33.8%), patient under anti-coagulation (21.6%), Forrest I bleeding (72.3%), OTSC placement was achieved with cap suction in 72 cases and with an OTSC Anchor in 2 cases. Technically successful hemostasis for 72 hrs was achieved in 92.8% of cases, a persistent bleeding and an early relapse bleeding (<72 hrs) were seen in 3.6%, respectively. Late relapse bleeding (>72 hrs) was observed in 3.6%. No late relapse bleeding was observed. 1 case showed mucosal esophageal lesions from device introduction were seen. In 14.5% OTSC clipping was done for recurrence of an initially successful other endoscopic therapy and in 13.3% for failure of other methods in the same treatment session. In 35.1% OTSC clipping was seen as an ultima ratio and as an alternative to surgical therapy otherwise becoming necessary. The summary of the authors is that the simple and easy to handle OTSC System is an effective treatment in severe GI bleeding and can avoid surgery in several cases.

D. Wiedenhehn, Dr. H. Dietrich, Dr. Osendorff, Dr. I. Trabandt, Dr. R. Schreiber, Dr. P. Dietrich

Use of an over-the-scope clipping device: multicenter retrospective results of the first U.S. experience

Baron TH, Song LM, Rosas A, Tokar JL, Irani S, Kozarek RA

Gastrointest Endosc. 2012 Jul;76(1):202-8

February 2013 | Retrospective multicentric review of early OTSC patients in the US: overall clinical success rate of 71%

Dr. Todd H. Baron and colleagues, Division of Gastroenterology & Hepatology, Mayo Clinic, Rochester MN, USA report about their experience with 45 patients and 48 OTSC clip placements from March 2011 to January 2012. Median follow-up time in this mixed cohort was 77 days (30-330 days). Indication breakdown included hemostasis (n=7), closure of chronic fistula (n=26), closure of iatrogenic perforations (n=5), closure of post-esophagectomy anastomotic leakage (n=3) and miscellaneous (n=2).

Before OTSC placement 49% of the patients had undergone other therapies for their condition that had failed. The overall clinical success rate was 71%. Hemostasis was achieved in 100% of cases. Anastomotic leakage and fistula was closed in 65%. Also one case of OTSC clip removal by means of APC-cutting of a clip hinge is described.

The authors conclude that the OTSC clip appears clinically effective and is a welcome addition to the therapeutic armamentarium in the setting of leaks, fistula, perforations and non-variceal bleeding.

Use of an over-the-scope clipping device: multicenter retrospective results of the first U.S. experience

Baron TH, Song LM, Rosas A, Tokar JL, Irani S, Kozarek RA

Gastrointest Endosc. 2012 Jul;76(1):202-8

New endoscopic hemostasis methods

Leung Ki EL, Lau JY

October 2012 | The success rates for hemostasis in severe GI bleeding, perforation closure and chronic fistula closure are 88%, 79% and 73%, respectively

The OTSC System has been described in more than 40 clinical papers in the scientific literature covering a range of indications. In order to summarize the clinical data published so far and to evaluate the overall clinical efficacy, Ovesco Endoscopy has commissioned systematic literature research on the OTSC System.

The study was limited to clinical publications and covered the key applications of the OTSC System, hemostasis, closure of acute GI lesions (perforations) and chronic GI lesions (fistula). Only clinical reports with >4 patients were included into the survey, that was carried out by Dr. Timo Weiland, novineon CRO, a specialized contract research organization for the medical device industry (www.novineon.com).

The success rates defined as permanent achievement of the therapeutic goal for hemostasis in severe GI bleeding, perforation closure (including acute anastomotic suture line failure) and chronic fistula closure are 88%, 79% and 73%, respectively. The OTSC System compares to the effectiveness of a surgical intervention in the respective indications or offers a new therapeutic option in situations where surgery is not feasible.


October 2012 | Hemostasis in large gastric ulcer with the OTSC® System

Vormbrock et al. report a successful treatment of gastric ulcer bleeding with the OTSC System. In an emergency EGD, removal of clots and fresh blood revealed an ulcer with a 2-mm thick pulsating vessel. Injection therapy was difficult due to the fibrotic tissue. Thus OTSC placement was decided. To mobilize the target tissue into the cap, two edges of the ulcer were grasped by each of the two jaws of the OTSC Twin Grasper. After retraction of the grasper and additional suction the OTSC was applied and immediate hemostasis achieved.

The authors conclude that the OTSC was effective for hemostasis in this fibrotic ulcer which was very hard to treat with other endoscopic methods. They state that the placement of OTSC was quick and easy resulting in potentially life-saving hemostasis.

Use of the “bear claw” (over-the-scope clip) to achieve hemostasis of a large gastric ulcer with bleeding visible vessel

Vormbrock K, Zabelaki M, Mönkemüller K
Gastrointest Endosc. 2012 Oct;76(4):917-8