

Congress report

50. Anniversary Congress of the DGE-BV (German Society for Endoscopy and Imaging Techniques)

Together with the professional societies **DGD & DEGEA**

8.–10. April 2021, virtual

Chairman: Prof. Dr. Alexander Meining, Würzburg

Prof. Dr. Hagenmüller, Hamburg, in his lecture – Disasters and achievements in endoscopy – a look back and forward – which he gave at the opening of the congress, mentioned the clinical research of Prof. Caca & Prof. Schmidt regarding haemostasis with OTSC® and endoscopic full-thickness resection with the FTRD® System as one of the great accomplishments of DGE-BV members in the further development of endoscopy.

There was also an evening symposium on HemoPill® & OTSC®: telemetric bleeding detection and latest data on haemostasis. In this context, the first data on the STING II study was presented, which investigated the OTSC first-line treatment of non-varicose upper GI bleeding with a high risk of rebleeding. Furthermore, several presentations dealt with the FTRD® System and OTSC® System.

FTRD® System

Current update on the topic of full-thickness resection in the lower and upper GI tract

As part of the series of lectures on new methods and instruments in endoscopic treatment, K. Caca, Ludwigsburg, gave an update on full-thickness resection, which according to him has now become standard in clinics. EFTR with FTRD as a non-exposure technique has already found wide application to date. K. Caca supports this statement with a brief overview of the larger studies, such as the 2018 Wall Resect study with 181 patients and the two large national registers (German FTRD register with 1178 patients, Dutch register with 367 patients). All three studies show comparable results: technical success rate between 85–90%, R0 resection rate around 80%, serious complication rate between 2–2.5% and mortality of 0. The data also shows that the procedure can be used throughout the colorectum. In terms of indications, the distribution in the German FTRD register was about 2/3 difficult adenomas and 1/3 T1 carcinomas and submucosal tumours. However, no differences were found in terms of efficacy and safety with regard to size, location (colon vs. rectum) or pre-treatment. K. Caca shows that the data is identical to the Wall Resect study, with the special feature that in the registry centres from all over Germany have contributed data even with low case numbers and can use the procedure safely and effectively. In comparison, the ratio of indications is different in the Dutch registry with considerably more T1 carcinomas, but also here approximately the same results are achieved.

K. Caca then presented the hybrid FTRD. A combined technique of EMR at the edge and FTRD in the centre, e.g. when a lesion is too large or cannot be completely ablated with EMR, e.g. because there is a central non-lifting sign. In this regard, data from 10 patients has already been published by his team and updated again in 2019 (32 patients, n=4 left colon, n=26 right colon, examination time 40–140 minutes, no serious complications, 5 recurrences at follow-up). Another publication from the USA, with 62 advanced colorectal adenomas, also shows internationally comparable data. Here, 33 adenomas were resected with FTRD alone and 39 with hybrid technique with a technical success of 89% vs. 96%, an R0 resection rate of 97% vs. 96% and two serious complications (1 appendicitis and 1 perforation).

Another topic in K. Caca's update was T1 carcinomas. At the beginning, a video example was shown in which a curative resection was performed on a patient with a suspected carcinoma finding and thus a left hemicolectomy could be spared. He then presented the data of Küllmer et al. who studied 156 patients in two groups: Group 1 with post-resections of malignant polyps and Group 2 with primary non-lifting lesions with suspected carcinoma. In group 1, 76% had only a scar left in the re-resection and 22% had a carcinoma; 84% from group 1 could ultimately be classified as low-risk and 16% as high-risk lesions. In group 2, the results were reversed with 16.3%

low-risk and 83.7% high-risk lesions. In the end, however, 16.3% of the lesions could be resected curatively according to the guidelines, which is why K. Caca concludes that it is worth trying if you are able to resect endoscopically.

The last aspect of the update was the full-thickness resection in the upper GI for which K. Caca also showed a video example – an EFTR with FTRD at the lower duodenal knee of a recurrence after surgical polypectomy. Here, too, the patient was spared surgery and the findings were successfully resected full-thickness with FTRD in . He briefly mentioned three clinical studies: 20 patients from Ludwigsburg, 10 patients from Rome and a publication from New York with 56 patients. Overall, the data in the duodenum shows more frequent bleeding than in the colon, which is why K. Caca also recommends from his own experience to always see that any source of bleeding in the duodenum is prophylactically coagulated. According to K. Caca, EFTR with FTRD is much less favourable in the stomach because the relevant lesions are usually larger and small lesions often do not have to be ablated. In the RESET study, he examined precisely these smaller findings, in which, however, a GIST or NET was found in only about 1/3 of the cases. However, an accurate diagnosis could be made in 100% of cases, which is why it is a good method when small findings are to be removed, e.g. due to a patient request. For larger findings in the stomach, however, he chooses the GERD-X method, for example, for which data has also already been published.

In summary, K. Caca concludes that almost 100% of all benign GI lesions can be resected endoscopically today. However, the desired complete resection does not always have to be en bloc, which is why there are options such as hybrid FTRD. However, the limits should always be observed (e.g. submucosal infiltration). The FTRD-EFTR fills an important gap whilst the hybrid FTRD fills a small but difficult therapeutic gap. Sometimes, however, the full-thickness resection is only a large biopsy, which is then not therapeutic but diagnostic – but then supports the stratification and the definition of the further therapeutic procedure. In the end, however, K. Caca concludes that it always depends on the indication and localisation: in the colon and rectum, FTRD is to be regarded as the standard, in the duodenum it can be used particularly well for non-lifting and subepithelial findings, and in the stomach it is more suitable for smaller lesions.

Full-thickness resection update – (Update Vollwandresektion)

K. Caca, Ludwigsburg

Retrospective analysis of pain after full-thickness resection in the upper and lower GI tract

H. Heinrich, Zurich, reported on a retrospective analysis of pain in patients after full-thickness resection in the upper and lower GI tract. For this purpose, data from 107 patients (49 female, 58 male) who, between 2017 and 2021, received a full-thickness resection with the FTRD System was collected and analysed. Pain was assessed using the following factors: visual analogue scale in the endoscopy report, need for medication and hospitalisation.

Among the 107 patients evaluated (mean age 61.3 years), 34 (32%) had full-thickness resections in the upper GI tract and 73 (86%) in the lower GI tract. The R0 resection rate was n=81 (75%), with diagnoses varying and including GIST, NET, adenomas and others.

The evaluation of the data regarding pain after full-thickness resection showed that 80 patients (75%) had no pain at all. 27 patients (25%) reported pain, which presented as immediate pain in 19% (20/107) and delayed pain (> 48 h) in 6% (7/107). Ultimately, 8 of the patients were hospitalised with immediate pain due to age and comorbidities. Among the patients with delayed pain, two appendicitis and three perforations occurred, which had to be treated surgically. Two of the perforations were due to a passenger disorder in the form of constipation, the third perforation was the consequence of incorrect post-interventional feeding. Overall, hospitalisation was necessary in 12% of patients complaining of pain.

The authors concluded that delayed pain after full-thickness resection with the FTRD System is an indication for the occurrence of appendicitis or delayed perforation and also identified risk factors such as COPD and obesity. It was noted that consistent stool regulation by the patient and sufficient instruction on post-intervention nutrition are particularly important.

Pain after FTRD in the upper and lower GI tract – a single center experience

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Report of perforated appendicitis as a late complication after EFTR

M. Raithel, Erlangen, presented the case of a 71-year-old female patient who had to undergo an emergency laparoscopy due to a late complication. The patient underwent EFTR with adenomectomy of the ostium appendicis 3 months previously. As the EFTR of the circular flat adenoma measuring approx. 22 mm was incomplete, the residual adenoma tissue was removed with a conventional polypectomy snare. The histopathological result showed a completely resected sessile-serrated adenoma without evidence of malignancy. The patient subsequently received prophylactic antibiotic treatment and could be discharged from hospital after 4 days following an uncomplicated course.

However, 3 months after the procedure, the patient presented again with clinical symptoms of acute appendicitis. Emergency laparoscopic appendectomy revealed perforation of the appendix with local peritonitis. The defect localisation was laterally under the appendix closure due to the previously conditioned FTRD closure. The postoperative course was unremarkable and the patient was able to leave the clinic 4 days after the emergency surgery.

M. Raithel concluded that the case shows that there is an increased risk of complications with EFTR at the appendix region and therefore a distinction should be made between people with and without appendectomy. In contrast to the usual recording of complications (< 4 weeks after endoscopy) in EFTR, later complications would also have to be observed in the case of appendectomy.

Perforated appendicitis as a late complication after endoscopic full-thickness resection (EFTR) with OTSC closure (Perforierte Appendizitis als Spätkomplifikation nach einer endoskopischen Vollwandresektion (eFTR) mit OTSC Verschluss)

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Practical tips and tricks on the subject of FTRD

As part of the DEGEA Mini Symposia, I. Galla gave a brief insight into tips and tricks for FTRD from a nursing perspective. To start with, he briefly presented the field of application of the FTRD with regard to localisations and indications, then the instrument set in its composition as a procedure set (incl. the auxiliary instruments) and the individual components of the system. An essential part of the presentation was important information on the preparation of the procedure, e.g. clarification, resource planning, task distribution, endoscope selection with correct diameter, correct HF parameters, aids, important aspects regarding the assembly of the system, e.g. do not twist the clip, push the cap forwards enough, apply the cover correctly. Finally, I. Galla gave tips for after the procedure, such as correct disassembly or issuing the MRI pass, and referred to supporting application documents that can be requested via the Ovesco field service.

Mini Symposia (DEGEA) – Tips and tricks for the FTRD

Ingo Galla

OTSC® System

Retrospective comparative study conducted on OTSC type-a vs. type-t clips in duodenal ulcer bleeding

M. Hollenbach, Leipzig, reported on a retrospective analysis comparing OTSC type-a versus type-t clips in the treatment of duodenal ulcer bleeding. For this purpose, data from 2009 – 2020 from 6 endoscopy centres was analysed and all patients treated with the OTSC System for duodenal ulcer bleeding during an emergency endoscopy were included in the analysis.

Finally, the data of 173 patients could be evaluated. Of these, 93 patients were treated with type-a and 80 patients with type-t. The analysis showed that the baseline characteristics age (71.2 y vs. 71.6 y, $p = 0.255$), gender (men: 69.9% vs. 67.5%, $p = 0.735$), use of anticoagulants (32.9% vs. 43.0%, $p = 0.176$) and Rockall score (7.2 vs. 7.4, $p = 0.917$) were comparable between the groups. However, there were some significant differences in the bleeding characteristics, which then also influenced the discussion. Thus, the type-a group had significantly fewer ulcers with active bleeding (Forrest Ia/b) than the type-t group (51.1% vs. 62.5%, $p=0.020$). In addition, type-t was used more often as first-line treatment (95% vs. 77.8%, $p=0.004$). Analysis of the data showed that initial haemostasis (type-a: 93.5%, type-t: 90%, $p=0.421$) and bleeding-associated lethality were not significantly different (type-a: 3.2%, type-t: 7.8%, $p=0.125$). However, the OTSC-t group showed a higher rate of rebleeding (37.2% vs. 6.5%, $p<0.001$).

The authors concluded that type-a should be considered the standard of care for endoscopic treatment of duodenal ulcer bleeding, if an OTSC is used, because of the lower rate of rebleeding. However, the significant differences within the bleeding characteristics were again pointed out during the discussion. No subgroup analysis was performed in the evaluation to determine whether bleedings that initially bled actively (Forrest Ia/Ib) also bled more afterwards. Thus, no statement can be made as to whether bleeding that initially bled and was treated more frequently with the type-t clip influenced the higher number of rebleeds. Therefore, further research is needed in this regard.

Analysis of traumatic vs. atraumatic over-the-scope-clip (OTSC) in the treatment of duodenal ulcer bleeding (Analyse des traumatischen vs. atraumatischen over-the-scope-clip (OTSC) bei der Behandlung von duodenalen Ulkusblutungen)

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