

January 2011 | Closure of rectovesical 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 rectovesical 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 Mangiavillano, Dept. of Gastrointestinal Endoscopy, University of Milan, Italy and colleagues report about the closure of a rectovesical fistula in a patient after laparoscopic sigmoid resection for adenocarcinoma of the sigmoid. A two-step approach was used in which the 6-mm fistula orifice was first reduced by an OTSC® clip, and a small residual opening was subsequently closed with cyano-acrylate injection in a second procedure. The patient was followed for approx. 10 weeks when CT showed the fistula completely closed. The authors conclude that OTSC® clipping with possible additional cyano-acrylate can be effective in the treatment of anastomotic leakage and fistula and should be considered in such cases before the patient is referred to surgery.

Endoscopic sealing of a rectovesical fistula with a combination of an over the scope clip and cyano-acrylate injection

Mangiavillano B, Pisani A, Viaggi P, Arena M, Opocher E, Mangano M, Santoro T, Masci E
J Gastrointest Oncol 2010; 1: 122-4

December 2010 | „Sparing the surgeon“: OTSC® for gastrointestinal perforation

The Gastroenterology Department of the University of Zurich, Switzerland (Dr. L. Seebach, Prof. Dr. P. Bauerfeind, 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

Ahead of print Obesity Surgery published an article by Alex Heylen et al., St.-Ursula Hospital, Kuringen, Belgium, where they report on 94 obese patients who had undergone Fobi pouch gastric bypass, and because of a dilation of the gastro-jejunosomy suffered a marked but unintended weight gain.

An endoscopic over-the-scope clip was used to narrow the pouch-outlet. The OTSC® application was safe and efficient to reduce the pouch-outlet in all cases. Best clinical results were obtained by narrowing the gastro-jejunosomy by placing two clips at opposite sites, hence reducing the outlet of more than 80%. Preferably, the clip approximated the whole thickness of the wall to avoid further dilatation of the anastomosis. Between surgery and OTSC® application the mean BMI dropped from 45.8 (+/-3.6) to 32.8 (+/-1.9). 3 months (mean 118 days, +/-46 days) after OTSC®

application the mean BMI was 29.7 (+/-1.8). At the second follow-up about 1 year (mean 352 days, +/-66 days) after OTSC® application the mean BMI was 27.4 (+/-3.8).

The authors conclude: „The OTSC® clip for revisional endoscopy after gastric bypass is reliable and effective in treating weight gain due to a dilated pouch-outlet with favorable short- and midterm results.“

The OTSC®-Clip in Revisional Endoscopy Against Weight Gain After Bariatric Gastric Bypass Surgery

Heylen AM, Jacobs A, Lybeer M, Proßt RL
Obesity Surgery 2010 Sept 3 (Epub ahead of print)

November 2010 | New clinical report about successful chronic fistula closure with OTSC® clips

In the October issue of the journal Gastro-intestinal Endoscopy, Dr. Daniel von Renteln et al., Dept. of Interdisciplinary Endoscopy, University of Hamburg-Eppendorf, Germany, report about the successful closure of a post-traumatic esophagopulmonary fistula and a chronic gastro-cutaneous fistula.

Closure was not successful in 2 other cases, due to substantial scarring at the fistula site. The mean procedure time was 54 minutes (range 24-93 minutes), there were no procedure-related complications.

The authors conclude: „The OTSC seems to be a feasible device to close chronic fistulae of the GI tract. It can achieve leakproof, 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 UW, Schachschal G, Anders M, Groth S, Rösch T
Gastrointestinal Endoscopy 2010 Oct 16

October 2010 | Ovesco OTSC® clip: Reliable full-thickness organ closure in experimental transgastric cholecystectomy, mean time required for closure is only 7 min.

A recent experimental study by RP Voermans et al., Academic Medical Center, Amsterdam, The Netherlands, reports about transgastric cholecystectomy and organ closure with Ovesco's OTSC clip. The study was carried out in the porcine animal model (n=16). A hybrid-NOTES technique was used, adding two 2-mm trocars and one umbilical laparoscope. The survival follow-up time was 10 days. Main outcome parameters included technical procedural success and organ closure, uncomplicated survival and histology-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 gastrotomy 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, Fockens P
Surgical Endoscopy 2010 Aug 19 (Epub ahead of print)

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. Eisendrath, 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?

Eisendrath 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, Borgulya M, Lorenz D, Ell C | Endoscopy 2010;42:757-9

September 2010 | OTSC® for closure of rectovesical fistula after radical prostatectomy

There is growing positive clinical experience worldwide with the use of Ovesco's OTSC clip in the treatment of chronic fistula.

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-vescicale

Maurizio Cavina, Romano Sassatelli, Francesco Azzolini, Lorenzo Camellini, Francesco Decembrino, Veronica Iori, Giuliana Sereni, Cristiana Tioli, Giuliano Bedogni
Servizio di Gastroenterologia ed Endoscopia Digestive, Arcispedale „Santa Maria Nuova“ di Reggio Emilia
Giorn Ital End Dig 2010;33:147-8

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 access site closure.

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

Tumulescu V, Gheorghe C, Pițigoi D, Kosa A, Ciocartan M, Pietrăreanu D, Turcu F, Copăescu C, Droc G, Popescu H, Grigorescu B, Stănculea O, Herlea V, Popescu I
Chirurgia (Bucur) 2010 May-Jun; 105(3):331-7

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.

Dr. M. Abu-Suboh 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 resection 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 multi-centric 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 Fockens, Amsterdam, The Netherlands, covered the topic of acute perforations and their treatment with OTSC®, partly referencing the CLIPPER trial that was completed under his coordination. 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 solution, the authors state.

Technische Aspekte bei der endoskopischen Submukosa-Dissektion (ESD)

Technical Aspects at the Endoscopic Submucosal Dissection (ESD)

Hochberger J, Dammer S, Menke D, Kruse E, Köhler P, Büning KF Endoskopie heute 2010; 23: 24–33

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-snare technique is feasible in an animal model.

Endoscopic full-thickness resection and defect closure in the colon

v. Renteln D, Schmidt A, Vassiliou MC, Rudolph HU, Caca K Gastrointestinal Endoscopy 2010 Jun; 71(7):1267-73

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

A multicentric 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 leakage. 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 clip device

A Parodi, A Repici, A Pedroni, S Bianchi, M Conio Gastrointestinal Endoscopy 2010 (in press)

June 2010 | Successful OTSC® closure of esophago-bronchial fistula reported at national gastroenterology congress in Portugal

Dr. P. Moutinho-Ribeiro and colleagues, Centro Hospitalar do Alto Ave – Guimarães, Portugal, report about the successful closure of a 15-mm esophago-bronchial fistula in an esophageal 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 placement was done to secure the result. The case was presented at XXXth National Congress of the Portuguese Society of Gastroenterology in Vilamoura, June 9-12, 2010.

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

Bruchsal, Germany, June 11, 2010. At the XXIst 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

Kratt T, Stüker D, Küper M, v. Feilitzsch M, Königsrainer A, Kirschniak A

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

Ulkus-Arrosionsblutung der A. gastroduodenalis – Vermeidung des Notfallingriffs durch ein neuartiges Clip-System – zwei Fallberichte

Kratt T, Stüker D, Brücher B, Heining A, Miller S, Königsrainer A

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

Kratt T, Kramer M, v. Feilitzsch M, Strese C, Küper M, Schenk M, Greiner T, Lange J, Kirschniak A, Minkley L, Schröppel K, v. Weyhern CH, Königsrainer A

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-snare technique

von Renteln D, Schmidt A, Vassiliou MC, Rudolph HU, Caca K | Endoscopy 2010 Jun;42(6):475-80

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 Kähler, Mannheim University Hospital, is using the OTSC® clip for closure after transgastric appendectomy, Dr. Thomas Kratt, 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 gastrotomy 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 Kähler, 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 snares

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 loosening 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 Prosst 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**

Prosst RL, Baur FE

Minimally Invasive Therapy 2010; 19:100-4

May 2010 | DDW 2010 – OTSC® for endoscopic 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 Matthes, 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 Altorio, Marc Oliver Schurr, Agostino Scozzarro

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 „effectiveness“, 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, March 11–13, 2010

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 a 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

M Traina, G Curcio, I Tarantino, S Soresi, L Barresi, P Vitulo, B Gridelli | IsMeTT, UPMC, Palermo, Italy
Endoscopy 2010; 42:E1-E2 [UCTN]

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 report about a series of 24 animals (domestic pig) 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, 3-8 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 Ludwigsburg 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 12. 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“) 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 esophago-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, Sooncheonhyang 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 Young Cho, Tae Hee Lee, Yoon Seon Park, Ju Young Cho
Endoscopic Submucosal Dissection (ESD), pp 16-52;

Jin Publishing Co. Ltd. Seoul, Korea, 2009

ISBN 978-89-90698-48-3

December 2009 | OTSC presented for esophageal closure in experimental live demo at the 33rd Annual New York Course, jointly sponsored by the Albert Einstein College of Medicine and the New York Society for Gastrointestinal Endoscopy, 16–19 Dec. 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, OMED 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-phrenic 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®s 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 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 ENDOSCOPIC CLIP TECHNIQUES FOR NOTES GASTROTOMY 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 (Twin 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 gastrotomy 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 gastrotomy 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 gastrotomy 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 vs 3 minor and 1 major leak after endoclip closure. The time required for the gastrotomy 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 sacrificed before finishing the study due to severe peritonitis.

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 gastrotomies

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New Hampshire, USA

Department of Surgery, Dartmouth-Hitchcock
Medical Center, Lebanon, New Hampshire, USA

Endoscopy 2009. Published online ahead of print

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

R. Voermans et al. published 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 (p = 0.003).

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

Novel over-the-scope-clip system for gastrotomy closure in natural orifice transluminal endoscopic surgery (NOTES): an ex vivo comparison study

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Endoscopy 2009. Published online ahead of print.

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

At this year's EndoClubNord 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.

October 2009 | Report about OTSC® clip treatment of gastric band complications and hands-on OTSC® course at the 21st SMIT Conference, 7–9 Oct. 2009 in Sinaia, Romania

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 Arezzo, 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 postsurgical healing problems in bowel anastomosis. He recommends OTSC® clipping for suitable cases in his overview 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.

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.

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. Raitchel.

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 of 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

HU Rudolf, D von Renteln, A Schmidt, M Gieselmann, T Gutmann, K Caca

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.

Suffiziente endoskopische Therapie bei Boerhaave-Syndrom

T Kratt, D Stüker, B Brücher, A Heining, S Miller, A Königsrainer

Klinik für Allgemeine, Viszeral- und Transplantations-

Chirurgie; Klinik für Anästhesie; Klinik für Radiologie

University Hospital Tuebingen

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 endo-scopic 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, 292-298), 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.

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