

Conference Report United European Gastroenterology Week (UEGW) 2018

- **RESECT+:** additional working channel (AWC[®]) and temperature-dependent agent for submucosal injection (LiftUp[®]) enable fast endoscopic en-bloc resection of specimens up to 30 mm
- **BougieCap:** prospective multicenter study shows 96 % successful bougienage and no complications
- **FTRD[®]:** endoscopic full-thickness resection of rectal neuroendocrine tumors is feasible, safe and effective and allows for definite diagnosis and treatment in the same session
- **OTSC[®]:** Large systematic review (2462 patients) shows 77-96 % clinical success by OTSC in various indications without the need for further intervention

The 26th United European Gastroenterology Week (UEGW) was held on October 20-24, 2018, in Vienna, Austria. Several workshops, talks and posters presented original research with Ovesco technology and procedures. Hands-on training sessions in the ESGE learning area with the OTSC System attracted lively interest.

RESECT+

Additional working channel (AWC) effectively supports endoscopic resection of large lesions in the upper and lower GI tract

B. Walter et al., Department of Internal Medicine I, University Hospital Ulm, Germany, presented first experiences using the additional working channel (AWC). The device can be fixed at the tip of a standard gastroscope or pediatric colonoscope. The distance of the two working channels can be adjusted by the endoscopist. Via the AWC a second endoscopic tool can be inserted and used for bi-manual handling. ESD and EMR with a modified 'grasp-and-snare' technique was performed, EMR in 4 patients (1 with lesion in the upper GI tract, 3 with lesions in the lower GI tract), and ESD in 4 patients (2 with lesions in the upper GI tract, 2 with lesions in the lower GI tract). Mean procedure time was 68.5 min. Reported complications were acute arterial bleeding post EMR in two cases treated in the same session. No delayed bleeding or perforation were reported. Passage with the AWC-equipped endoscope was possible in all cases. The authors concluded that

the AWC effectively supports endoscopic resection of large lesions in the upper and lower GI tract. Potential benefits are its suitability for EMR and ESD, no need for dual-channel endoscope and an adjustable distance or working channels.

EMR+: the new technique allows for fast endoscopic en-bloc resection of lesions up to 30 mm

B. Meier and K. Caca, Department of Internal Medicine, Klinikum Ludwigsburg, Germany presented preclinical data on a new EMR technique (EMR+). This technique allows for en-bloc resection of specimen > 20 mm, which are usually resected in piecemeal EMR or by ESD, which however is time-consuming and associated with a higher risk for complications. EMR+ was developed and evaluated in an ex vivo porcine stomach. The stomach was adjusted in a special simulation model to be accessible to endoscopy. An additional working channel (AWC) was mounted on a standard gastroscope and used for a resection snare. The conventional working channel of the scope was used for an anchor device. For submucosal injection a newly

developed agent with a temperature-dependent viscosity (LiftUp) was used. The agent has liquid consistency at room temperature, which allows submucosal injection. At body temperature, the agent gels and forms a stable cushion within seconds, which provides stable resection conditions (no deminishing over time, re-injections are not necessary). The effectiveness and safety of this agent has already been shown in vivo in domestic pigs. Imaginary lesions of 30 mm were marked by coagulation. After injection, the anchor device was used for tissue lifting simultaneously with the snare to facilitate resection. After the resection technique was established, 22 resections were performed and evaluated. The median size of the en-bloc resection specimens was 30 x 26 x 11 mm (max. 40 x 33 x 14 mm). The procedure times were between 6-7 minutes. No perforations occurred. The authors concluded that the EMR+ technique allows for fast en-bloc resection and obtains resection specimens of 30 mm.

BougieCap

Endoscopic treatment of benign stenosis using the BougieCap enables direct visual control of the bougienage

B. Walter et al., Department of Internal Medicine I, University Hospital Ulm, Germany, presented a prospective interventional study on patients with a benign oesophageal stenosis and with clinical symptoms of dysphagia treated with the BougieCap at three endoscopy units in Germany and UK. 50 patients (m/f 25/25) underwent the procedure, mean age was 67.1 years (± 16.8). Etiology of strictures was peptic (n=23), radiation (n=13), anastomosis (n=6), caustic ingestion (n=4), post ESD (n=2), EoE (n=1) or unknown (n=1). Successful dilatation with the BougieCap was possible in 96 % (n=48). On average 2.3 (± 0.7) BougieCaps of subsequent sizes were used per patient. A stiff guide-wire was used in 10 cases to aid with bougienage, using a pediatric scope in 8

cases and a standard gastroscope in 2 cases. In two cases with a narrow stricture and no usage of guide wire treatment failed as a result of high resistance at the site of stricture causing buckling of the endoscope in the pharynx. Symptoms of dysphagia (as assessed per Dysphagia Handicap Index score) decreased significantly after bougienage in short-time follow-up (14 days post-interventional). No severe complications were reported. Adverse events were loss of 2 BougieCaps in the stomach causing no symptoms. The authors concluded that endoscopic treatment of benign stenosis using the BougieCap enables direct visual control of the bougienage procedure and therefore of mucosal damage within the area of strictures. This might help to adapt endoscopic treatment even more precisely to the stricture. Symptoms of dysphagia are improved in short-term follow-up. Additional wire guidance is reasonable.

FTRD System

3-year multicenter UK experience: EFTR highly successful in the treatment of colonic lesions not previously amenable to endoscopy

I. Rahman et al., Department of Gastroenterology University Hospital Southampton, UK, presented data from the UK FTRD registry. Registry data from 04/2015 – 01/2018 comprised 52 cases of FTRD application in 8 centers. Patients had a median age of 72 years (39-93). The target lesion could be reached with the FTRD mounted on top of the endoscope in 51/52 patients (98 %). 1 caecal lesion could not be reached due to sigmoid diverticulosis. Median total procedure time was 45 minutes (10-150). Median FTRD insertion time was 5 minutes (1-100). Median specimen size was 22 mm (10-30). Technical success was achieved in 88 % (45/51). Technical difficulty was experienced in 9 cases: In 6 cases snare closure was not

possible, in 3 cases the lesion slipped from the grasper on clip deployment. R0 resection was achieved in 74 % (38/49), for two patients, histological data was incomplete. Residual/recurrent lesions at follow-up were found in 7 % (2/30). Complications occurred in 3 patients; 1 acute appendicitis at day 6 after resection of appendix base adenoma, 1 arterial fibrillation and hypotension, and 1 rectal bleeding. There were no cases of perforation or fistula. The authors concluded that treating colonic lesions with the FTRD shows high success rates and low complication rates, making EFTR a viable alternative to surgery.

Pooled analysis from all studies that report on FTRD use (532 patients): 77.5 % R0-resection rate, 5.4 % complication rate

A. Wannhoff et al., Department of Internal Medicine, Klinikum Ludwigsburg, Germany, reported on a study analyzing all so far published data with the FTRD System (published studies and relevant congress abstracts). A total of 18 studies were included, 9 of them published as a full-text and 9 as congress abstracts, which comprised a total of 532 patients from 7 countries. The target lesion was reached with the FTRD mounted on top of the endoscope in 522 (98.1 %) patients and technical success was achieved in 486 (91.4 %) patients. The full-thickness resection was histologically confirmed in 326 of 401 (81.3 %) patients, in the remaining 131 no data on this endpoint was reported. The R0 resection rate was 77.5 % and achieved in 383 of 494 patients for which data on resection margins was reported. Technical problems were mostly related to the resection snare, which occurred in 34 cases. In most of this cases a successful resection however was achieved by use of a conventional resection snare following clip application with the FTRD.

Complications included minor bleeding and post-polypectomy syndrome in 14 (2.6 %) patients each. Severe bleeding occurred in 2 (0.4 %) patients and perforations were reported in 13 (2.4 %) patients. A surgical intervention due to a FTRD related complication was necessary in 9 (1.7 %) patients. The authors concluded that the FTRD system provides high efficacy in the colorectum. The complication rate is low and most complications can be managed conservatively or endoscopically.

EFTR with the FTRD for rectal NET is feasible, safe and effective and allows for definite diagnosis and therapy at once

B. Meier and K. Caca, Department of Internal Medicine, Klinikum Ludwigsburg, Germany, presented a study evaluating EFTR for rectal neuroendocrine tumors. All cases of rectal NETs in the German FTRD registry, which comprises data of FTRD procedures of 31 German centers, were retrospectively analyzed. 40 patients (19 male, 21 female, median age 58 years, range 28-81) met the inclusion criteria. Lesions were located in the lower (n=13), middle (n=24) and upper rectum (n=3). Median size of the lesions was 8.4 mm (3-25). Biopsies were taken before EFTR in 19 patients and EMR had been performed in 10 patients prior to EFTR, histology had shown well differentiated NET in all cases. However, in all cases resection status was unclear or incomplete. 6 NET (15 %) were recurrent NET and had been treated previously (multiple forceps biopsies or snare resection). Mean procedure time of EFTR was 23 minutes (range 7-60 minutes). A full-thickness resection specimen could be obtained in all cases. R0-resection was achieved in all cases. However, in 7 cases (28 %) a NET could no longer be proven. Adverse events occurred in 5 cases (12.5 %), 4 patients suffered peri-interventional

bleeding, which could be managed endoscopically in all cases, in 1 patient a technical problem occurred (rupture of the FTRD snare, resection was performed with a conventional snare). Follow-up data was available for 32/40 patients. Mean follow-up time was 17 weeks (1-45 weeks). Residual or recurrent tumors were not found during follow-up.

The authors concluded that EFTR of rectal NET < 20 mm is feasible, safe and effective and allows diagnosis/risk stratification and therapy (R0 resection) at once. The technique should be considered as first-line therapy.

OTSC System

Lively interest in Hands-On Trainings with the OTSC System

The European Society of Gastrointestinal Endoscopy (ESGE) offered an ESGE Learning Area to all delegates of the UEGW to provide a platform for live encounter and interaction among aspiring endoscopists and renowned experts in the field.

In the ESGE Learning Area, three 90-minute Hands-On Trainings with the OTSC System were offered. All Hands-On Trainings were fully booked.

Besides, a talk on the OTSC System was held in the ESGENA Lunch Session (A. Caputo: “Advantages of the OTSC System in the treatment of UGIB”) and the exhibition of Ovesco products attracted lively interest.

Large systematic review shows 77-96 % clinical success of OTSC in various indications without the need for further intervention

N. Bartell et al., Department of Gastroenterology and Hepatology, University of Rochester, United States, reported on a systematic review with the

OTSC System. The study evaluated a large body of literature to determine the overall efficacy and safety of OTSC. 81 case series/ retrospective reviews/ prospective studies (Group A with a total of 2285 patients) and 157 case reports (Group B with a total of 177 patients) were included.

In Group A, technical success of OTSC placement was 95.3 %, with a clinical success of 77.2 %. Indications for OTSC placement were fistula closure (30.6 %), bleeding (28.9 %), perforation closure (16.3 %), leaks (15.1 %), EFTR (8.4 %) and stent fixation (0.7 %). Complete luminal obstruction (n=1) was the only reported adverse event across all studies. 24/81 papers reported the need for surgery despite OTSC placement (90/673 patients, 13.4 %).

Indications for OTSC placement in Group B were fistula closure (37.9 %), perforation closure (33.9 %), bleeding (14.1 %), EFTR (7.9 %) and leaks (6.2 %). Pooled technical success in this group was 99 % and clinical success was 96.0 %. 7/177 (4 %) patients required surgical intervention despite OTSC placement. Complete luminal obstruction in 1/177 patients and small bowel fixation with pneumoperitoneum in 1/177 patients were the only OTSC related adverse events reported.

The authors concluded that the OTSC is a safe and effective, surgery-sparing endoscopic tool in today’s GI practice with 77-96 % of patients achieving clinical success without the need for further intervention. Technical success of > 95 % has been reported across all indications.

OTSC for high-risk peptic ulcer bleeding: one and done in 75 %

S. Gölder et al., Department of Internal Medicine III, Klinikum Augsburg, Germany, presented a study evaluating the use of OTSC for the treatment of high-risk peptic ulcer bleeding (HRUB).

Between 4/2014 and 03/2018, 100 patients with peptic ulcer bleeding (Forrest Ia-IIb), in the stomach of the duodenum were treated with OTSC. The OTSC was used as first-line procedure in 66 patients. Successful primary hemostasis could be achieved in 89.4 %. The OTSC was used as secondary treatment after failure of an initial

endoscopic treatment in 34 patients. OTSC clipping led to successful primary hemostasis in 94.1 %. Recurrent bleeding occurred in n=9 for primary OTSC (15.3 %) and in n=7 patients with secondary OTSC (21.9 %) (p=0.812).

No treatment beside the single OTSC clip was necessary in 75.8 % (n=50) in the primary-OTSC arm and in 73.5 % (n=25) in the secondary-OTSC arm, respectively.

OTSC failure occurred more often in large ulcers (> 3 cm, p=0.03), in the duodenal bulb (p=0.03) and in ulcers with negative helicobacter test (p=0.045). The patients with OTSC failure received more blood transfusions (p=0.002). No statistical difference was found for the Rockall score (median 7.5), the Glasgow Blatchford score (median 15.5), NSAID use or anticoagulation.

The authors concluded that the OTSC has a high rate of bleeding control in first- and second line treatment of peptic ulcer bleeding. Potential risk factors for treatment failure are location in the duodenal bulb, longer ICU stay, higher amount of transfusions and a higher reimbursement per case.

For questions and further information:

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