

Full Thickness Resection of an Early Caecal Cancer in an Elderly Patient

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Abstract

Colorectal cancer is emerging in elderly patients. Low risk colorectal cancer offers an option of endoscopic resection (ER). In cases of submucosal infiltration (SM1), endoscopic mucosa resection (EMR) is contraindicated. Endoscopic submucosa dissection (ESD) is a well-established technique for high grade dysplastic polyps and low risk colorectal cancer, however bearing the risk of perforation, bleeding and incomplete resection. In particular, the risk of perforation is increased in the right colon, due to limited wall thickness.

Full thickness resection, using the FTRD device, is a new, innovative technique for resection of the complete walls. Indications are low-risk colorectal cancer among others, such as recurrent polyps, non-lifting polyps and high grade dysplastic polyps. We here report on one of the first cases of an early caecal cancer resected by FTRD technique in an elderly patient.

Introduction

Full thickness resection is an emerging endoscopic technique for resection of polypoid recurrences, non-lifting polyps or small low risk colorectal cancer [1,2]. The device can be used for lesions with a size below 30mm in diameter. A series of 25 cases who underwent full thickness resection for different indications was presented at the annual meeting of the German Society of Gastroenterology 2015 [2]. Furthermore, a small series of three colon cancer full thickness resections was published recently in Gastroenterology [3].

Case Report

An 86-year old male patient with a current history of hepatocellular carcinoma and transarterial chemo-embolisation presented with a sudden onset of hematochezia in September 2015. Although the patient had a medical history, including symptomatic abdominal aneurysm (treated with a stent/graft in March 2015), coronary heart disease (treated with bypass surgery), tachyarrhythmia absoluta (treated with a implantation of a DDD-pacemaker and anticoagulation), chronic renal insufficiency grade III° and prostate cancer (diagnosed in 2013; treated with antiandrogenic therapy), he nonetheless was still in-good condition, with a Karnofsky Index of 80%. He had received one course of transarterial chemo-embolisation for hepatocellular carcinoma, first diagnosed in July 2015.

Upon presentation with hematochezia, we decided to perform a colonoscopy. We identified a non-pedunculated polypoid lesion in the caecum with a focal disrupted vascular pattern, facing the ileocaecal valve as the former focus of hematochezia. Upon saline injection the polyp presented a non-lifting sign and seemed indurated. During colonoscopy, bleeding was absent, due to interrupted anti-coagulation. Biopsies revealed a high grade dysplasia.

Histology reports were discussed with the patient. Because of the high grade dysplasia, the pathological vascular pattern and the non-lifting sign, we discussed the possibility of an invasive cancer deep within the lesion [4]. Together with the patient, we decided to perform a full thickness resection.

Prior to the full thickness resection the patient received standard inpatient bowel preparation. During colonoscopy, the lesion was identified using virtual chromoendoscopy (I-Scan modus 2, Pentax Medical Systems, Germany). A non-pedunculated lesion was classified as pit pattern IV-V, depicting signs of vessel disruption and an irregular surface suggesting an early cancer [5]. A careful injection with NaCl

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solution 0,9% was performed, again resulting in a non-lifting sign of the lesion. Hence the borders of the polyp were marked by circumferential coagulation (20 Watt). Following removal of the colonoscope, the full thickness resection device was attached and the colonoscope was reinserted and carefully maneuvered towards the caecum. Due to the electrocoagulation markings the lesion was easily identified. The polyp tissue was grabbed with forceps, retrieved into the device cap, the device clip was applied, and the lesion was removed with a snare, consistent with the manufacturer's recommendations.

The colonoscope was removed from the colon and the resected full thickness resection sample was evaluated macroscopically. Hence, the full thickness resection kit was removed from the colonoscope and the colonoscope was again inserted, identifying the former lesion. The clip was detected, revealing an adequate position with no signs of perforation or bleeding in the resection area.

The patient remained an in-patient and received antibiotics for three days. On the second day, we performed a colonoscopy, due to a new onset of hematochezia with a drop of 2g/dl hemoglobin: we found very small coagula of blood on the lesion with no signs of active bleeding. The patient was discharged two

days later in a stable condition after replacement of two units of erythrocytes.

Histology revealed a pT1, sm2 (1300 µm), L0, V0, R0, G1 resected early colon cancer. A subsequent CT-scan of the thorax and abdomen showed no signs of lymphatic involvement. The situation was discussed with the patient, who decided to avoid iliocaecal resection due to his age and coexisting diseases.

Six weeks after resection, the patient is doing well and has no further signs of GI-bleeding or perforation (Figures 1-5).



Figure 1: Hg dysplastic non-pedunculated polyp facing the ileo-caecal valve in HD endoscopy.



Figure 2: Hg dysplastic non-pedunculated polyp facing the ileo-caecal valve in HD endoscopy applying iscan modus 2.

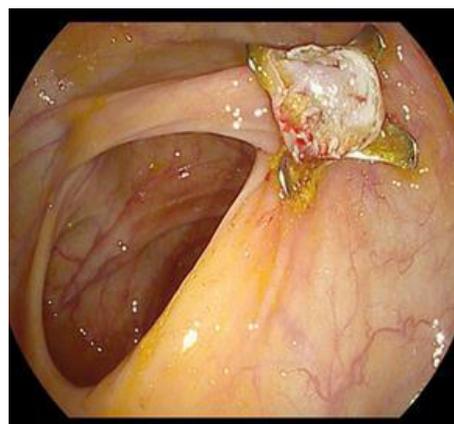


Figure 3: Lesion after full thickness resection; adapting clip in situ



Figure 4: Removed hg dysplastic polyp after full thickness resection, all coagulation markers were completely within the resection margins.

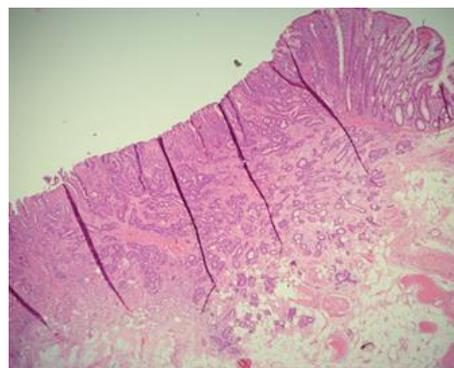


Figure 5: Histology revealed a pT1 sm2 L0 V0 G1 colon cancer.

Discussion

To date, full thickness resection has been used for resection of complicated polyps, such as and non-lifting polyps [1,6]. By retrospective analysis, low risk colorectal cancer lesions were found in some of the resected polyps [2,3,7].

We present the case of a prospectively resected hg dysplastic polyp suspicious of an early cancer of the right colon. Due to multiple diseases, the patient (Karnofsky Index 80%) decided to decline a surgical resection but accepted a full thickness resection.

The full thickness resection was performed without any initial complications. Shortly after resection, the patient developed a minor hematochezia without any need for further intervention during colonoscopy. Histology revealed a pT1, sm2, L0, V0, R0, G1 early colon cancer. Due to his multiple diseases, the patient pro-actively decided not to undergo final oncological resection, accepting an 8% risk of lymphatic disease [8,9]. In contrast, risk of lymphatic dissemination is only 1-3% in sm1 cancers, as compared to 23% in sm3 cancers [9].

CT scans revealed no signs of lymphatic or distant metastases. His known hepatic lesions were in line with hepatocellular carcinoma, which had been treated by transarterial chemo-embolisation.

The chosen approach seemed optimal for this-particular patient: On one hand, the risk of complications of a classical surgical approach would not have been acceptable for the patient in his particular condition; on the other hand, due to depth of infiltration of 1300µm an ESD resection technique could have

resulted in an R1 situation in this case. Using full thickness resection, we were able to perform an R0-resection and were able to provide a relevant chance of a good survival prospect related to both the colorectal cancer and the gastrointestinal bleeding.

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