April 2013 | OTSC System found safe and appropriate for closure of acute perforations in the stomach

In this first trial from China (after compassionate use cases in patients earlier on) the authors investigated the feasibility of the OTSC System for the closure of gastric perforations in the fundus. This location is of special interest since the handling of a flexible scope in the retroflex position is sometimes quite challenging. The investigation was done in a dog model. The perforation was performed with electrocautery and a needle knife in seven dogs. Closure was performed with one OTSC clip each. The closure was performed in 18.5 ± 6.4 minutes (team without prior experience). The following leak pressure test with maximum air insufflation and 500 ml methylene blue solution resulted in one minor leak (laparoscopic control) without clinical consequences though. The authors conclude that the OTSC System is safe and appropriate for the closure of perforations in the stomach despite the well known difficulties with the J-maneuver.

Feasibility study of secure closure of gastric fundus perforation using over-the-scope clips (OTSC) in a dog model

Zhang XL, Qu JH, Sun G, Tang P, Yang YS
J Gastroenterol Hepatol. 2012 Jul;27(7):1200-4

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 closure of chronic lesions/ fistulae (source: www.dge-bv.de).

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

Weid E, Menke D, and Hochberger J, Strasbourg (France)
reported about a cohort of 54 patients with OTSC clipping for GI bleeding, fistula and GI wall insufficiency. 101 OTSC clips have been used in this cohort, or 1.2 clips per patient. Indications included mainly severe upper GI peptic ulcer hemorrhage (n=38) and preventive clipping to avoid re-bleeding (n=12) or secondary perforation (n=18) after large area ESD. The clinical success rate in peptic ulcer minor leak was 79%, most patients had already been treated unsuccessfully with other hemostatic techniques before 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.


E. Weid, D. Menke, and J. Hochberger, Strasbourg

Large single center cohort on OTSC hemostasis in severe GI bleeding

Kraut T, Stüker D, Gräpler F, Küpper M, Wichmann D, Königsrainer A, Tübingen, showed data from their cohort on OTSC in endoscopic hemostasis (n=85). 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 polyectomy in the rectum).

The characteristics of the cohort underline the severity of bleeding: life-threatening bleeding (28.4%), patient in hemodynamic shock (31.1%), immediate blood transfusion (33.8%), patient under anti-coagulation (21.6%). Forrest I bleeding (72.3%), OTSC placement 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 re-bleed (<72 hrs) were seen in 3.6%, respectively. Late relapse bleeding (>72 hrs) was observed in 3.6%. No severe complications were observed; in 3 cases mucosal esophageal lesions from device introduction were seen. In 14.3% OTSC clipping was done for re-bleeding 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 ultimate rate and as an alternative to surgical therapy otherwise becoming necessary. The summary of the authors is that simple and easy to handle OTSC system is an effective treatment in severe GI bleeding and can avoid surgery in several cases.

Das OTSC-Clip-System: Klinische Erfahrungen zur Therapie der schweren GI-Blutung bei 85 Patienten

T. Kraut, D. Stüker, F. Gräpler, M. Küpper, D. Wichmann, A. Königsrainer, Tübingen

OTSC to prevent migration of covered self-expanding stents

Fährndtch M, Pohlt R, Rolfv S, Sandmann M, and Heike M, Dortmund, presented their technique of using OTSC to avoid migration of covered, self-expandable stents. Stent migration has an incidence of up to 30% and represents a significant clinical challenge. To prevent stent migration the authors used OTSC to fix the stent permanently to the neighboring GI wall. In 24 cases with benign indication for stent placement OTSC fixation was carried out in the following locations: esophagus, small bowel and colon. After 5–8 weeks the OTSC clips were removed by Nd:YAG laser cutting to intentionally remove the stent. In all 24 patients the procedure was technically successful. In 1 patient an undesired stent migration before intentional removal was observed. In another case the stent had to be removed after a few days due to intolerance by the patient in a location close to the upper esophageal sphincter. The authors conclude that OTSC clipping was found to be a safe and practical technique and has prevented stent migration in 96% of the cases studied.

Verwendung des Ovesco-Cliips zur Verhinderung der Migration bei vollgecoerten selbstexpandierenden Stents

M. Fährndtch, T. Pohlt, S. Rolfv, M. Sandmann, and M. Heike

Hospitalisation time and 30-days mortality in GI perforations after technically successful and unsuccessful OTSC closure

Hagel A, Nägel A, Raithel S, Diebel H, Neurath M, and Hochberger J, Erlangen, showed data on the management of GI perforations with OTSC clips. They studied 19 patients with apparent perforation of a digestive organ wall in various anatomical locations. In 13 patients the perforation could be closed with OTSC (“O+”) to avoid emergency surgery. In 6 patients OTSC closure was technically unsuccessful and emergency surgery was needed (“O–”). In the O+ group the duration of hospitalisation was 10.7 ±/– 10 days, no mortality. 2 patients in this group had co-morbidities and a prolonged hospital stay; excluding these 2 patients, hospitalisation was 5.8 ±/– 2 days. In the O– group hospital stay was 12.1 ±/– 7.1 days, one patient with esophageal perforation died after emergency surgery was not able to prevent fatal mediastinitis. The authors draw the conclusion that OTSC treatment can significantly reduce morbidity and mortality in GI perforations.

OTSC-Anwendung bei manifesten GI-Perforationen: 30-Tage-Mortalität, Hospitalisationsdauer und Outcome nach endoskopisch erfolgreichem und nicht-erfolgreichem Perforationsverschluss

A. Hagel, A. Nägel, S. Raithel, H. Diebel, M. Neurath, and M. Raithel, Erlangen

Monocentric case experience with OTSC in a broad range of wall closure indication: safe transmural closure

Nietsch H, Hammelmann F, and Asperger W, Halle, summarized their initial experience with OTSC in endoscopic closure of the GI organ wall in 10 consecutive applications. Indications included: post-surgical rectal anastomotic leak (n=2), rectal ESD perforation (n=1), gastric ESD perforation (n=2), esophageal perforation after balloon dilation (n=1), Mallory-Weiss tear (n=1), perforated gastric ulcer (n=1), post-surgical duodenal leak (n=1) and post-surgical bariatric suture line leak. All cases were successful. The authors conclude: OTSC enables a safe transmural closure of spontaneous and iatrogenic perforations. In a majority of cases target tissue handling is possible with suction only and does not require additional instruments. In well-trained endoscopy centers the learning curve for OTSC is short.

Erfahrungsbereich der ersten 10 Anwendungen des endoskopischen OTSC-Clip-Systems

H. Nietsch, F. Hammelmann, and W. Asperger, Halle

OTSC for closure of distal esophageal perforation

Braun A, Richter-Schrang H, Hopt U, Fischer A, Freiburg, showed data on OTSC in the treatment of distal esophageal perforation after vomiting (Boerhaave, n=1) and iatrogenic injury (n=1). Esophageal perforation is a life-threatening situation with a high complication and mortality rate. In both cases endoscopic closure of the esophagus was achieved within 12 hrs after the lesion. Both patients received bilateral thorax drainage and antibiotic therapy. No patient developed sepsis. Starting oral intake was without problems. Control endoscopy after 3 months revealed no stenosis and both clips were found in place. The authors summarize that the closure of esophageal perforations with OTSC is a safe and effective method and is significantly more economic than common surgical therapy requiring longer hospital stays.

Endoskopischer Verschluss von distalen Oesophagusperforationen mit einem Over-The-Scope-Clip (OTSC)

A. Braun, H. Richter-Schrang, U. Hopt, A. Fischer, Freiburg

Consecutive case series of OTSC application in the endoscopic management of complications and emergencies

Thomsen T, Berthold B, Khbichanchian M, and Trabandt I, Neubrandenburg, presented data of a case series (n=11). Indications included upper and lower GI bleeding, PEG-fistula closure, rectal-pelvic fistula closure, sigmoid anastomosis leak, bleeding from diverticulum (Hartmann situation), arterial bleeding from colon anastomosis. The overall clinical success rate in the mixed case series was 82%. No procedure took more than 30 min. As complications 1 fistula recurrence (required second OTSC procedure), 1 re-bleeding and 1 remaining perforation were seen. The authors summarize that OTSC clipping is a fast procedure with a high primary success rate and is quick to learn.

Endoskopische Interventionen mit dem OTSC-System am Klinikum Neubrandenburg

T. Thomsen, B. Berthold, M. Khbichanchian, and I. Trabandt, Neubrandenburg

OTSC for stopping gastroduodenal artery bleeding in duodenal ulcer

Kraut T, Stüker D, Kirschnak A, Heininga A, Wiedt B, Königsrainer A, Tübingen, showed a case series (n=7) in which OTSC was applied in upper GI emergency hemostasis to stop bleeding from the gastroduodenal artery. Gastroduodenal artery bleeding is besides aortoduodenal fistula considered the most severe bleeding complication in the digestive tract, associated with high morbidity and mortality. In many cases surgical emergency hemostasis is inevitable. In all cases reported here the gastroduodenal artery was verified as the bleeding source by angiography after successful endoscopic treatment. In all 7 patients the acute bleeding from an ulcer at the posterior duodenal wall was successfully stopped using OTSC. The procedure was safe and the patients discharged without sequelae.
controlled with OTSC, in 4 cases fibrin glue was additionally applied. After the initial 72 hrs, 3 patients suffered from rebleeding, which was then controlled surgically. No mortality was encountered in this case series. The authors draw the conclusion that OTSC is effective in emergency management of gastrointestinal arterial bleeding. In more than half of the cases endoscopic management was the only therapy. In the other patients OTSC was a successful "bridge to surgery" and allowed stabilizing the patient before the operation. OTSC-basierte Notfall-Hämostase der lebensbedrohlichen A. gastrudodenal  

Dr. Kratt presented data of his resection at the 43rd Congress of the German Society for Hospital, Tuebingen, Germany, received an award for this presentation. Königsrainer A, Tübingen, presented data of their OTSC (n=3), GIST (n=1) or in the lower GI tract (adenoma or early adenoma). The target lesion was reached. The cases treated included various indications in which OTSC was used as a device for full-thickness tissue retrieval with the primary purpose of enhanced histological examination of an in toto full-thickness specimen. The target lesions were in the upper GI tract, melanoma metastasis (n=2), GIST (n=1) or in the lower GI tract (adenoma or early colorectal cancer, low risk histology, n=4). The presentation gave a detailed case history of an elderly patient with recurrent adenoma (high grade dysplasia, partially adenocarcinoma) of the rectum. The patient had full-thickness resection with OTSC under single-shot antibiosis and was discharged the following day. As histology demonstrated complete removal of the lesion, no further therapy was done. Follow-up was uncomplicated. After 14 weeks control endoscopy revealed that the clip had detached from the tissue, normal scar formation was seen at the resection site and no signs of residual lesion or new recurrence were found.

Klinische Evaluation eines neuen endoskopischen GI-Trakt-Vollwandresektionsystems: das OTSC-basierte „full thickness resection device“ (FTRD)

K. Kratt, D. Stüker, J. Krach, M. Schmek, A. Schmoeve, A. Königsrainer; Tübingen

FTRD is not yet commercially available.

March 2013 | Dr. Thomas Kratt, University of Tuebingen, Germany, wins award for clinical research with Ovesco’s FTRD

Dr. Thomas Kratt, Interdisciplinary Endoscopy, University Hospital, Tuebingen, Germany, received an award for this presentation of clinical research in the field of full-thickness resection at the 43rd Congress of the German Society for Endoscopy and Imaging (DGEiV), held in Munich, March 14–16, 2013.

Dr. Kratt presented data of his first 8 cases with FTRD, a device of Ovesco Endoscopy, not yet commercially available. It combines modified OTSC clipping with tissue resection. In 7 of the 8 cases the procedure was technically feasible; in 1 case the target lesion could not be reached. The cases treated included various indications in which FTRD was used as a device for full-thickness tissue retrieval with the primary purpose of enhanced histological examination of an in toto full-thickness specimen. The target lesions were in the upper GI tract, melanoma metastasis (n=3), GIST (n=1) or in the lower GI tract (adenoma or early colorectal cancer, low risk histology, n=4).

The presentation of Dr. Kratt gave a detailed case history of an elderly patient with recurrent adenoma (high grade dysplasia, partially adenocarcinoma) of the rectum. The patient had full-thickness resection with FTRD under single-shot antibiosis and was discharged the following day. As histology demonstrated complete removal of the lesion, no further therapy was done. Follow-up was uncomplicated. After 14 weeks control endoscopy revealed that the clip had detached from the tissue, normal scar formation was seen at the resection site and no signs of residual lesion or new recurrence were found. www.dge-bv.de/german/home.php

March 2013 | Prospective trial on OTSC Proctology treatment presents first data

Munich, March 8, 2013. The annual conference of the German Society for Coloproctology (DGK) was held in Munich, March 8 and 9. At the conference first data were presented from an investigator initiated multicentric prospective observational clinical trial on the use of OTSC Proctology in the treatment of anal fista. The two participating trial sites are the Stuttgart Institute of Proctology (PD. Dr. R. Prostl, Dr. W. Ehni), and the German Anorectal Center (EDZ) (Dr. A. Joos, Prof. Dr. A. Herold, PD Dr. D. Bussen), Mannheim.

The trial presented an interim analysis on the first 15 patients. Inclusion criteria are supra-, extra- or high-transsphincteric anal fistula, including first recurrence but excluding patients with IBD.

Mean follow-up was 6.9 months (1–15 months) after OTSC placement. 8 patients had already completed follow-up (6 months), 7 patients were still followed. In patients who had already completed the trial, mean follow-up was 10.8 months (6–15 months).

In these patients the healing rate, defined as post-surgical closure of the fistula, absence of drainage from the fistula and absence of recurrence after 6 months was 88%.

In his presentation PD. Dr. R. Prostl, Stuttgart, coordinator of the trial, summarized that data were encouraging but completion of the trial had to be awaited. The trial is expected to close in 2013.

www.mcn-nuernberg.de/DGK2013/programm-08032013.php

March 2013 | EndoResect study – Endoscopic full-thickness resection of gastric subepithelial tumors

Meining et al. report of 20 patients with gastric subepithelial tumors (SET) up to 3 cm in diameter. Patients were prospectively enrolled and 14 of them treated by endoscopic resection using the OTSC Anchor and a monolaminate flap. In cases where perforation occurred the defect was closed with Twin Gprasr and OTSC System. The authors conclude that this method seems to be faster and easier than other endoscopic techniques such as ESD or submucosal tunneling. Perforations could be adequately managed by the clip. Eight months after clip closure the fistula had permanently healed. The authors conclude fistula closure using the OTSC Proctology system represents a promising spinecher-preserving minimally invasive procedure.

The OTSC Proctology clip system for anorectal fistula closure: the Anal Fistula Claw: Case report

Prostl RL, Ehni W


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 break-down included hemostasis (n=7), closure of chronic fistula (n=28), closure of iatrogenic perforations (n=5), closure of post-esophagostomy anastomotic leak (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%, Hemosuccintia 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 closure 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 (with videos)

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

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

January 2013 | Combined use of OTSC System and stent to close large EMR-related perforations

Treatment of large EMR-caused perforations with a combined use of OTSC and stenting is reported by Hadj-Amor et al.

One patient with a 20-mm esophageal perforation was treated with an OTSC, several other clips and an endoloop. A fully covered stent was placed on top to bypass the perforation. The large duodenal perforation in the other patient was initially unsuccessfully treated with a fully covered stent and several clips to avoid migration. After removal of the clip...
the stent an OTSC and two other clips were used to close the perforation completely. The perforation was bridged by another fully covered stent that was placed over the closed perforation without fixation. In both patients the stents were removed after several weeks and both sites showed healing of the perforation.

Successful endoscopic management of large upper gastrointestinal perforations following ERUS using over-the-scope clipping combined with stenting

December 2012 | OTSC effective in closure of chronic esophago-jejunal anastomotic leaks after total gastrectomy

Prof. Dr. Gennaro Galizia and co-workers from the Second University of Naples, Italy, recently described the application of OTSC clips in the treatment of postsurgical anastomotic failure after total gastrectomy. In a case series of 3, patients that developed anastomotic leaks after gastrectomy and Roux-en-Y jejunal transposition and esophageal-injury were endoscopically treated with OTSC clipping. The case series was published in the Journal of Gastrointestinal Surgery. In all patients clip closure of the leak was technically simple, clinically effective and did not result in complications. The authors conclude that the OTSC System may represent a new option in the management of postsurgical esophago-jejunal leaks. The incidence of anastomotic leaks ranges from 4 to 27% after total gastrectomy and is a not infrequent challenge in such patients.

The Over-The-Scpe Clip (OTSC) System is effective in the treatment of chronic esophago-jejunal anastomotic leakage


December 2012 | The interesting case: ERCP-related jejunal perforation managed by OTSC clipping

In a recent issue of Gastrointestinal Endoscopy Dr. F. Buffoli and colleagues, Digestive Endoscopy and Gastroenterology Unit of the Hospital Institutes, Cremona, Italy, presented an interesting case report on OTSC clipping for jejunal perforation closure:

An 85 y/o women with bile obstruction due to pancreatic cancer presented with jaundice. The patient had Bilroth II anatomy from gastric resection due to a peptic ulcer 35 years in the past. Cholangiography showed a bile duct stricture. An endoscope-related perforation of the jejunum with a size of about 20 mm was visualized distally of the papilla. After placing a covered self-expanding stent through the biliary duct stricture it was decided to close the perforation of the bowel with an OTSC clip. The patient was considered inoperable due to age and comorbidities.

Closure of the jejunum was successful. Retroperitoneal fatty tissue was additionally pulled into the cap by suction and created a “retroperitoneal fat patch”. Abdominal CT revealed retroperitoneal air but no free liquids. The patient received parenteral nutrition and antibiotic treatment. The patient remained symptom-free and the jaundice disappeared. Control CT after 20 days demonstrated complete absorption of the air and the patient was discharged.

ERCP has a perforation rate of approx. 0.3 to 1.3%, as described in the clinical literature. The authors conclude that for the endoscopic closure of large ERCP-related perforations OTSC may be considered as a possible treatment.

Endoscopic “retroperitoneal fatpexy” of a large ERCP-related jejunal perforation by using a new over-the-scope clip device in Bilroth II anatomy (with video)


November 2012 | First publication of Japanese experience with OTSC®

In the recent issue of the World Journal of Gastroenterology Dr. Hirohito Mori published first Japanese experiences with the OTSC System.

Two elderly patients who had suffered iatrogenic lesions in the rectum (one large rectal perforation with abscess formation and one recto-vesical fistula). Both patients were not subject to a surgical intervention for poor general condition, and thus were successfully treated with one OTSC clip each. Both interventions resulted in a dramatic improvement of the patients’ status. It should be noted that both patients underwent direct endoscopic lavage before closure. This is noteworthy especially in the case with the abscess where no percutaneous drainage was inserted.

The authors state: “The endoscopic closure of perforations and fistulae with OTSC is a simple and minimally invasive technique. Given the complete closure and healing of large fistulae with OTSC in our two cases, this approach may be less expensive and more advantageous than surgical closure.”

Rectal perforations and fistulae secondary to a glycerin enema: Closure by over-the-scope clip

Mori H, Kobara H, Fujihara S, Nishiyama N, Kobayashi M, Masaki T, Iizushi K, Suzuki Y


November 2012 | Efficacy of OTSC for the treatment of colorectal postsurgical leaks and fistulas: 86% overall success rate

Anastomotic leaks and fistulas are a severe complication in colorectal surgery. The incidence of clinically relevant leaks ranges from 3–6%.

Prof. Dr. Alberto Arezzo and colleagues, Dept of Digestive, Colorectal and Minimal Invasive Surgery, University of Turin, Italy report about a prospective case series covering 14 consecutive patients, treated between April 2008 and September 2011. Criteria for treatment with OTSC were a wall opening of <15 mm with no extrapolum abcess and absence of stenosis. The mean defect size treated was 9.1 mm in diameter. One OTSC clip of either size 11 or 12 was sufficient in all defects. In one case two separate defects were treated in the same patient. In 8 cases the leak was a fresh, acute lesion, in 6 cases a chronic fistula.

The overall success rate of durable defect closure in this prospective case series was 86%, for acute cases it was 87% and for chronic cases 83%. No OTSC-related complications were reported. Re-surgery was needed in 1 case, in a second failure case the patient refused re-surgery and was left untreated.

The authors conclude that endoscopic closure of colorectal postsurgical leaks are a safe technique with a high success rate, including rectovaginal and colocutaneous fistulae.

Efficacy of the over-the-scope clip (OTSC) for treatment of colorectal postsurgical fistulae and leaks


November 2012 | Performance of the OTSC System in the endoscopic closure of gastrointestinal fistulae – a meta-analysis

The recent issue of “Minimally Invasive Therapy and Allied Technologies” publishes a systematic review and meta-analysis on the challenging field of closing gastrointestinal fistulae by means of the OTSC System. The paper provides an extensive overview of relevant primary clinical research, case reports and conference abstracts published on this topic. The statistical evaluation of, in total, 19 examined articles revealed a high rate of procedural success (mean 84.6%; 95% confidence interval 68.6% to 93.8%) and durable clinical success (mean 69.0%; 95% confidence interval 66.6% to 93.8%) and dura-

November 2012 | Performance of the OTSC System in the endoscopic closure of gastrointestinal fistulae – a meta-analysis

Weiland T, Feilhar M, Gottwald T, Schurr MO

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 vis-à-vis vessel


October 2012 | Post surgical colorectal anastomotic leaks: OTSC® clip recommended as treatment of choice at SMIT conference

Barcelona, September 21st 2012: The 24th conference of the Society for Minimally Invasive Therapy (SMIT) was held in Barcelona, Spain, under the presidency of Dr. Enric Laporte. Prof. Dr. Alberto Arezzo and colleagues, 2nd Dept of General Surgery, University of Turin, Italy, presented latest data of 25 clinical cases with post-surgical anastomotic leaks or fistula after colorectal surgery. In the general literature anastomotic leaks have an incidence of about 7–9% after laparoscopic or open colorectal surgery.

In the 25 cases prospectively collected in Turin, 21 were successfully treated with endoscopic OTSC clipping alone. This is a success rate of 84%. In 3 patients the fistula did not heal, and in 1 patient additional surgery was needed to close the defect. In conclusion the authors recommend the use of endoscopic OTSC clipping for lesions up to 12 mm in size as the primary treatment for patients with post-surgical leaks and fistula after colorectal surgery.

Efficacy of the over-the-scope clip (OTSC®) for treatment of colorectal post-surgical leaks and fistula

Arezzo A, Verra M, Reddavid R, Cravero F, Bonino MA, Morino M

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August 2012 | OTSC® featured for gastro-intestinal bleeding and NOTES in UEGW 2011 Report

In the UEGW 2011 Report: putting endoscopy into perspective, Papanikolau and Rösch feature the OTSC® System for gastrointestinal bleeding and NOTES.


The authors conclude that although OTSC being “promising, further clinical experience will help to identify the optimal role and indication for OTSCs in gastrointestinal bleeding.” Ovesco would like to add that recently Dr. T. Krah (Endoscopy Unit, Dept. Gen. Surgery, University of Tübingen) has prospectively evaluated 60 consecutive patients with complicated GI hemorrhages with encouraging results (see Ovesco news below "June 2012 | OTSC® in emergency hemostasis: new data demonstrate superior results"). At the same time a multicenter prospective, randomised, controlled trial is about to start to identify "patients and lesions that are most suitable for the OTSC device, in addition to randomized trials comparing its efficacy and safety relative to those of established techniques". Ovesco has also performed a cost-analysis study proving OTSC being superior to both conventional endoscopy and surgery.

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July 2012 | Experimental study from Norway confirms efficacy and safety of OTSC® in gastric closure for NOTES

Researchers at St. Olavs University Hospital, Trondheim, have reported about a new experimental trial in the porcine animal model (n=15). After transgastric approach had been established and flexible peritoneoscopy had been performed, gastrotomy closure with OTSC clips and T-bars was studied. The safety of closure was tested with the methylene blue test after the procedure. The animals were kept for 2 weeks postoperatively and then re-operated for sample retrieval and histological examination. No postoperative complications were found and the methylene blue test did not reveal any leaks. Histology demonstrated full-thickness healing of all gastric lesions. Differences between both closure methods were not observed.

Efficacy and safety of transgastric closure in natural orifice transluminal endoscopic surgery using the OTSC system and T-bars: a survival study in a porcine model


July 2012 | First North American literature report on OTSC®

In a recent issue of the Canadian Journal of Gastroenterology, Dr. T.H. Kohari, Dr. G. Haber and colleagues from the Dept. of Gastroenterology at Lenox Hill Hospital, New York City, reported about their initial experience using Ovesco’s OTSC clip. They report about the application of OTSC in the treatment of gastrocutaneous fistula. A case report describes the use of OTSC in a patient with a persistent gastrocutaneous fistula after PEG feeding tube removal. 2 clips were placed to
occlude the gastric orifice of the fistula tract. The closure was immediately successful and the patient was discharged home. At 3-month gastrointestinal follow-up the fistula had completely healed. The 2 clips were found spontaneously detached from the tissue and were removed from the gastric cavity with an endoscopic net retriever. The authors conclude that the results from the literature and their own experience demonstrate efficacy of the OTSC system in the closure of gastrointestinal fistula.

The over-the-scope clip system – a novel technique for gastrointestinal fistula closure: The First North American experience
Kothan TH, Haber G, Sonpal N, Karanth N

June 2012 | OTSC® in emergency hemostasis: new data demonstrate superior results.
Freiburg, Germany. June 15, 2012 – Congress of the South-West German Society for Gastroenterology. Dr. Thomas Kratt, Department of Visceral and Transplant Surgery of Eberhard-Karls University, Tuebingen, Germany, presented latest data on the use of OTSC in the emergency treatment of GI hemorrhage. He reported on a consecutive series of 60 patients with severe GI bleeding based on different pathologies, mainly peptic ulcer and different locations. 69 OTSC clips had been placed in these patients. In 19 cases OTSC clipping was chosen due to acute failure of conventional other hemostatic techniques to stop the bleeding or relapse of the bleeding after such conventional treatment.

The overall success rate was 65 of 69 or 94.2%. No severe complications related to the OTSC procedure were noted and 2 minor complications (muco-cutal injury), requiring no further treatment.

http://www.sw-gastro.de/haupt/kongress.php

June 2012 | OTSC®@EAES 2012: new data in the treatment of post-surgical leaks and fistulas
From June 20–23 the 20th International Congress of the European Association of Endoscopic Surgery took place in Brussels, Belgium.

New clinical data on Ovesco’s OTSC clip were presented by Prof. Dr. Alberto Arezzo and colleagues from Turin, Italy. They described results from a consecutive patient series with post-surgical leaks and fistulas, closed with OTSC clipping. 16 patients were treated at the Department of Surgery at Molinette Hospital in Turin. The rate of permanently successful closure was 96%.

Effective Over-The-Scope Clip for double enterocutaneous anastomotic fistula treatment after right hemicolectomy
Arezzo A, Reddavid R, Verra M, Cravofo F, Bonin MA, Morino M (524; Thursday)
In a second talk, Prof. Dr. Arezzo presented a case study on OTSC closure of a double enterocutaneous fistula after colorectal resection.

Endoscopic treatment of colorectal post-surgical leaks and fistulas using an Over-The-Scope-Clip (OTSC)
Arezzo A, Verra M, Reddavid R, Cravofo F, Bonin MA, Morino M (513, Thursday)

June 2012 | OTSC® in bariatric procedures: 30th GEEW – Gastroenterology and Endoscopy European Workshop – 20th to 22nd June 2012
From June 18 to 20 the 30th GEEW – Gastroenterology and Endoscopy European Workshop – took place in Brussels, Belgium, under the directorship of Prof. Dr. Jacques Devière and colleagues.

The use of Ovesco’s OTSC clip was presented in a live procedure for the treatment of weight regain after Roux-en-Y gastric bypass.

The procedure was performed by Prof. Dr. J. Devière, Brussels, supported by Prof. Dr. G. Costamagna, Rome. The gastro-jejunal pouch anastomosis that had enlarged over time, leading to weight-regain, was reduced in size by means of the placement of 2 OTSC clips. A variation of the original technique described by Dr. A. Heylen was applied. The procedure took about 15 min.

Prof. Dr. Devière also mentioned that he is currently running a study on 20 patients and that he treated 3 patients so far with satisfactory weight loss.

The OTSC® Clip in Revisional Endoscopy Against Weight Gain After Bariatric Gastric Bypass Surgery
Heylen AM, Jacobs A, Lybeer M, Probst RL
Obesity surgery 2011 Oct;21(10):1629-33
www.live-endoscopy.com

June 2012 | Successful gastric closure with OTSC® in porcine NOTES feasibility studies
Bernhardt et al. used the OTSC for gastric access closure in a recent pure NOTES sigmoid resection study in the porcine model. According to the study pure NOTES resection and anastomosis of the large bowel are feasible. The gastric access was successfully closed in all five animals using one OTSC clip and with the help of the OTSC Twin Grasper. Histology after 35 days showed the clip still in place and a healed gastric access site without adhesion or irregular scar formation.

Another recent pure NOTES porcine study by Donatsky et al. showed immediate closure of gastric access site in all ten pigs using the OTSC clip.

Pure NOTES sigmoid resection in an animal survival model
Endoscopy. 2012 Mar;44(3):265-9

Pure natural orifice transluminal endoscopic surgery (NOTES) with ultrasonography-guided trans-gastric access and over-the-scope-clip closure: a porcine feasibility and survival study

May 2012 | Treatment of a double anastomotic fistula by OTSC® published online by the Italian Society of Digestive Endoscopy
On their website, the Italian Society of Digestive Endoscopy published an interesting clinical case report of Dr. Alberto Arezzo from the University of Turin, Italy, of a double anastomotic fistula to the skin after right hemicolectomy, both treated by OTSC.

Trattamento di duplice fistola anastomotica enterocutanea dopo emicolectomia destra mediante Over The Scope Clip (OTSC)
Alberto Arezzo, Rossella Redavid, Mauro Verra, Francesca Cravofo, Marco Augusto Bonin, Mario Morino Caso Clinico proposto da Alberto Arezzo. Pubblicato il: 11/05/2012
Chirurgia Digestiva, Colorettale e Miniinvasiva; Dipartimento di Discipline Medico Chirurgiche; Università degli Studi di Torino

May 2012 | Conference report: OTSC® system recommended for the treatment of anastomotic leakage and bleeding (Congress of German Society of Surgery, DGCH, in Berlin)
At this year’s Congress of the German Society of Surgery in Berlin – 129th Congress of the Deutsche Gesellschaft für Chirurgie (DGCH), 24 - 27 April 2012 – Ovesco’s products were featured by Prof. Thomas Lehnert, Bremen and Prof. Ulrich T. Hopt, Freiburg during the session on „Management of post-surgery complicated/anastomotic leakage“. Lehnert who reported on the upper GI tract also cited his good clinical experience with OTSC regarding severe bleedings of e.g. the duodenum. Hopt pointed out that with the OTSC being very effective in the closure of post-surgical defects in the lower GI tract one must always consider proper drainage of a potential abscess behind the leak.

April 2012 | Pre-clinical research: Ovesco’s FTRD tested for resection of gastric submucosal tumors
Ovesco is conducting research on endoscopic full thickness resection techniques. Its FTRD-full thickness resection device is in late pre-clinical development for use in the colon. D. von Renteln and colleagues recently reported about the application of FTRD for resecting artificially created submucosal tumors in the porcine animal model (n=8). The median procedure time was 15 min. Successful resection of the artificial submucosal lesion was achieved in 4/6 (67%) cases. Successful full thickness resection of the gastric wall was achieved in 3/6 (50%) cases. In all cases, the OTSC closed the resection site completely.

The current version of the device is designed for colonic application and not matched for harvesting thicker gastric tissue. However, the authors conclude that gastric resection is technically feasible with FTRD.

FTRD is not yet available for clinical use.
Endoscopic full-thickness resection of submucosal gastric tumors.
von Renteln D, Rösch T, Kratt T, Denzer UW, El-Maayr M, Schachtschul G.

April 2012 | Conference report: OTSC® at German Society for Endoscopy (DGE-BV) – latest clinical data
The German Society for Endoscopy and Imaging Techniques (DGE-BV) held its XXXIIth Annual Conference in Munich, Germany, from March 22-24.

Ovesco’s OTSC clip was the topic of a number of presentations in the scientific programme, as listed below. Part of these presentations were recently published on “Endoskopie heute”, the official journal of the DGE-BV.

dres Faehndrich and Sandmann from Dortmund presented their 2-year experience using OTSC in various indications. Their case series included 31 patients with GI fistula, acute perforations or post-surgical suture dehiscence. The therapeutic goal of closure was achieved in 83%, 100% and 75%, respectively. They also report about successful removal of clips with the Nd:YAG laser. A special application of OTSC in the Dortmund case series was endoscopic gathering of the hiatus in patients with reflux disease.

FV17 Neue Einsatzmöglichkeiten des OTSC-Systems im Gastrointestinaltrakt – Ergebnisse und Verläufe nach 2 Jahren praktischer Anwendung
Sandmann M, Heike M, Fahnrich M.
In a further paper, the same authors reported on the use of OTSC in a clinical case series with full-thickness colon resection (n=8). In 4 patients polycystomy revealed T1 colon cancer, in 3 patients an accidental carcinoid was found and in 1 patient local recurrence after several mucosectomies.
for colonic adenoma. In all these cases an 14-size OTSC system was deployed to close the full thickness of the wall after the lesion had been pulled into the OTSC application cap. Then a snare was used to cut the folded tissue just above the level of the clip. Complete lesion removal, confirmed by histology was achieved in all 8 cases. In 5 cases the level of resection was in the deep muscular layer and in 2 cases the entire wall layers were involved. The authors conclude that deep wall or even full thickness resection with wall closure by OTSC is safe and fast and can be seen as an alternative to surgical resection in specific clinical cases.

FV9 Ergebnisse der endoskopischen Vollwandresektion im Gastrointestinaltrakt mithilfe des OTSC-Systems
Fähndrich M, Sandmann M, Heike M, Dortmund

The group of Prof. Hochberger from Hildesheim presented their results of a consecutive series of 40 OTSC interventions. In 85% of cases the primary therapeutic goal was reached. Dr. Widi reported on 23 cases of upper GI bleeding which had been refractory to other therapy before being treated with OTSC. Of these 17 cases of OTSC perforation closures were successful treated, 2 patients died in spite of attempted surgical hemostasis and 2 other patients for reasons not related to the endoscopic intervention. He also showed data of 3 perforations with a closure rate of 100%. Also 2 complications were reported. 1 new sigmoid perforation that was reported after success closure of an EMR-related perforation in the hepatic flexure and one impingement of an endoscopic instrument with an OTSC clip.

FV24 Der Over-The-Scope-Clip (OTSC) – Erste klinische Erfahrung bei der Behandlung von schweren Blutungen, Perforationen und Fisteln an 40 Patienten
Wedi E, Menke D, Hochberger J

The group around Prof. Rahmel from Erlangen summarized their experiences with OTSC in 17 cases of OTSC perforation closures in a retrospective evaluation. Dr. Hagel reported an overall success rate of 64.7%. He distinguished between cases with vital and with necrotic or inflamed tissue margins. In cases with non-vital wound margins the number of clips was greater that in cases with non-altered wound margins (1.1 +/- 0.3 vs. 2.3 +/- 0.5 clips per case).

P22 Over-the-scope-clip – Applikation ermöglicht eine hohe Verschlussrate bei verschiedenen Arten von gastrointestinalen Perforationen

In a pre-clinical study Dr Bernhard and co-workers, Rostock, assessed OTSC for gastric closure after pure NOTES sigmoïd resection using a combined transgastric and transsigmoidal approach in 5 animals. Closure of the gastric cavity with the OTSC clip was successful in all cases. All clips were still present at the end of the follow-up period (5 weeks). The mean operative time was 3 h 20 min (2.5 - 4.5 hrs).

P22 Pure-NOTES-Signaresektion in einem Tier-Überlebensmodell

Further presentations dealt with the application of the OTSC system:
Ovesco-Clip bei Fisteln und Anastomoseninsuffizienz
Fähndrich M, Dortmund
Ovesco-Clip bei iatrogeneren Perforationen und zum Verschluss von Vollwandresektionen
von Renteln D, Hamburg

Endoskopische Vollwandresektion von subepithelialen Magentumoren (EndoResectStudie)

Perforationen am GI-Trakt: Wann endoskopische Therapie, wie lange warten, wann Chirurgie?
Pohl J, Wiesbaden vs. Fuchs KH, Frankfurt/Main

Transgastrische Appendektomie
Köhler G, Mannheim

Moreover, several posters showed results of OTSC-system applications:
Stentfixierung mit Hilfe des OTSC-Systems zur Verhinderung von Stentmigrationen
Fähndrich M, Sandmann M, Heike M, Dortmund

Over-the-scope-clip – Applikation ermöglicht eine hohe Verschlussrate bei verschiedenen Arten von gastrointestinalen Perforationen

Hocheffektive konservative Therapie einer beginnenden Sepsis infolge Magenperforation nach PEG-Anlage durch endoskopischen Over-the-scope Clip (OTSC)-Perforationsverschluss und frühzeitige Tigecyclin-Linseolidapplikation

April 2012 | Efficacy of endoscopic closure of acute perforations of the gastrointestinal tract
Voermans at al., Department of Gastroenterology and Hepatology, Academic Medical Center, University of Amsterdam, Amsterdam, the Netherlands – report of the first international prospective study on efficacy and safety of the OTSC® system for acute iatrogenic perforations in the GI tract.
36 patients were recruited over a time period of 1.5 years and started almost three years ago. 5 esophageal, 6 gastri- c, 12 duodenal, and 13 colonic perforations were included and endoscopic repair was performed by using the Over-the-Scope-Clip according to a standardized operating procedure. Primary end point was successful closure, which was determined as endoscopic successful closure without leakage (detected by water-soluble contrast x-ray analysis), and absence of adverse events within 30 days after the procedure.
Immediate closure was endoscopically successful in 33 patients (92%). One patient developed an esophageal perforation while the cap was introduced, and in 2 patients the perforations did not close; these 3 patients were successfully treated with surgery. None of the patients had leakage of soluble contrast on the basis of contrast x-ray. One patient with a closed colonic perforation deteriorated clinically within 6 hours after the procedure. Despite surgery the patient died within 36 hours. The remaining 32 patients had successful endoluminal closures; the overall success rate was 89% (95% confidence interval, 75% – 96%). The mean endoscopic closure time was 5 minutes 44 seconds ± 4 minutes 15 seconds. The authors conclude that the OTSC system is effective for the endoluminal closure of acute iatrogenic perforations. It allows patients to avoid surgery, and 85% of patients had successful closures without adverse events.

Efficacy of Endoscopic Closure of Acute Perforations of the Gastrointestinal Tract

March 2012 | OTSC® for treating anal fistula in proctology
Prossl RL, Herold A, Joca AK, Bussen D, Wehmann M, Gottwald T, Scharf MO

OTSC® Proctology is a CE-marked medical device of Ovesco Endoscopy AG and is presented at the meeting of the German Society for Coloproctology in Munich, Germany 36. Deutscher Koloproktologen-Kongress; 15–17 March 2012
Hilton Munich Park | Am Tucherpark 7 | 80538 Munich
OTSC® Proctology is not cleared by the FDA for clinical application in the United States

OTSC® update 9

March 2012 | OTSC® is superior to other endoscopic clips in acute upper GI hemorrhage in the experimental setting
The treatment of severe upper GI hemorrhage is one of the foremost indications of the OTSC® clip. Due to its size and compression force OTSC® is effectively used in peptic ulcer bleeding.
A recent prospective randomized trial, carried out by investigators from the USA, Japan and Korea has underlined the superior performance of OTSC®. The study was conducted by M Kato, Y Jung, MA Gromski, R Chuttani and K Matthes (Boston, Tokyo, Seoul) and was carried out in a standardized ex vivo animal tissue hemorrhage simulation (EASIE-R). Spurting vessels were created using porcine stomach. The vessels were connected to a pressure transducer to measure the circulating blood substitute pressure in order to determine the closing of the spurting vessel. Two conventional endoscopic clips (QuickClip 2, Olympus, Resolution clip, Boston Scientific) and the OTSC® clip (Ovesco) were compared.
Both investigators used either suction through the scope for and standardized ex-vivo model for training and research. (EASIE), used for the study, represents a well-established ved between the 3 devices in terms of usability and ef

January 2012 | OTSC® has greater hemodyna-mic efficacy in stopping spurting bleeding in the EASIE model than other endoscopic clips. Dr. A Naegel, Dr. J. Maiss and colleagues from the 1st Depart

January 2012 | OTSC® has greater hemodynamic efficacy in stopping spurting bleeding in the EASIE model than other endoscopic clips. Dr. A. Naegel, Dr. J. Maiss and colleagues from the 1st Department of Medicine at Erlangen University Hospital, Er- langen, Germany, published the results of an ex vivo trial on OTSC® in the treatment of upper GI hemorrhage in the January issue of Gastrointestinal Endoscopy. The setting of the trial was prospective for studying OTSC® and used a historic control group of alternative endoscopic clips, studied earlier under identical model conditions. The Erlangen Active Simulator for Interventional Endoscopy (EASIE), used for the study, represents a well-established and standardized ex vivo model for training and research. The EASIE model is equipped with an active and pressure-controlled bleeding simulator, operating a close to physiolog-ical hemodynamic conditions. Two investigators took part in the trial, each treating 16 standard EASIE bleeding sites. Both investigators used either suction through the scope for positioning the OTSC® applicator cap at the bleeding site or the OTSC® Anchor (n=8, each application condition). Systemic pressure in the EASIE circulation system was measured one minute before, during and one minute post clip application to objectify the effects of clipping on the vessel diameter. In result, OTSC® clipping led to significant increase of systemic pressure (indicating effective hemostasis) and vessel diameter decrease (p<0.001). The application technique had no significant effect on the main outcome variable. Historic comparison with conventional endoscopic clips, studied earlier, demonstrated a significantly higher hemodynamic efficacy of the OTSC® system. Hemodynamic efficacy of the over-the-scope clip in an established porcine cadaveric model for spurting bleeding Naegel A, Boltz J, Zofp Y, Matthes K, Mueller B, Kraus F, Neurath MP, Maiss J. Gastrointest Endosc. 2012 Jan;75(1):12-9.

December 2011 | OTSC® is a safe and uncomplicated alternative to surgery in perforation closure The recent issue of "Endoskopie heute", the official journal of the German Society for Endoscopy (DGE-BV), publishes a systematic literature review on Ovesco’s OTSC® clip. The paper, presented by Dr. A. Kirschniak et al., Dept of Surgery, Tuebingen University, Tuebingen, Germany, summarizes data of 37 original Medline-referenced publications. This includes 29 clinical and 8 experimental publications. In summary the authors state that the current literature supports the use of OTSC® for the closure of spontaneous and iatro-genic perforations in the digestive tract up to 20 mm in size. OTSC®-Clipsystem – Klinische Anwendungen und Ex- perimentelle Erfahrungen – Systematischer Review [OTSC-Clip System – Clinical Applications and Ex- perimental Experiences – A Systematic Review] Kirschniak A, Falck C, Kirschniak M, Storz P, Kratt T. Endo heute 2011; 24: 195-200 November 2011 | In retrospect: OTSC® notably mentioned at UEGW, October 22–26, 2011, Stockholm, Sweden The OTSC® clip was the topic of numerous scientific pre-sentations at UEGW 2011. The primary areas of application of Ovesco’s over-the-scope-clipping technology include the treatment of severe upper GI hemorrhage, the closure of acute perforations and the closure of chronic lesions of the wall, e.g. fistula. Clinicians from various centers presented their data on the use of OTSC®: E. Wedi et al., Hildesheim, Germany, presented a mixed case series of 24 patients treated between February 2009 and March 2011. 15 patients suffered from upper GI bleed-

December 2011 | Closure of therapy-resistant enteric fistula with OTSC® clip and OTSC® anchor PD Dr. J. Grossmann and colleagues, Evangelisches Krankenhaus, Moenchengladbach, Germany, report about a special case of OTSC® treatment in the recent issue of Deutsche Medizinische Wochenschrift. A patient suffered from recurrent subphrenic abscesses following a complicated postoperative course after sigmoidectomy for chronic recurrent diverticulitis. Two previous attempts of abcess treatment by transcutaneous drainage had failed. Radiographic studies revealed a fistula of the de-scending colon leading to the abscess formation. An OTSC® clip was applied on the enteric fistula, retracted by means of the OTSC® anchor. This led to complete closure of the fistula within four days as demonstrated by radiographic studies and repeat dye installation. Subsequently the transcutane-ous drainage was successfully removed within 14 days of OTSC® application without recurrence of abscess formation. Endoskopischer Verschluss einer chronischen Fistel des Kolons unter Anwendung des „Over-the-Scope“- Clips (OTS) [Article in German] Grossmann J, Dening C, Althoff C. Dtsch Med Wochenschr. 2011 Nov;136(44):2245-8. [Epub 2011 Oct 25]
into a large transparent cap, electric snare and special OTSC® clip preloaded. Full resection was successful in all 8 animals, in one case 2 additional clips had to be placed for complete closure, in one case clip release failed. Altogether the authors conclude that this device allows for reliable full-thickness resection and closure of the colonic wall in a single procedure as well as reliable wound healing of ETTR defects.

P020 ENDOSCOPIC FULL-THICKNESS RESECTION AND DEFECT CLOSURE OF THE COLON WALL USING A CLIP AND CUT TECHNIQUE

Daniel von Renteln, Germany; Thomas Kratt; Thomas Rösch; Ulfhke Denzer; Guido Schachschulz

Full paper: GIE 2011 Nov; 74(9): 1108-14

Thomas Huc et al. presented data from a porcine survival model where they compared feasibility and safety of gas- tric and colonic NOTES closure using the OTSC® system (10 animals each). Closure was successful in all 20 ani- mals with mean application time of 8 min (stomach) and 5 min (colon). Histology revealed transmural healing in all animals due to signs of mucosal inflammation in some animals further investigation is recommended according to the authors (although they are probably just normal in this setting, acc. to Ovesco).

P0204 OVER-THE-SCOPE-CLIP CLOSURE OF GASTRIC AND COLONIC ANNOUS SESS SITES IN NATURAL ORIFICE TRANSULMINAL ENDOSCOPIC SURGERY

Tomas Huc, Czech Republic; Marek Benes; Matej Kock; Martin Krak; Jana Maluskova; Eva Kieslchlova; Martin Oliverius; Julius Spicaík

The Munich (Germany) group around A. Meining reported of 16 prospective patients with gastric subepithelial masses (<3 cm). Solely endoscopic resection was possible in 12/16 cases. In 4/12 patients gastric perforation occurred and was cu- red with an OTSC® clip successfully. The authors conclude that,endoscopic snare resection of digestive subepithelial masses (<3cm) seems to be a safe and minimal invasive procedure. If perforation occurs, it can be adequately managed by placing the OTSC® clip. These results can be regarded as a further en- couraging step towards transgastric endoscopic surgery.

P1080 ENDOSCOPIC FULL THICKNESS RESECTION OF GASTRIC SUBEPITHELIAL MASSES – A STEP TOWARDS NOTES?

Christoph Schlag, Germany; Stefan von Delius; Hubertus Feusser; Dirk Wilhelmm; Anelena Beitz; Roland M Schmid; Alexander Meining

Donatsky et al. evaluated the feasibility of combining trans- gastric. (TG) pure NOTES peritoneoscopy and intraperitoneal EUS (ip-EUS) with intraluminal EUS (i-EUS) for perito- neal evaluation, and the safety of EUS-guided access and OTSC® clip closure in a survival model with 10 pigs. All ani- mals survived with histologically proven full-thickness closure again with signs of inflammation and micro-abcesses. They conclude that NOTES peritoneoscopy and ip-EUS are feasible and render sufficient peritoneal evaluation, given that the OTSC® system ensures a full thickness closure of the perforated defect.

P1044 BETTER OUTCOME OF ENDOSCOPIC MANAGEMENT VS SURGERY FOR UPPER GASTROINTESTINAL PERFORATION

Anne Vijverman, Belgium; Hubert Pissevaux; Tanh Anou- tah; Jean-François Gogot; Pierre H. Deprez

September 2011 | Vészegmedizin 2011 in Leipzig, Germany, 15–17 September 2011 | Surgeons recommend the OTSC® System for the closure of anastomotic leaks and fistulas. At the joint congress of the DGVS and the DAVG (German society of digestive & metabolic disease and German soci- ety of general and visceral surgery) the OTSC® System was discussed by surgeons and gastroenterologists in the session Complications with interventions in the upper GI tract.

Following lectures titled "Therapeutic concept for intrathora- cic anastomotic insuf- ficiency" and "Therapeutic concept for intrabdominal anastomotic insufficiency" session partici- pants were sharing their clinical experience with the device. Both presenters are positive about the OTSC® System as an endoscopic device for the closure of anastomotic leaks and fistulas. One surgeon reported on his clinical experience where the OTSC® System was successfully used for the closure of two anastomotic leaks.

September 2011 | Endoscopic treatment of perforated peptic gastric ulcer: case report of two patients

The surgical unit CLINTEC, Karolinska Institutet vid Koro- linksa Universitetssjukhuset Huddinge, Stockholm, Sweden, reported of a 42-year old woman with a 3x4-mm perforation in the antrum which was successfully treated with the OTSC® System. The patient was discharged after 4 days. At follow- up, a month later, the patient presented fully recovered.

The second patient, a 83-year old man, had a 23-mm perforation which could also be closed successfully using two OTSC® clips.

The authors conclude that endoscopic closure with the OTSC® System offers an interesting alternative to conven- tional surgical treatment of peptic ulcer perforations.

At behandla perfererade peptiska ventrikul-ulcus med endoskopii; fallrapport på två patienter

Fredrik Swahn, Lars Enochsson, Magnus Nilsson, Lars Lundell, Matthias Lühr, Urban Amelo

Enheten för kirurgi, CLINTEC, Karolinska Institutet vid Ka- rolinska Universitetssjukhuset Huddinge, Stockholm, Sweden

September 2011 | Closure rate of 90% in fistulas, anastomotic leaks and perforations treated with OTSC® : new case series published

A new case series, reported by Dres Sandmann, Heike and Faehndrich, Klinikum Dortmund Mitte, Germany, was published in the German Zeitschrift fuer Gastroenterologie. The authors present a series of 10 patients with penetrating defects within the digestive tract. Pathologies were fistulas (esophagotracheal, esophagopleural, gastrectomaceous and colovésical), perforations (after mucosectomy, after papilo- tomy and PEG misplacement) and anastomotic leakages (after gastroscopy and gastrectomy). They report a closure success rate of 90% (9 out of 10 patients).

Application of the OTSC System for the Closure of Fistulas, Anastomosomal Lesions and Perforations within the Gastrointestinal Tract


August 2011 | OTSC® clip among most promising technologies for closure of perforations in the digestive tract

In the latest issue of the Spanish journal Gastroentero- logía y Hepatología Dr. F. Junquera and colleagues, from the Servicio de Aparato Digestivo, Corporación Parc Taulli, Sabadell, Spain, describe the OTSC® system and its use in full thickness perforations of the digestive tract. The authors conclude that OTSC® is one of the most promising techno- logies for closure of perforations of the gastrointestinal tract because of its efficacy, safety and rapidity. Other indications include severe gastrointestinal bleeding, fistulae, anasto- motic leaks, and bariatric surgery anastomosis remodelling.


August 2011 | OTSC® clipping for closure of gast- rocutaneous fistula after surgery for peptic ulcer Dr. G. Kouklidis and colleagues from the University Gene- ral Hospital of Alexandroupolis, Greece, describe a case of gastrocutaneous fistula after surgical treatment for a perfor- rated gastric ulcer. By means of OTSC® clip placement the fistula was successfully closed. Therapeutic success was verified at the 2nd day and 6th week after the application of the clip. The authors judge endoscopic application of the OTSC® device was safe and effective for the treatment of a gastrocutaneous fistula.


August 2011 | Endoscopic Full Thickness Re- section with OTSC® as a spin-off from NOTES research for the therapeutic gastroenterologist

The research in natural orifice transluminal endoscopic sur- gery (NOTES) has brought significant advances in flexible endoscopy. In a recent overview in Minerva Gastroenterolo- gia e Diabetologia RR Watson and CC Thompson analy- sers NOTES research and indicate candidate NOTES spin-off procedures. Among them is Endoscopic Full Thickness Re- section of GI lesions with subsequent full thickness closure of the organ wall with an OTSC® clip by Ovesco Endoscopy.

Predical research at Ovesco includes combined me- chanisms for full thickness resection of polyis, adenoma or other suitable lesions, and a Technical Report on the
in their recent report about a series of 12 consecutive patients with post-surgical or traumatic fistulas of the gastrointestinal tract treated by OTSC® clipping. R. Manta et al., Modena, Italy carried out a cost comparison. They found OTSC® therapy considerably cheaper than alternative surgical intervention (USD 1,050 vs USD 3,800 in this particular hospital setting). Besides the cost advantage also the therapeutic results are reported as favourable: “No complications occurred, and the leaks were all healed at follow-up 1 – 3 months later. In 9 of the 11 patients, the leak was sealed within 4 days by a single application.” The authors conclude that OTSC® clipping is an effective and technically simple technique for the closure of wall defects.

Endoscopic treatment of gastro-intestinal fistulas using an over-the-scope clip (OTSC) device: Case series from a tertiary referral center


May 2011 | Case report: closure of broncho-esophageal fistula

In the April issue of the journal Gastrointestinal Endoscopy A Rebelo and colleagues, Alto Ave Hospital, Guimarães, Portugal, present a case report with closure of spontaneous esophageo-bronchial fistula in a lung cancer patient, after radio-chemotherapy. Closure of the fistula was feasible by means of OTSC clip application and additional placement of a self-expandable covered stent. Besides partial occlusion of the fistula orifice the OTSC clip also worked as an anchoring mechanism for the stent to avoid migration. Until one month after there were no signs of fistula re-opening. The patient died of the underlying pulmonary tumor.

Complex endoscopic resolution of a large broncho-esophageal fistula

Rebelo Ana, Mouzinho-Ribeiro Pedro, Cotter José
Gastrointestinal Endoscopy 2011;73:4 833-4

April 2011 | Post-surgical gastrointestinal fistulas treated with OTSC®

In the March issue of the journal Endoscopy R. Manta et al. report about a series of 12 consecutive patients treated with OTSC for closure of post-surgical gastrointestinal fistula in a tertiary referral center (S. Agostino Estense Hospital, Modena, Italy). Fistula closure with OTSC clipping was successful in 11 out of 12 cases. Healing was confirmed by radiographic control or endoscopy. No device-related complication occurred.

The authors conclude that OTSC clipping is an effective and technically simple technique for the closure of wall defects.

Endoscopic treatment of gastrointestinal fistulas using an over-the-scope clip (OTSC) device: Case series from a tertiary referral center


March 2011 | The Over-The-Scope Clip (OTSC) for the treatment of gastro-intestinal bleeding, perforations, and fistulas

Kirschnaik A, Sabatova N, Zeikek D, Klinkrainger A, Krott T

March 2011 | First pharyngeal placement of OTSC® reported at FISMADE conference, Torino, Italy

F. Iacopini, A. Sozzarzo and colleagues reported the emergency use of an OTSC clip in a patient after colar stabbing injury in suicidal intent at the 17th National Congress of the Italian Society for Digestive Disease (FISMADE), Torino, Italy, March 3-9, 2011. After self-inflicted stabbing injury of the neck an elderly female patient with a history of severe depression was admitted to the S. Giuseppe Hospital, Albano Lazio, Rome, Italy. OTSC revealed a 12-mm cut of the left lateral wall of the hypopharynx. The lesion was endoscopically closed by means of an OTSC clip. 3 days after the procedure normal contrast swallow with gastrografin demonstrated normal liquid passage, a CT-scan showing no mediastinal emphysema or fluid collection. The patient had some discomfort with pharyngeal foreign body feeling. After 5 weeks the clip detached and was swallowed by the patient without complications. The further course was uneventful.

March 2011 | OTSC® comparable to surgical suture for the closure of colonic perforations in a standardised porcine model

RP Voermans et al. report of an animal series of ex vivo colonic perforations that were treated with several methods, surgical suture being considered the gold standard. Mean colotomy leak pressure (mm Hg) as primary outcome was comparable in surgical suture, flexible staplers, and OTSC®.

Comparison of endoscopic closure modalities for standardised colonic perforations in a porcine colon model

Voermans RP, Vergouwe F, Breeveld P, Fockens P, van Berge Henegouwen MI

Further reading:

March 2011 | OTSC® System successfully administered in full wall resection for early colon cancer

Dr. Martin Fähndrich and Dr. Marcel Sandmann of the Department of Gastroenterology, Klinikum Dortmund, Germany for the fourth time successfully used the OTSC® System in a full wall resection for early colon cancer. The tumor was secured within the resection cap of the OTSC® system for hemostasis (n = 27) in the colon and the upper GI tract, closure of esophageal, gastric, and colonic perforations (n = 11) as well as closure of fistulas (n = 8) and for preoperative marking (n = 4). The primary treatment was reported successful in all cases. In more detail, there were two secondary bleedings that required endoscopic re-intervention, and the permanent closure of fistulas could not be achieved in all cases. The authors conclude that the OTSC system is effective and safe for complicated bleeding and closure of fresh perforations of the gastrointestinal tract.

The Over-The-Scope Clip (OTSC) for the treatment of gastrointestinal bleeding, perforations, and fistulas

Kirschnaik A, Sabatova N, Zeikek D, Klinkrainger A, Krott T
With regard to closure of transmural access lesions in NOTES the report states that several studies menti-
oned safe access and closure with new devices such as anchorg systems or Ovesco’s large scale clip (OTSC®)
Natural-orifice transluminal endoscopic surgery (NOTES) in Europe: summary of the working group pro-
ports of the Euro-NOTES meeting 2010

February 2011 | Advance notice: OTSC® System prominently represented at 41st Congress of the
DGE-BV, 17–19 March 2011 in Munich, Germany
The 41st Congress of the German Society for Endoscopy and Imaging Procedures (Deutsche Gesellschaft für Endo-
skopie und Bildgebende Verfahren, DGE-BV) is held at The Westin City Center Munich under the presidency of
Prof. Dr. Hubertus Feussner.
Ovesco is present at the industry exhibition, booth # 205.
Ovesco is also sponsoring several workshops for advanced endoscopists:
Thursday, 17 March 2011,
Hands-on Training at the EASIE simulator, Workshop # 2: FIBRO: Trans proliferative and post-
operative Leckagen
Workshop J1 and Workshop J2
NOTES-Tool-Box und neue Technologien – Dissektoren,
neue Blutstillungs- und Verschlussysteme, Näh-
maschinen.
Furthermore, the OTSC® System is dealt with in a number of presentations:
Thursday, 17 March 2011 | Room Atlanta Session 08:30 –
10:00 am, Expertenvideos i 09:42 – 10:00 am
Neue Methode der endoskopischen Vollwandresektion mit Hilfe des OTSC System nach endoskopischer RL
Resektion eines low grade kolorektalen Frühkarzinoms
M Sandmann, M Heike, M Fähndrich, Dortmund
Session 02:00 – 03:30 pm Expertenvideos ii 02:36 – 02:54 am
Successful complication management of a colon peri-
fusion after PEG implantation with the OTSC system
M Fähndrich, M Sandmann, M Heike, Dortmund
Thursday, 17 March 2011 | Room Barcelona Session
02:00 – 03:30 pm Freie Vorträge i 02:44 – 02:36 pm
Der „Over the scope clip“ (OTSC) zum Verschluss von
intestinalen Leckagen und zur Therapie der intestinalen
Blutung
J Albert, M Friedrich-Rust, S Zeuzem, C Sarrazin, Frankfurt
Friday, 18 March 2011 | Ballsaal, Session 02:00 – 03:30 pm
Neue endoluminale und transluminale Verfahren
Transgastrale Appendektomie – erste Ergebnisse der
Toga-Studie
G Kähler, Mannheim
For further information on the congress see: www.dgebv.de (pdf)

January 2011 | Successful treatment of duodenal
fistula after gastrectomy with the OTSC® clip
Dr. R. Bini and colleagues, SG Bosco Hospital, Torino, Italy, report about the successful closure of a duodenal fistula with Ovesco’s OTSC® clip. The fistula arose in an elderly patient who was treated with emergency gastrectomy for severe peptic ulcer bleeding. The postoperative fistula was associated to sepsis, malnutrition and hydro-electrolyte dis-
orders and did not respond to surgical and medical treat-
ment attempts. The fistula was then closed endoscopically by means of an OTSC® clip.
Endoscopic Treatment of Postgastrectomy Duodenal
Fistula With an Over-the-Scope Clip

January 2011 | Closure of rectocecal fistula by
means of OTSC® and cyano-acrylate reported
Anastomotic fistula after colorectal surgery is not infrequent and can happen in up to 10 % of cases. Also rectocecal fistula can result and is cause of significant morbidity and discomfort. Temporary diverting ileostomy for 2–3 months is a common surgical treatment.
Dr. Benedetto Mangiavilano, Dept. of Gastrointestinal En-
doI. 2011 | 1553-3550/10/392244 [Epub 2011 Jan 18]

December 2010 | “Sparing the surgeon”: OTSC® for
gastrointestinal perforation
The Gastroenterology Department of the University of
Zurich, Switzerland (Dr. L. Seebach, Prof. Dr. P. Bauer-
feind, Dr. C. Gubler) reports about 7 patients treated with
OTSC for gastrointestinal perforation.
Causes for the intervention were colonic perforation (n=3), gastric perforation (n=1) and anastomotic leakage after
surgery (n=3). All patients were considered candidates for
surgery and OTSC clipping was used as an alternative to
surgery.
In all but 1 patient closure was demonstrated.
In 4 of the 7 patients no surgery was required and OTSC®
clipping was sufficient. In 1 additional case a laparoscopy
was performed to release free air from the abdomen but
closure of the perforation had been achieved.
In conclusion, the author’s judge is the OTSC is a very
valuable method for closing GI perforations.
˝Sparing the surgeon˝: clinical experience with over-
the-scope clips for gastrointestinal perforation
Seebach L, Bauerfeind P, Gubler C
Endoscopy 2010; 42:1108-11

November 2010 | Successful use of the OTSC®-
Clip in Revisional Endoscopy Against
Weight Gain After Bariatric Gastric Bypass Surgery
Voermans RP, van Berge Henegouwen MI, Bemelman WA, Voermans RP, van Berge Henegouwen MI, Bemelman WA,
hyphenated full-thickness closure of transmural defects. Nevertheless, in circumstances of severe fibrosis and scarring, complete incorporation of the defect into the applicator cap and successful OTSC application might not be possible.
Endoscopic closure of GI fistulae by using an over-the-
scope clip
von Renteln D, Denzer U, Schachschal G, Anders M,

October 2010 | Ovesco OTSC® clip: Reliable
full-thickness organ closure in experimental transgastric cholecystectomy, mean time re-
quired for closure is only 7 min.
A recent experimental study by RP Voermans et al., Aca-
demic Medical Center, Amsterdam, The Netherlands, reports about transgastric cholecystectomy and organ closure with Ovesco’s OTSC clip. The study was carried out in the por-
cine animal model (n=16). A hybrid-NOTES technique was
used, adding two 2-mm trocars and one umbilical laparo-
scope. The survival follow-up time was 15 days.
Main outcome parameters included technical procedural suc-
cess and organ closure, uncomplicated survival and histo-
logy-confirmed full-thickness closure of the gastric access
site. Transgastric organ closure was successful in all cases in a mean time of 7 min (SD 3 min.). Necropsy demonstrated absence of infectious complications. Histology revealed full-thickness healing in all cases (95 % CI: 81-100 %).
The authors conclude: “Use of OTSC for gastroscopy closure is feasible, reliable and results in histology-proven full-thickness closure in survival porcine experiments.”
Hybrid NOTES transgastric cholecystectomy with reliable gastric closure: an animal survival study
Voermans RP, van Berge Henegouwen MI, Bemelman WA, Voermans RP, van Berge Henegouwen MI, Bemelman WA,
i.e.: the OTSC®-clip for revisional endo-
surgery after gastric bypass is reliable and effective in treat-
ing weight gain due to a dilated pouch-outlet with favorable short- and mid-term results.

The OTSC®-Clip in Revisional Endoscopy Against
Weight Gain After Bariatric Gastric Bypass Surgery
Heylman AM, Jacobs A, Lybeer M, Protil RL
October 2010 | September issue of *Endoscopy*: The treatment of esophageal perforations with the OTSC® clip – a valid alternative to stenting

The September issue of the journal *Endoscopy* discusses the use of the OTSC® clip for the closure of esophageal perforations. In the editorial, Dr. P. Eisenbraun, Brussels, Belgium, states that the use of larger clips, such as the OTSC® clip, could reduce the number of clips that must be placed and the dedicated forceps (remark: OTSC Twin Grasper®) may help to overcome the difficulties in approximating the two edges of the leak.

**Esophageal leaks: extending our toolbox?**

Eisenbraun P | *Endoscopy* 2010; 42:753-4

An initial case series (n=2) on endoscopic closure of post-operative esophageal leaks with the OTSC® clip is presented by Dr. J. Pohl et al., Wiesbaden, Germany. The authors conclude that OTSC® clipping is an effective endoscopic treatment of intrathoracic esophageal leaks and might be considered as a valid alternative to stent treatment in selected cases.

**Endoscopic closure of postoperative esophageal leaks with a novel over-the-scope clip system**

Pohl J, Borgia M, Lorenz D, Ehl C | *Endoscopy* 2010;42:757-9

**September 2010 | OTSC® for closure of recto-vesical fistula after radical prostatectomy**

There is growing positive clinical experience worldwide with the use of Ovesco’s OTSC® clip in the treatment of chronic fistulas. Dr. M. Cavina and coauthors, Reggio Emilia, Italy, report about the successful treatment of a chronic recto-vesical fistula in a male patient, subsequent to prostatectomy. The size of the chronic fistula was 4 mm and it was effectively occluded by means of a single OTSC® 12/6/a clip. The case was reported in the Italian Journal of Digestive Endoscopy. Utilizzo della clip Ovesco nel trattamento di una fistola retto-vescicolare


**September 2010 | OTSC® clip enables secure and fast gastric closure after transgastric experimental oophorectomy**

In a recent experimental study, V. Tumulescu et al., Bucharest, Romania, studied the use of OTSC® and other closure methods for managing the gastric access site after transgastric oophorectomy. The procedure was carried out in the porcine animal model (n=10). In 5 animals a hybrid-NOTES technique with supplemental laparoscopic access was used, the other 5 animals had complete transgastric access. Gastric closure with OTSC® was successful and took approx. 10 minutes, whilst closure with endoloops and endoclips took approx. 100 min. The authors conclude that transgastric oophorectomy is feasible, including secure gastric closure with OTSC®.

**An experimental model of transgastroscopic ooforectomy using a porcine model [Article in Romanian]**


**September 2010 | Report EURO-NOTES 2010: Ovesco’s OTSC® system positioned as state-of-the-art closure device**

Rome, Italy, September 9–11. The 4th EURO-NOTES Joint Workshop of ESGE and EAES took place under the presidency of Prof. Guido Costamagna, Catholic University of Rome. Researchers and clinicians from different countries presented their experience on organ closure using Ovesco’s OTSC® clip.

**OTSC® update 13 | research & clinical trials**

**Dr. M. Abu-Sabih Abadia from Barcelona, Spain, presented experimental data on using OTSC® for the closure of experimentally created perforations.**

New aspects were presented by Dr. E. Rieder, Portland, OR, USA who demonstrated a new wedge technique using OTSC® clips for closure prior to snare resection of the tissue. Dr. T. Verlaan, Amsterdam, The Netherlands, presented the data of the recently completed multicentric single-arm CLIPPER trial which demonstrate that OTSC® is an effective treatment for the closure of acute perforations in the digestive tract. In his state-of-the-art lecture, Prof. Paul Foekens, Amsterdam, The Netherlands, covered the topic of acute perforations and their treatment with OTSC®, partly referencing the CLIPPER trial that was completed under his coordinati-on. He stated that the closure of acute perforations is now satisfactorily possible in expert hands.

**August 2010 | State-of-the-art report by J Hochberger et al. on techniques for ESD refers to OTSC® clip**

The leading German speaking endoscopy journal “Endoskopie heute”, Official Journal of the German Society for Endoscopy (DGE-BV), reports about the OTSC® clip. Juergen Hochberger, MD, PhD, Hildesheim, Germany, and coauthors describe the state-of-the-art in technical aspects and equipment for Endoscopic Submucosal Dissection (ESD). Perforations of the esophageal, gastric or colonic wall are not rare in ESD and happen in 6 – 8 percent of the cases, according to clinical experience. For the immediate closure of perforations the OTSC® clip is a promising solu-tion, the authors state.

**Technische Aspekte bei den endoskopischen Submukosa-Dissektionen (ESD)**


**August 2010 | Feasibility of endoscopic full-thickness resection using the OTSC® system**

In the June issue of the journal *Gastrointestinal Endoscopy* D. von Renteln, MD and colleagues report about an experimental feasibility trial on full-thickness resection of the colon. They compared different modalities of applying the Ovesco OTSC® clip in conjunction with full-thickness resection of the colonic wall, using the grasp-and-snare technique. Depending on application modalities burst pressure tightness of 76.6 mm Hg (range 35–120; SD, 31) was reached, demonstrating the possibility of secure wall closure after full-thickness resection (FTR).

The authors conclude that colonic FTR using the grasp-and-snap technique is feasible in an animal model.

**Endoscopic full-thickness resection and defect closure in the colon**


**July 2010 | Successful management of GI perforations with the Ovesco OTSC® clip**

A multicenter study performed at 2 Italian endoscopy centers (General Hospital, San Remo, and Humanitas Hospital, Milan) has investigated the use of the OTSC® clip for closure in 10 patients. Indications for digestive organ wall closure included acute perforations, fistula and anastomotic leak- age. The location of the leak was gastric (n=2), duodenal (n=2) and colonic (n=6). The leak diameter ranged from 7 to 20 mm. After closure with the OTSC® clip, patients received follow-up endoscopy 3 months after the intervention. The technical success was 8 out of 10 cases. None of the cases with initial technical success required additional treatment.

The authors of the study conclude that the OTSC® system is a useful device for the management of larger GI leaks in a variety of clinical indications.

**Endoscopic management of GI perforations with a new over-the-scope clipping device**


**June 2010 | Successful OTSC® closure of esophagobronchial fistula reported at national gastroenterology congress in Portugal**

Dr. M. Mourinho-Ribeiro and colleagues, Centro Hospitalar do Alto Ave – Guimarães, Portugal, report about the successful closure of a 15-mm esophagobronchial fistula in an esophago-gastric cancer patient following chemo-radiation therapy. By using the OTSC® Anchor to pull the fistula orifice to the tip of the OTSC® cap and application of an OTSC® clip, the fistula was successfully closed. Supplementary stent place-ment was done to secure the result. The case was presen-ted at XXXth National Congress of the Portuguese Society of Gastroenterology in Vlamoura, June 9–12, 2010.

**June 2010 | Tuebingen University reports experience in 60 consecutive patients treated with OTSC®**

Bruchsal, Germany, June 11, 2010. At the X0th Congress of the Southwest German Society of Gastroenterology Thomas Kratt, MD, Surgical Endoscopy, Tuebingen University Hospital, Germany, reported about a case series of 60 patients treated with OTSC® for various indications. 37 patients were treated for stopping gastrointestinal hemorrhage, 11 for closure of perforation, 8 for closure of fistulae and 4 for the marking of lesions. In all 60 cases technical success, defined as ability to place the OTSC® at the desired location, was achieved. In the 37 cases of GI bleeding 2 relapse bleedings were seen. In all 11 cases of GI perforation therapeutic success, defined as absence of failure/recurrence was achieved. In the 8 fistula patients 3 recurrences were found.

The authors conclude that based on their experience OTSC® is best applied in the following indications:

**Emergency:**

- Severe peptic ulcer bleeding
- Iatrogenic perforations
- (Spontaneous) perforations
- Hemorrhoidal post-surgical hemorrhage

**Elective:**

- Anastomotic failure
- Fistula
- Anastomotic correction
- NOTES

**Das Over-The-Scope-Clip System (OTSC®): Erfahrungen in der klinischen Anwendung bei 60 Patienten**

Kraut T, Stüker D, Küper M, v Feilitzsch M, Königrainer A, Kirchniak A

There were two more reports on successful application of Ovesco’s OTSC® system:

**Ulkus-Arrosionsblutung der A. gastroododenalae – Vermeidung des Notaufleggriffs durch ein neuerartiges Clip-System – zwei Fallberichte**

Kraut T, Stüker D, Brücher B, Heininger A, Miller S, Königrainer A

**Aus dem Labor in die Klinik: Die transgastrisch-flexible NOTES-Laparoskopie**

June 2010 | Ovesco's OTSC® Anchor for supporting gastric mucosal resection
Daniel von Renteln, MD, and co-authors report about the use of the OTSC® Anchor in EMR. They carried out an experimental study in 10 domestic pigs using a dual channel endoscope. Gastric lesions of approx. 3 cm were simulated by RF marking. The OTSC® Anchor was used through one working channel and a monofilament snare through the other. The tissue anchor was advanced through the snare and anchored in the submucosal layer. After lifting the lesion, the snare was closed and the mucosal resection completed. The mean time to perform gastric EMR was 32.4 min. The mean surface area of the resected specimen was 9.36 sq cm. Complete en-bloc resection of the large specimen was achieved in one maneuver in 9 cases, it required two maneuvers in one case. One gastric wall perforation occurred. The authors conclude that grasp-and-snare EMR is feasible with the OTSC® Anchor.

Endoscopic mucosal resection using a grasp-and-suture technique

June 2010 | Clinical NOTES experience with OTSC® presented at German D-NOTES meeting in Mannheim, Germany
At the annual meeting of the German NOTES working group, D-NOTES, in Mannheim, Germany, June 3-5 2010, two research groups reported about their clinical experience with the OTSC clip for gastric closure: The chairman of the meeting, PD Dr. Georg Kährler, Mannheim University Hospital, is using the OTSC® clip for closure after transgastric appendectomy, Dr. Thomas Krait, Tuebingen University Hospital for closure after transgastric diagnostic laparoscopy. Both centers have enrolled first patients into their respective studies. OTSC® was shown to be effective and safe in closing gastroscopy after transgastric NOTES.

May 2010 | Central Endoscopy Department (Zentrale Interdisziplinäre Endoskopie) of Mannheim University Hospital starts clinical trial on transgastric NOTES appendectomy
The Central Endoscopy Department at Mannheim University Hospital, Germany (Director: Georg Kährler, MD, PhD) has started enrolling patients into an investigator initiated trial on transgastric NOTES appendectomy. Ovesco’s OTSC® clip is used for closure of the gastric access site after completion of the procedure. The Central Endoscopy Department in Mannheim is among the leading international institutions in interventional endoscopy and NOTES research and is hosting the 2010 D-NOTES meeting, June 3-5, Mannheim, Germany.

May 2010 | Study demonstrates that Ovesco’s Traction Polypectomy Snare is 31% more efficient in tissue acquisition than conventional snare
Ovesco’s Traction Polypectomy Snare is a newly designed, serrated snare for endoscopic tissue acquisition procedures such as polypectomy, endoscopic mucosa resection (EMR) or similar techniques. Its specific design reduces slipping of the snare upon closure and loss tissue intended for removal. At the same time the Traction Snare has excellent maneuverability and repositioning properties, making its handling simple and efficient. A recent experimental trial by RL Proost and FE Baur, Stuttgart, Germany has shown that the Traction Snare removes 31% more tissue than a conventional snare. Comparing the weight of colonic tissue removed with one snare deployment was 454 mg (SD 202) with the Traction Snare vs 347 mg (SD 165) with a conventional snare. This difference was statistically significant (p=0.017).

The authors conclude that the Traction Snare increases the effectiveness of snare resection by avoiding the accidental loss of entrapped tissue. In addition the achievable reduction of sample numbers during piecemeal resection may increase the precision of histo-pathological assessment. A new serrated snare for improved tissue capture during endoscopic snare resection
Proost RL, Baur FE | Minim Invas Therapy 2010; 19:100-4

May 2010 | DDW 2010 − OTSC® for endoscopy closure of acute perforations of the gastrointestinal tract using the Over-the-Scope Clip: A prospective multicenter human trial (CLIPPER-trial)
In his presentation “Endoscopic closure of acute perforations of the gastrointestinal tract using the Over-the-Scope Clip: A prospective multicenter human trial (CLIPPER-trial)” at DDW 2010, New Orleans, May 4, Dr. Rogier Voermans, Dept. of Gastroenterology and Hepatology, Academic Medical Center, University of Amsterdam, Netherlands, gave an update on intermediate results of this prospective multicenter cohort study conducted at 10 tertiary-care medical centers in Europe. The aim of the trial is to evaluate safety and reliability of the endoscopic closure of acute perforations of the human gastrointestinal tract (esophagus, stomach, duodenum, colon) using Ovesco’s OTSC® system. The primary endpoint was successful closure, defined as macroscopic adequate closure and no leakage on water soluble contrast X-ray within 24 hours without additional interventions. He reported on 24 of 36 planned consecutive patients in the participating centers. Primary closure could be achieved in 22 of 24 patients. One patient suffered other complications before the clip could be applied, and one patient failed adequate placement of the clip. Only one patient of those 22 patients where the system could be administered suffered delayed leakage and had to be treated surgically. The trial is ongoing. Final results will be published as available.

May 2010 | Ovesco Endoscopy’s OTSC® system at DDW in New Orleans: clinical paper presentations, hands-on workshop and industry exhibition
The OTSC® system is presented at the Digestive Disease Week, DDW 2010, New Orleans, May 1-5, 2010. Besides scientific paper presentations about clinical experience and data by different authors, the ASGE Hands-on Workshop "GI Emergencies: Sutures, Closures and Hemostasis" by Juergen Hochberger, MD PhD, demonstrates the OTSC® system in practical use, supported by K Mathes, MD, G. Haber, MD and RI Rothstein.

April 2010 | New publication on the use of OTSC® in bariatric patients
Dr. Federico Iacopini published a case report on the use of OTSC® to treat complications of gastric banding in the World Journal of Gastroenterology. Ovesco’s OTSC® clip was used to close full thickness stomach erosions resulting from long-term gastric band implantation. Two patients were successfully treated.

Over-the-scope clip closure of two chronic fistulas after gastric band penetration
Federico Iacopini, Nicola Di Lorenzo, Fabrizio Altonio, Marc Olivier Schur, Agostino Scozzaro World J Gastroenterol 2010 April 7; 16(13):1665-9

April 2010 | OTSC® system referenced as best gastric closure system in latest review paper
A new review paper by Alberto Arezzo and Mario Morino, Torino, Italy, published in Surgical Endoscopy references Ovesco’s OTSC® system as safe and efficacious for gastric closure in NOTES.

Compared to other available closure technologies, such as other clips, T-tags or endoscopic suture devices, OTSC® is evaluated "very good" under the categories "simplicity," "security" and "efficacy", leading to the highest overall score of all systems.

Endoscopic closure of gastric access in perspective NOTES: an update on techniques and technologies
Arezzo A, Morino M | Surgical Endoscopy 2010; 24:2; 298-303

March 2010 | Ovesco supports lunch symposium on OTSC® clip and is sponsor of the 40th Congress of the German Society for Endoscopy (DGE-BV) in Hanover
The 40th Congress of the German Society for Endoscopy (DGE-BV) is held in Hanover under the presidency of Prof. Dr. Jürgen Hochberger, Hildesheim. Ovesco supports the lunch symposium on clinical indications and experiences with the OTSC® clip on Friday, March 12, 2010, 13:00-14:00 h, Saal 1A

March 2010 | Tuebingen University starts clinical NOTES trial on diagnostic laparoscopy
Successful closure of gastric NOTES access
The first patient was recruited in the Transgastric NOTES Laparoscopy Trial. Through an incision in the anterior gastric wall which was dilated with a 15-mm balloon, the abdomen was explored and staging was performed in a patient suffering from an infrequent type of lymphoma. The closure was performed with an OTSC® clip 12-6 gc. The gastrotomy was immediately gas tight. Postoperative follow-up was without any complications.

March 2010 | Italian gastroenterologists report successful closure of tracheo-esophageal fistula using Ovesco’s OTSC® clips
In the recent issue of the journal Endoscopy, Dr. M. Traina and colleagues, Palermo, Italy, report about the closure of a chronic tracheo-esophageal fistula emerging in a patient after long-term ventilation. The fistula was located 20 cm from the mouth. After closure with an OTSC® clip the clinical condition of the patient improved and healing of the fistula was seen at follow-up endoscopy, 2 and 4 weeks later. No complications were reported.

New endoscopic over-the-scope clip system for closure of a chronic tracheo-esophageal fistula

February 2010 | Researchers report secure closure of duodenal perforations using the OTSC® clip in a randomized controlled experimental trial
In the recent issue of the journal Gastrointestinal Endoscopy, Dr. Daniel von Renteln and colleagues reported on the results of 24 duodenal (domestic cap) in which duodenal perforations had been intentionally created. All cases were randomized to undergo either surgical repair by hand sewing or endoscopic closure by means of the OTSC® clip. At necropsy, all OTSC® and surgical closures demonstrated complete sealing of duodenotomy sites. Mean time for OTSC® closure was 5 minutes (range, 3-6 min; SD 2). Leak testing under pressure demonstrated a mean burst pressure of 166 mm Hg (range 80-260; SD 65) for OTSC® closures and 143 mm Hg (range 30-300, SD 83) for surgical sutures.
This shows that OTSC® closure of duodenal full thickness wall lesions can result in higher pressure resistance than hand suturing, although the difference was not significant. There were no complications related to the OTSC® clip reported.

Endoscopic closure of duodenal perforations by using an over-the-scope clip: a randomized, controlled porcine study

D von Renteln, HU Rudolph, A Schmidt, MC Vassiliou, K Caca Ludwigshafen and Heidelberg, Germany;
Lebanon, New Hampshire, USA
Gastrointestinal Endoscopy 2010; 71;1: 131-8

February 2010 | Résumé to the 12th Düsseldorf International Endoscopy Symposium, 5–6 February 2010

This year’s 12th Internationales Endoskopie Symposium again enjoyed an impressive acceptance by a national and international audience as well as an excellent faculty of some of the finest experts in the field.

Prof. Dr. Stefan Seewald from Zürich in his oral presentation (“Neue Produkte zur endoskopischen Therapie von Perforationen und Fisteln/New devices for endoscopic treatment of perforations and fistulas”) was very much focussed on the OTSC® system. It was basically cited to be the answer to many problems in GI endoscopy.

This was followed by a lively discussion on challenging indications for the system like esophageal-tracheal fistulas.

Ovesco’s booth again was able to attract a huge crowd.

The feedback on the OTSC® system plus the accessories including the latest product “traction snare” was overwhelming.

January 2010 | Korean endoscopists make reference to the OTSC® clip as a device in ESD for gastric cancer

Prof. Won Young Cho et al. from the Dept. of Gastroenterology (Director: Prof. Ju Young Cho) at the College of Medicine, Soonchunhyang University, Korea, refer to the OTSC® clip as an endoscopic device for treating post-interventional bleeding or organ wall lesions in the chapter on Endoscopic Submucosal Dissection (ESD) of the recently published book “Endoscopic Treatment of Gastric Cancer”. Prof. Won Young Cho and his colleagues are leading users of Ovesco’s OTSC® in South Korea.

Endoscopic Treatment of Gastric Cancer
Won Ytung Cho, Tae Hee Lee, Yoon Seon Park, Ju Young Cho Endoscopic Submucosal Dissection (ESD), pp 16-52.
Jin Publishing Co. Ltd. Seoul, Korea, 2009


Prof. Dr. Juergen Hochberger, Hildesheim, Germany, showed the use of the Ovesco OTSC® system at the 33rd Annual New York Course.

In an experimental laboratory demo, transmitted live from Lenox Hill Hospital, he closed a 8–10-mm full thickness esophageal perforation successfully by means of one OTSC® clip.

November 2009 | Ovesco exhibits at Gastro 2009, UEGW/WCOG, the jointly organised landmark meeting of UEGF, WGO, OMEM and BSG, London, November 21–25, 2009

Moreover, OTSC® is focussed in a poster and in an oral presentation: OVER-THE-SCOPE-CLIP (OTSC®) CLOSURE OF TWO CHRONIC FISTULAS AFTER GASTRIC BAND PENETRATION is the title of a poster presentation of F. Iacopini et al.

A 45-year-old woman presented with a band erosion and penetration through two large tears at the posterior wall of the gastric fundus. A sub-phaneric abscess was demonstrated by computed tomography (CT-scan). Surgery was performed but external drainage of enteric material persisted for 2 weeks. Both fistulas were successfully closed with OTSC®'s (one in combination with a fully-covered esophageal SEMS) and remained successfully closed. Both OTSC® were spontaneously lost after 4 weeks. The authors conclude that if prospective large comparative studies with fully-covered stents and OTSC® will confirm this initial positive observation, the OTSC® may be the least invasive, easiest, and safest endoscopic method to close chronic small fistulas or leaks.

In an oral presentation D. v. Renteln et al. report data of a RANDOMIZED CONTROLLED TRIAL COMPARING ENDO-SCOPIC CLIP TECHNIQUES FOR NOTES GASTRO-TOMY CLOSURE. In 20 pigs an 18-mm gastrotomy was created using PEG technique and a wire-guided 18-mm dilatation balloon. Animals were randomly assigned to gastrotomy closure using endoclips (n=10, Resolution clips, Boston Scientific) or over-the-scope clips (n=10, OTSC®, Ovesco). The specially designed tissue approximation grasper (Twins Grasper®, Ovesco) was used to achieve optimal tissue approximation prior to placement of OTSC®'s for closure. Laparoscopic leak tests were carried out after each gastro-tomy closure. Necropsies were performed 10–14 days post procedure.

The authors conclude that NOTES gastrotomy closure using standard endoclips is associated with significant leaks and the risk of intra-abdominal infection whereas the OTSC® system for endoscopic gastro-tomy closure reduces the risk of leakage and intra-abdominal infectious complications.

Ovesco also takes part in the Teaching Theatre ESGE/OMED Learning Area with daily practical hands-on demonstrations of the OTSC® system for the endoscopic treatment of hemorrhage and closure of acute and chronic organ wall lesions (Mon 23-Wed 25).

November 2009 | Randomized controlled trial demonstrates advantages of OTSC® vs standard endoscopic clips in experimental gastro-tomy closure

A new comparative study published by D. von Renteln et al. in the journal Endoscopy investigated closure safety after NOTES gastrotomy in the porcine model (n=20) using either conventional endoclips or the Ovesco OTSC® clip. No leaks were observed after OTSC® closure of 3 minor and 1 major leak after endoclip closure.

The time required for the gastro-tomy closure procedure was 8.5±9.1 minutes with OTSC® and 31.5±24.2 minutes with endoclips. After necropsy 2 animals in the endoclip group showed signs of peritonitis. 1 animal in that group had to be treated for sepsis and dissection of gut wall, first by ESD then by transmural endoscopic cutting of the muscular layer. The stomach was closed resulting in the gold standard (p = 0.003).

The authors conclude that standard endoclips have an increased risk of failure in the closure of NOTES gastrotomy.

Randomized controlled trial comparing endoscopic clips and over-the-scope clips for closure of natural orifice transluminal endoscopic surgery gastromies

D von Renteln, MC Vassiliou, RI Rothstein
Dpt. of Gastroenterology and Hepatology; Dpt. of Surgery Dartmouth-Hitchcock Medical Center, Lebanon, NH, USA

November 2009 | Experimental study confirms pressure tightness of gastric closure with OTSC® compared to the gold standard of hand-suturing

R. Voermans et al. evaluated comparative data on gastric closure after NOTES in the ex vivo experimental model. Gastric closure with the OTSC® clip was compared to gastric closure by hand-suturing, determined as the gold standard.

Surgical suturing demonstrated pressure tightness of the closure up to a mean leak pressure of 206 mm Hg (SD 59), (n = 15 samples). OTSC® closure demonstrated tightness up to a mean pressure of 233 mm Hg (SD 47), (11 samples). This was non-inferior to the gold standard.

The authors conclude that closure of gastric incisions meeting predetermined pressure resistance criteria was attainable and easy with the OTSC® system.

November 2009 | Ovesco presents at the EndoClub Nord, 6–7 November 2009 in Hamburg, Germany

At this year’s EndoClub Nord at the Congress Center Hamburg Ovesco’s OTSC® (over the scope clip) system has been presented in a live demo: Prof. Dr. Thomas Rösch (Dept. and Clinic for Interdisciplinary Endoscopy, University Hospital Eppendorf, Hamburg) endoscopically removed a submucosal tumor in the anterior wall of the stomach.

In a rendez-vous-procedure he was supported by a team of surgeons of the Dept. of Surgery (also UKE) via a single port access. The respective area of the stomach was marked and dissected full wall, first by ESD then by transmural endoscopic cutting of the muscular layer. The stomach was closed through the flexible endoscope with two OTSC® gc clips, was re-inflated thereafter and proved to be tight.

The surgical team then closed the outer of the stomach intraperitoneally with an endo-TEA- stapler.Ovesco is currently testing full thickness resections of the GI tract with the approved OTSC® System. Smaller lesions already have been closed through the endoscope alone. Yet, the company is currently developing an “all-in-one” system which will allow for safe resection and closure in one procedure. The device is planned for approval and launch later next year.

The new systems will enable healthcare professionals of both specialties to more aggressively diagnose and yet less invasively treat e.g. submucosal tumors of uncertain dignity.


At the 21st Conference of the Society for Medical Innovation & Technology (SMIT) Ovesco’s OTSC® clip is presented in various scientific sessions.

Dr. Agostino Scozzarro and colleagues, Rome, Italy, report about the successful closure of chronic fistula related to adjustable gastric band erosion, using OTSC® clipping.

The use of OTSC® in Natural Orifice Transluminal Endoscopic Surgery (NOTES) is presented by Prof. Dr. Alberto Arazzo, Torino, Italy, within a hands-on workshop on basic techniques in NOTES. He also shows recent data on trans-gastric cholecystectomy and secure endoscopic closure of the stomach with the OTSC® clip in a surviving porcine model.

Further, he reports about the use of OTSC® for the treatment of post surgical healing problems in bowel anasto-mosis. He recommends OTSC® clipping for suitable cases in his over-view presentation on closure of fistula and chronic pelvic abscess after colorectal surgery.

A summarizing overview about global clinical experiences with the OTSC® clip is given by Prof. Dr. Marc O. Schurr, Member of the Executive Board of Ovesco Endoscopy AG.
Experimentally, the OTSC® gc is a derivative of the established OTSC® clip. It is specifically designed for the needs of gastric closure and has longer teeth to support gastric wall capture even more strongly than the OTSC® clip. In his oral presentation at the EAES congress in Prague in a session on Sutureless Tissue Approximation, Prof. Dr. Alberto Arezzo from Torino, Italy, reports on successful gastric closure with the new OTSC® gc special clip: Transgastric cholecystectomy and secure endoscopic closure of transgastric approaches in a surviving porcine model.

Hollow organ closure devices and techniques for NOTES.

June 2009 | OTSC® clips in combination with Twin Grasper and Anchor referenced as a suitable organ closure device.

In a comprehensive review in the Chirurgische Allgemeine Zeitung (CHAZ, 2009,10.5, 292-296), the German NOTES working group (D-NOTES) resumes all aspects of NOTES in a status report, including an assessment of all current closure techniques. Ovesco’s OTSC® clips are highlighted and very favorably described, especially if applied in combination with the OTSC® Anchor and the OTSC® Twin Grasper.

June 2009 | OTSC® gc, a new special version of the OTSC® clip for gastric closure, applied in live demo at D-NOTES 2009 in Munich, 11–13 June 2009

Organised by Prof. Dr. H. Feußner and Prof. Dr. A. Meining, Munich, from the D-NOTES working group.

In a live demo of transgastric access techniques Prof. Dr. Karel Caca from Ludwigsburg and PD Dr. Jörn Bernhardt from Rostock demonstrate the application of Ovesco’s new special clip OTSC® gc and the OTSC® Anchor for gastric closure in NOTES. Prof. Dr. A. Meining also uses the OTSC® Twin Grasper for gastric closure.

June 2009 | Experimental study proves effectiveness of the new clip version. OTSC® gc for gastric closure in NOTES; EAES congress in Prague, 17–20 June 2009

The OTSC® gc is a derivative of the established OTSC® clip. It is specifically designed for the needs of gastric closure and has longer teeth to support gastric wall capture even more strongly than the OTSC® clip. In his oral presentation at the EAES congress in Prague in a session on Sutureless Tissue Approximation, Prof. Dr. Alberto Arezzo from Torino, Italy, reports on successful gastric closure with the new OTSC® gc special clip: Transgastric cholecystectomy and secure endoscopic closure of transgastric approaches in a surviving porcine model.

Hollow organ closure devices and techniques for NOTES.

September 2009 | Ovesco’s OTSC® system applied in live demos at 43rd Erlangen Symposium for practical gastroenterology and hepatology, Erlangen University, 18–19 Sept 2009

Future prospects in complication management are a major topic of this meeting (43. Erlanger Tagung für Praktische Gastroenterologie und Hepatologie). Ovesco’s OTSC® system is applied in live demos transmitted from the Department of Gastroenterology and favourably pointed out by Prof. Dr. M. Raithel. Further, Prof. Dr. J. Hochberger emphasizes the significance of the OTSC® in view of NOTES.

June 2009 | HU Rudolf is awarded a prize for his study on endoscopic closure of duodenal perforations applying OTSC® clips and the OTSC® Twin Grasper at the XXth Congress of the South-West German Society of Gastroenterology

A working group of researchers from the Medizinische Klinik I in Ludwigsburg and the University of Heidelberg Medical Faculty Mannheim was honoured with a poster award for their presentation of results of an experimental randomised animal study on endoscopic closure of duodenal perforations.

Endoskopischer Verschluss von Duodenalperforationen: Eine randomisierte tierexperimentelle Studie
Klinikum Ludwigsburg, Medizinische Klinik I
Universität Heidelberg, Medizinische Fakultät Mannheim

June 2009 | Dr. Thomas Kratt wins award for his presentation of case reports on endoluminal OTSC® treatment of Boerhaave syndrome

At the XXth Congress of the South-West German Society of Gastroenterology in Stuttgart, a poster of a working group from the University Hospital Tuebingen presenting a case report on endoluminal OTSC® clip therapy with Ovesco’s OTSC® clip in Boerhaave syndrome is awarded a poster prize. Suficientes endoskopische Therapie bei Boerhaave-Syndrom
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September 2009 | Reports about the OTSC® clip as a closure device at EURO-NOTES workshop, Barcelona, Spain

Leading scientists present their results at the EURO-NOTES workshop, 24–26 Sept. 2009, Barcelona, Spain. Prof. Dr. P. Fockens, Amsterdam, The Netherlands, explains the technique of OTSC® application for NOTES gastric closure and its successful use in the experimental model. Dr. D. von Renteln and colleagues, Ludwigsburg, Germany, present a randomized controlled trial comparing endoscopic clipping techniques for gastrotomy closure with favourable results of the OTSC® clip.

Dr. R. Voermans et al., Amsterdam, The Netherlands, present an ex vivo comparison of current colotomy closure modalities, including OTSC®.

Successful clinical cases with OTSC® for the closure of gastric fistula after gastric banding are shown by Dr. F. Iacopini et al., Rome, Italy.