SECTION: ENDOSCOPY

087

ENDOSCOPIC MUCOSAL RESECTION OF LARGE AND SESSILE COLORECTAL NEOPLASMS

Bortlík M.[1], Lukáš M.[1], Adamec S.[1], Krechler T.[1], Novotný A.[1], Chalupná P.[1], Horný I.[2]

[1] *4th Medical Department, General Faculty Hospital, Charles University, Prague*
[2] *Internal Department, County Hospital, Strakonice, Czech Republic*

Introduction

Endoscopic mucosal resection (EMR) permits the removal of most large and sessile adenomas and early carcinomas in the large bowel with minimal risk of complications.

Methods

Twenty-three patients (8 female, 15 male) with large and/or sessile colorectal neoplasm (n = 30) were included in this prospective study. Tumor size, location, shape, histology as well as type of resection, number of sessions needed to treat, success rate and number of complications were assessed. The "inject and cut" technique of EMR was used in all cases with standard injection needle and polypectomy snare. Pictures documenting tumors and results of treatment, including complications, were taken.

Results

Thirty tumors (27 adenomas and 3 early carcinomas) of mean size 35 mm (15–60 mm) were treated. Complete resection was achieved in 25 cases (83 %), patients with remaining 5 tumors (17 %) underwent additional argon plasma coagulation (n = 4) or surgery (n = 1). There was no difference as to the size of the tumors removed completely or incompletely (33 mm vs. 41 mm, n.s.), but a trend towards larger tumors was observed in patients with incomplete resection. Tumors removed by using a peace meal technique (PM) were significantly larger than tumors resected en bloc (EB) (46 v.s. 24 mm, $p < 0{,}001$). The mean size of tumors resected with complications was significantly higher than those without (41 vs. 32 mm, $p < 0{,}05$). However, most serious complications, delayed bleeding, occurred after resection of tumors of less than average size. There was no significant difference in complication rates between tumors resected by PM or EB technique (5 vs. 4, n. s.). Number of serious complications was generally low. These were delayed bleeding (n = 2) and abdominal pain due to coagulated bowel wall (n = 1). Bleeding immediately following the resection was seen in 7 cases and treated successfully by clipping during the same procedure in all cases.

Conclusion

Large and sessile colorectal adenomas and early carcinomas can be safely and effectively treated by the inject-and-cut technique of endoscopic mucosal resection regardless of their size, shape and location.

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LINEAR ENDOSONOGRAPHY – INTERESTING FINDINGS

Cendelínová J., Mareš K., Schützner ová D.

Department of Gastroenterology, Hospital Na Homolce, Prague, Czech Republic

Introduction

Linear endosonography (EUS) is a method with no radiation risk and a great benefit for patients. The EUS transducer at the tip of the endoscope scans the target area in multiple planes. We can use fine needle aspiration biopsy and doppler imaging.

Methods

Sonography equipment: Core Vison Pro and endosonography probe PEF (Toshiba, Japan).

Results

Some interesting findings of eosophagus, stomach, duodenum, pancreas, bile duct, kidneys, suprarenal glands and rectum are presented. In some cases linear EUS is the only method supporting this diagnosis; results of CT and MR were negative.

Conclusion

Using linear EUS it is possible to visualize various lesions without the risk of radiation. In some cases EUS can be the only method for diagnosis verification.

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JUXTAPAPILLARY DIVERTICULA AND ERCP

Drábek J.[1], Keil R.[1], Schwarz J.[2], Lochmannová J.[1], Námešný J.[1]

[1] *Endoscopic Center, Clinic of Internal Medicine, Faculty Hospital Motol, Prague*
[2] *1st Surgery Department, Faculty Hospital Motol, Prague*

Introduction

According to the literature, juxtapapillary diverticula are associated with an increased incidence of common bile duct stones. The incidence is 9 % and 23 % at ERCP. In patients with juxtapapillary diverticula, the cannulation rate is lower and the rate of complications is higher.

Aim

The aim of our study is the retrospective evaluation of cannulation rate and complications in patients with juxtapapillary diverticula by ERCP in comparison with the control group with normal papilla.

Methods

Retrospectively we evaluated the group of patients, who underwent ERCP with obstructive jaundice, cholestasis and suspicion for common bile duct stones from January 1994 to June 2003.

Results

During this period we performed 16171 ERCPs. We found 6359 patients with normal papilla and 1149 patients with juxtapapillary diverticula. The cannulation was not successful in 7 % in both groups. Choledocholithiasis was found in 25 % of patients with normal papilla and in 35 % of patients with juxtapapillar diverticula. Bleeding in 2 % in both groups complicated ERCP. Retroperitoneal leak of contrast fluid was noticed in 0.03 % of patients with normal papilla and in 0.3 % of patients with juxtapapillary diverticula.

Conclusion

We found no difference in cannulation rate between the group of patients with normal papilla and the group of patients with juxtapapillary diverticula. The rate of choledocholithiasis was higher in patients with juxtapapillary diverticula. The rate of bleeding after papilosphincterotomy was identical in both group, but we noticed higher occurrence of retroperitoneal leak in patients with juxtapapillary diverticula.

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ENDOSCOPIC VARICEAL BAND LIGATION IN COMPARISON WITH BETABLOCKERS IN THE PROPHYLAXIS OF THE FIRST VARICEAL BLEEDING IN PATIENTS WITH LIVER CIRRHOSIS: PRELIMINARY RESULTS OF THE "BLOK" STUDY

Drastich P.[1], Lata J.[2] , Petrtýl J.[3], Procházka V.[4], Vaňásek T.[5], Zdeněk P.[6], Špičák J.[1]

[1] *Institute of Clinical and Experimental Medicine, Prague*
[2] *Faculty of Medicine Masaryk University, Brno*
[3] *General University Hospital, Prague*
[4] *Faculty of Medicine Palacký University, Olomouc*
[5] *Charles University Faculty of Medicine, Hradec Králové*
[6] *Charles University Faculty of Medicine, Plzeň*

Background and Aim

Esophageal variceal haemorrhage is perhaps the most serious complication of cirrhosis and it occurs in 30 % of patients with cirrhosis and portal hypertension. Prophylaxis of the first variceal bleeding is one of the most important strategies in treatment of patients with cirrhosis. Endoscopic variceal ligation (EVL) and beta-blockers have been shown to decrease the risk of first bleeding.
We conducted a prospective, multicentric, randomised trial to compare the efficacy and safety of propranolol therapy vs EVL for the prophylaxis of the first variceal bleeding in patients with cirrhosis and large esophageal varices.

Patients and Methods

Over the 8months period, 42 consecutive patients with high-risk varices (> 5 mm in diameter) that had never bled, were included in the study. Child – Pugh Classification – A: 22 patients, B: 18 patients and C: 2 patients. The patients were randomised into 2 groups: 16 persons received propranolol at a dose sufficient to decrease the base-line heart rate by 25 percent, and 25 underwent endoscopic variceal ligation until eradication was reached. The primary end point was bleeding from the esophageal varices.

Results

The mean (± SD) number of sessions needed to achieve variceal eradication was 2.0 ± 0.7, the mean dose of propranolol reguired for adequate heart rate reduction was 60 ± 26 mg daily. Three patients died, 1 in propranolol group (6.3 %) and 2 in EVL group (8 %), all as a consequence of variceal bleeding. There were no serious complications related immediately to EVL, in the propranol group no treatment withdrawal occurs so far due to side effects.

Conclusion

Both propranol and EVL seem to be safe and effective in primary prophylaxis of bleeding in patients with high-risk of esophageal varices. The final conclusion of the study will be available within 2 years.

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CONTINUOUS BLEEDING AFTER ENDOSCOPIC SPHINCTEROTOMY

Gatek J., Mica T., Duben J., Dudesek B., Hnatek L.

Department of Surgery, Atlas Hospital, Zlín

Introduction

Endoscopic sphincterotomy is an alternative to the open surgery for treatment of common bile duct stones. Laparoscopic cholecystectomy very often follows the successful removal of common bile stones. The most frequent complication after endoscopic sphincterotomy is bleeding. Serious bleeding occurs in 2 % of cases. When transfusion is applied mortality can be 10 %. Patients with bleeding after sphincterotomy are rarely operated on but the mortality in this case reaches 50 %.

Case report

Patient J. M., 1935 was admitted to the Surgery department of Atlas Hospital in Zlin with icterus. Bilirubin 122.7, ALT 1.74, AST 0.74, alk. phophatase 8.04 HTK 0.43, hemoglobin 147. Ultrasonography showed dilated common bile duct with suspected common bile stones. The patient took acylpyrine regularly. Endoscopic sphincterotomy was performed. No stones were found. Melena appeared after four hours. Hematocryt dropped. We performed endoscopy to stop bleeding and injected a dose of aethoxysclerol. We were convinced that the procedure was successful, however symptoms of continuing bleeding re-appeared. Further endoscopy was performed and bleeding was confirmed. The patient was operated on. Artery gastroduodenalis was found and prepared for ligation. Cholecystectomy for cholecystolithiasis, choledochotomy and duodenotomy were done. We were unable to identify the exact point of the bleeding. Direct

intervention at the papilla is dangerous due to postoperative pancreatitis. Therefore we decided to ligate the artery gastroduodenalis. Bleeding immediately stopped. A small duodenal fistula complicated the postoperative period and it was probably caused by the sphincterotomy. This healed conservatively. We will present the bleeding in our video.

Conclusion

The risk of postoperative pancreatitis after direct intervention at papilla Vateri is very high as the exact place of bleeding is very difficult to identify. The ligation of artery gastroduodenalis is very efficient and safe.

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092

THE IMPORTANCE OF CENTRALIZATION OF TREATMENT OF PATIENTS WITH ACUTE GASTROINTESTINAL HAEMORRHAGE

Konečný M., Ehrmann J., Procházka V., Válka L., Zámečníková P., Aiglová K., Tozzi I., Vinklerová I.

2nd Internal Department, Medical Faculty and University Hospital, Olomouc

Introduction

In most cases, gastrointestinal haemorrhage is an acute state requiring hospitalisation of the patient and taking immediate diagnostic and therapeutic action. The mortality rate associated with this condition is relatively high (8 %). It seems that care for these patients is most effective when based on close interdisciplinary cooperation of surgeons, internists, endoscopists and intervention radiologists.

Patients and Methods

From 6 June 2000, the Medical Faculty in Olomouc (MFO) exercises the profilization program of internal departments. Within this program, the 2nd Internal Department is focused on diabetology and gastroenterology including the treatment of patients with acute gastrointestinal haemorrhage.
We have compared mortality rate, the period of hospitalization and costs of treatment of these patients in three-year periods before and after establishing the centralized system of treatment of patients with acute gastrointestinal haemorrhage in MFO.

Results

In the period 1997–2003, we had 831 patients with symptoms of acute gastrointestinal haemorrhage in MFO. All patients underwent endoscopic procedure within 24 hours, predominantly gastroscopy with follow-up endoscopic hemostasis.
In the period between 1 June 1997 and 1 June 2000, these patients were hospitalised in the surgical and internal departments. During the following three-year period, in accordance with the treatment centralization program, the patients were treated mainly in the 2nd Internal Department, especially in the intensive care unit.
After centralization of treatment, the mortality rate of the observed set decreased by 2 %, the treatment period has been shortened by more than two days, and the treatment costs have been decreased by approximately 15 %.

Conclusion

Our three-year experience evidenced that centralization of treatment of patients with acute gastrointestinal haemorrhage is demanding on the department staff and technical equipment, but it brings rationalization of diagnostic and therapeutic procedures, lower mortality rate and shorter treatment periods.

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ENDOSCOPIC RETROGRADE ILEOGRAPHY IN PATIENTS WITH CROHN'S DISEASE

Kremer M.,Vrána J., Fojtík P., Kovala P., Fiala J., Janík D., Dostalík Z.

1st Department of Internal Medicine, Gastroenterology, MNO, Ostrava-Fifejdy

Introduction

Enteroclysis is mainly used for the study of small intestine. In patients with Crohn's disease it is sometimes difficult to obtain a clear picture of the terminal ileum. Frimberger and others[1, 2] developed Endoscopic retrograde ileography (ERI), which may be useful in patients with terminal ileal pathology. This method is a combination of colonoscopy and radiologic ileal examination.

Method

We reviewed the last 2000 colonoscopies that have been done in our department. 53 patients with Crohn's disease had colonoscopy and 12 of these patients were examined by ERI. Indications were symptoms of recurrent abdominal cramp, radiographic or sonographic suspicion of subileus. 4 patients had a history of surgery (ileocecal resection).
All patients underwent preparation with phosphate solution. In the X-ray room the colonoscope was introduced into the colon up to the terminal ileum or to the stenosis of lumen. Teflon cannula 8–10F was inserted (sometimes with hydrophilic guide wire) and introduced into terminal ileum or through the stenosis under fluoroscopic control. Our aim was to obtain a double contrast radiograph by application of water-soluble iodine in contrast with dimeticon and air.

Results

In 11 cases out of 12 we obtained satisfactory ileal or ileocolonic radiographic image. In 4 cases after surgery we obtained stenotic

picture of anastomosis. 6 patients had a Crohn's-related stenosis of terminal ileum and 2 patients displayed ileocolonic stenosis. One patient had the endoscopic balloon dilation of stenosis during the procedure and 4 patients were operated on later. In 3 cases the surgery proceeded as expected, however in 1 patient with long ileocolonic stenosis we were not able to confirm the coloduodenal fistula.

Conclusion

ERI is a selective examination and complementary method to enteroclysis. In eligible cases it enables us to obtain precise ileographic images especially in patients with Crohn's postoperative stenosis. Knowledge of the character and length of the stenosis or fistula may be useful for decision towards further therapy. However, ERI is time-consuming and requires endoscopist's and patient's patience.

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LINEAR ENDOSONOGRAPHY CONTRIBUTION TO PAIN TREATMENT IN PANCREAS CANCER– COMBINED APPROACH TO THE COELIAC PLEXUS NEUROLYSIS CASE REPORT

Mareš K.[1], Cendelínová J.[1], Schütznerová D.[1], Michálek P.[2]

[1] *Gastroenterology, Internal Department, Hospital Na Homolce, Prague*
[2] *Anestesiology Department, Hospital Na Homolce, Prague*

Background

There are two anterior quadrants of plexus coeliacus and right and left main splanchnicus in the right and left retrocrural space. These regions can be reached under linear endosonography, CT or biplanar skiascopic control. It is advisable to start neurolysis from the anterior part because of fewer complications.

Case Report

27 years old woman underwent pancreatic head resection because of pancretic cancer in 2002. Local relapse and metastases developed gradually thereafter. Back pain was her main symptom nearly one year after the operation, in spring 2003. We performed anterior neurolysis under EUS control in April 2003. We used approximately 10 ml of pure ethanol. She was without any pain immediately after the procedure, effect of which lasted for three weeks. Then the back pain gradually started anew. Doctor Michálek therefore continued with neurolysis in the retrocrural space by 5–8 ml of 60 % ethanol. The patient is without pain until now.

Conclusion

Linear endosonography is the ultrasound method of choice for goal-directed punctures and biopsies from visible lesions. It is approximately 5 cm distant from the digestive tract. On the other hand, it is possible to inject the medicaments into these lesions by the same way. Plexus coeliacus neurolysis is one of the indications for this procedure. Performed early, it has better results (pain relief). If this "anterior" procedure fails, the posterior approach neurolysis is the therapy of choice bringing very good results as well.

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IMPROVEMENTS IN ENDOSCOPIC CLINIC

Popelínská J.

Outpatient Department of Gastroenterology Internal Ward, Třebíč Hospital

The former operation of the gastroenterology outpatient department was carried out in three rooms. In the first room, which contained a file cabinet, a doctor and a nurse worked taking blood samples and performing rectoscopies. In the second room, patients were examined using a gastroscopic apparatus. Colonoscopies were performed in the third room. The washing and disinfections of the endoscopes were carried out in each room using a manual washing machine. There was no toilet for patients. The EKG was located at the end of a corridor on the mezzanine level. When we relocated our gastroenterology outpatient department from the former unsuitable internal ward to a modern #8220 Universal Hospital Pavilion #8221 in 1998, our improved conditions expanded our possibilities. We obtained four spacious rooms with dressing dividers for patients, a separate room for endoscope washing and disinfection, toilets for patients and staff, and a reference file.

The gastroenterology outpatient department is located on the first floor and connected to an internal outpatient department reception office. This guarantees easy accessibility for portable EKG machines. The X-ray department and the cardiology outpatient department are located on the same floor. A wheelchair access entrance facilitates safe and fast movement of both outpatients and in-patients. The outpatient department is furnished with centralized air conditioning. Examination beds and video monitors in the surgeries are grounded. All instruments can be moved easily. Dressing dividers, together with a toilet and a shower stall near the colonoscopy surgery, raise the comfort level for patients before and after examinations.

The separation between doctors in #8217 surgery and nurses in #8217 offices gives patients space for privacy and personal exchanges. In addition to verbal explanation, written explanations have also been developed for patients, which give them detailed information about the surgery prior to the procedure itself, e.g. colonoscopy, so that work can proceed without delay and without disturbance in either workplace and in both endoscopic surgeries at the same time. The washing room is equipped with three manual washing machines, a large stainless steel sink, a shower, and a water pressure gun for scouring which allows thorough washing and disinfection for endoscopes, including instruments. As a result of increased activity with the endoscopic instruments, it has been proposed that the room be provided with an automatic washing machine. At the end of each day, the endoscopes are hung into fitted, locked cases.

There are six endoscopes in #8211 provided by OLYMPUS – including instruments, at our disposal. Two of them are video gastroscopes and two are video-colonoscopes. As a result of the extension of our video-technology, we were able to examine 2567 patients by endoscopes in 2002. We performed gastroscopies on 1172 patients, rectoscopies on 622 patients, and colonoscopies on 733 patients. 76 patients were examined after positive prophylactic OK tests (16 polyps, 4 carcinomas rectum). Five patients were referred for surgery. One undisputed advantage of video-documentation is the possibility to photo-document medical findings.

We performed polypectomies on 85 patients, and endoscopic staunch bleeding (rinsing, injection, electrokoagulation) on 38 patients. We are going to expand this method with clipping. Giving artificial nourishment by enteral probe is nowadays very typical – we intend to set up this operation in our outpatient department as well.

Not only new instruments, but also modern and tastefully furnished rooms have provided us with the opportunity for timely surgery in case of complications. They also provide space for even further applications and the establishment of new methods. For us, the most rewarding part of our work is a satisfied patient who trusts us.

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ENDOSCOPIC TREATMENT OF ZENKER'S DIVERTICULUM

Procházková L., Šeberová I.

4th Medical Department, Charles University, Prague, Czech Republic

Introduction

Zenker's diverticulum is a rare disease of the hypoharynx and oesophagus and is represented by a pouch of the hypopharyngeal mucosa pushed out between cervical columm and oesophagus. Clinical manifestations are usually dysphagia, foetor ex ore, and regurgitation of swallowed meal. Available treatment included surgical approaches or rigid endoscopy. A new therapeutical method, which has been introduced over the last few years, is APC (argon plasma coagulation) septotomy during flexibile esophagoscopy.

Metods

Description of endoscopic APC septotomy:
1. Verification and localisation of the Zenker's diverticulum; 2. Introduction of the guidewire and nasogastric tube into the oesophageus; 3. Endoscopical localisation of the diverticular septum; 4. Application of APC probe and performance of septum thermocoagulation (60 W/1.2 ml/min)
Potential risks of this procedure include: 1. Perforation of the oesophagus or the diverticular bottom; 2. Massive hemorrhage after septotomy; 3. Aspiration during the procedure; 4. Fever and pain after the procedure or subcutaneous emphysema on the neck

Results

Endoscopic APC septotomy was performed in 15 patients with Zenker's diverticulum (5 men and 10 women, mean age 73.5y). Clinical symptomatology consisted of: regurgitation after the meal (100 %); hypopharyngeal dysphagia (70 %), and recurent bronchopneumonia (30 %). Endoscopic septotomy led in seven patients (47 %) to complete resolution of the symptoms, in seven patients (47 %) to partial response, and in one case the therapy failed.
Serious complications were not observed.

Conclusion

1. Endoscopical APC septotomy in patients with Zenker's diverticulum is an effective and safe method; 2. This is the suitable method for senior patients with high operative risk; 3. Close cooperation between the endoscopist and endoscopical staff (nurses) is warranted.

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COLONOSCOPY COMPLICATIONS

Špaček V., Šmejkal K., Maršík L.

Department of Surgery, University Hospital, Hradec Králové

Authors present the set of patients examined colonocscopically in the Department of Surgery, University Hospital in Hradec Králové within the 12-year time span. Complications of this method are described and own results are being compared with literature data. Special attention is aimed to the analysis of possible causes of complications of endoscopical investigations of colon.
Within the 12-year interval we performed 4 084 colonoscopies (2 122 of diagnostic and 1 962 therapeutic ones). From this total number we experienced 7 perforations and 11 intestinal bleeding, which led to admission of these patients into the hospital. Operation treatment of perforations and conservative treatment of bleeding are described. In the conclusion the authors come to the agreement with currently published opinions and furthermore they stress the prevention measures especially.

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BLEEDING AFTER ENDOSCOPIC POLYPECTOMY IN LARGE BOWEL – A SERIOUS COMPLICATION?

Šťovíček J., Keil R., Hrdlička L., Tyburec M., Drábek J., Lochmannová J.

Endoscopic Center, Clinic of Internal Medicine, Faculty Hospital Motol, Prague

Introduction

Polypectomy has become a routine endoscopic method for the treatment of adenomatous polyps of the large bowel and an efficient way of prevention of colon carcinoma. Bleeding after polypectomy can be a serious complication. According to the literature it occurs 0.2–0.6 % in lower gastrointestinal bleeding cases. Most cases can be treated conservatively. Delayed bleeding after polypectomy is much more often than early bleeding. Therefore observation on the ward for at least 24 hours is recommended.

Methods

The aim of our study was to evaluate the rate of bleeding after polypectomy, the severity of bleeding and the effectiveness of endoscopic treatment in these patients. Retrospectively we assessed a group of 292 patients, who underwent endoscopic polypectomy from January 2001 to June 2003.

Results

Bleeding after polypectomy occurred in 8 patients (2.7 %). All these patients underwent emergency colonoscopy. Polypectomy was the cause of bleeding in 7 (2.3 %), in 1 patient the enterorhagia was caused by Glutaraldehyde colitis. The bleeding was treated by the endoscopic methods (haemoclips, injection technique) in all patients – no surgery was needed.

Conclusion

Lower gastrointestinal bleeding is a rare complication of endoscopic polypectomy. Mostly it can be treated by endoscopic methods or

conservatively. Adequate hemostatis of the bleeding vessel in the stalk before the resection can prevent delayed bleeding.

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CAPSULE ENDOSCOPY

Tachecí I., Rejchrt S., Kopáčová M., Bureš J.

Clinical Centre, Second Department of Internal Medicine, Hradec Králové

Capsule endoscopy is an advanced technology enabling endoscopic evaluation of the small intestine. The capsule contains a miniature video camera, a light source, batteries and a video transmitter. It moves through the small bowel, propelled by peristalsis and transmits data to a portable recorder. Data can be analysed by special computer software. It provides direct colour video images of the gastrointestinal mucosa at a rate of 2 images per second for approximately 8 hours. The capsule is naturally passed through.

The main indication for the capsule endoscopy is gastrointestinal bleeding after conventional diagnostic procedures (gastroscopy, colonoscopy) not for diagnosis of definite bleeding sites. Obscure gastrointestinal bleeding can be subcategorised into either obscure-occult (recurrent iron-deficiency anaemia or recurrent positive faecal occult blood test) or obscure-overt bleeding (recurrent melena, haematemesis or enterorhagia). The most frequent causes of small bowel bleeding are angiodysplasias (70–80 %) and tumours. Other causes of bleeding can be small bowel ulcers (namely in NSAID enteropathy), jejunal and ileal varices. Published studies show that the push-enteroscopy has a diagnostic yield of 30–50 % in patients with obscure occult or overt gastrointestinal bleeding (the actual diagnostic yield is still lower because some lesions detected during the push-enteroscopy are missed in stomach and duodenum during gastroscopy), but allows visualization of between 60–120 cm beyond the ligament of Treitz. On the contrary, the diagnostic yield of radiology (barium follow – through examination, enteroclysis) reaches in patients with obscure gastrointestinal bleeding 5–10 % at maximum. Moreover, radiology cannot demonstrate flat lesions such as arteriovenous malformations. Capsule endoscopy allows complete examination of the small bowel and has its diagnostic yield higher (50–80 %) according to initial studies. Other indications for capsule endoscopy are suspected small bowel tumours and polyps, chronic diarrhoea with malasimilation, evaluation of extent of Crohn's disease and NSAID enteropathy. The diagnostic yield of capsule endoscopy is similar in these cases (50–80 %).

Capsule endoscopy is compared with push enteroscopy in most studies. However this comparison is limited only, because push enteroscopy is able to reach as little as one third of the small bowel's total length. More objective is then comparison of capsule endoscopy with probe or intraoperative enteroscopy. Probe enteroscopy is in fact not often used today in clinical practice owing to discomfort to the patient and clinical limitations to the procedure. The diagnostic yield of probe enteroscopy is reported to be between 26 % and 54 %.

Intraoperative enteroscopy is considered as the "gold standard" for the small bowel examination because most of the small bowel can be visualized and has a diagnostic yield of 70–100%.

The main disadvantage is that intraoperative enteroscopy is an invasive procedure. The number of complications shows that only experienced endoscopists and surgeons should perform this procedure in carefully selected subset of patients.

Capsule endoscopy is a safe non-invasive diagnostic method with high diagnostic yield. The portable recorder fixed to the belt permits patients to continue with their normal daily activities during the examination. The contraindications for the capsule endoscopy are: suspected obstruction or stenosis of the gastrointestinal tract, heart pacemakers and other electromechanical implants and swallowing disorders. At present pregnancy also represents one contraindication (because of incorporated battery system). The main complication of examination is the non-passage of the capsule. The Barkin's study shows that surgical intervention to remove a non-passed capsule is a rare event (0.75 %) and non-passage revealed unsuspected pathology in all patients. Capsule impaction indicates small bowel pathology, resection of the small bowel results in resolution of clinical symptoms. Other disadvantages of capsule endoscopy are impossibility of biopsy and/or rinse of mucosa, as well as insufflations and other technical limitations of the procedure (a rate of 2 images per second, limitation of the battery capacity, worse quality of picture in comparison with the push enteroscopy).

At our department we use the capsule endoscopy system since January 2003. We examined 8 patients. Two patients underwent capsule endoscopy for obscure overt bleeding, in both cases we found the source of the bleeding in the small bowel (metastasis of the testicular seminoma and arteriovenous malformation). These two patients were indicated to the intraoperative enteroscopy and resection of the involved part of the jejunum and ileum. In one case, multiple sessile polyps were diagnosed in the ileum and jejunum (the retroperitoneal metastasis of carcinoid in history). Patient underwent intraoperative enteroscopy and resection of the involved small bowel. Histology diagnosed carcinoid. One patient had T lymphoma of the small bowel. In two cases we found non-specific inflammation and in two patients normal findings. The capsule non-passage was observed in one case. The pictures of the examinations are available on the web sites of our department: www.lfhk.cuni.cz/kcvl/.

At present the capsule endoscopy is the least invasive diagnostic method enabling to visualize mucosal surface of the small bowel in its whole length. In future, improvement of the method, as well as expansion of the spectrum of diagnostic indications, can be expected.

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ENDOSCOPIC DIAGNOSIS AND TREATMENT OF EARLY NEOPLASMS IN THE ALIMENTARY TRACT –EXPERIENCE OF THE CZECH CENTRE

Urban O., Chalupa J., Řeha P., Vítek P.

Hospital Ostrava Jih.
Hospital Frýdek-Místek

Background

There is a general acceptance worldwide that early malignancies of the alimentary tract may not appear as polypoid or ulcerative. Superficially elevated, flat and depressed lesions have been described. These lesions appear as faint mucosal irregularities or discolorations, which may be difficult to distinguish from inflammation and trauma. Macroscopic classification of an early neoplasm is important because some estimate of the potential for submucosal cancer involvement can be made. Dye spraying helps to diagnose these early lesions and the endoscopic mucosal resection (EMR) has become the first choice of treatment under defined conditions. Superficial early cancers have been rarely reported in the Czech Republic so far. Our group published the first EMR in the year 2000.

Patients and Methods

During routine endoscopy of the alimentary tract in 8 patients the mucosa was carefully scrutinized for faint irregularities and discolorations. Dye spraying using 0.2% indigocarmin solution was often used. The depths of invasion were estimated by local injection of saline epinephrine solution. EMR was used in a selected group of patients by using OLYMPUS EMR device or simple diathermic snare.

Results

The author was recently able to diagnose early neoplastic lesions in the alimentary tract of 8 patients out of which 4 were treated with EMR.

A male patient with esophageal intramucosal superficial flat (IIb) type cancer in a Barrett esophagus was operated on. A female patient with gastric intramucosal superficial elevated (IIa) type cancer was treated with EMR as well as a male patient with gastric combined (IIa+IIc) cancer with superficial submucosal invasion who was considered to be a poor surgical candidate. A female patient with colon depressed (IIc) type cancer and deep submucosal invasion was operated on as well as a male patient with two synchronous colon intramucosal combined (IIa + IIc) type cancers. A male patient with rectal combined (IIa+IIc) type cancer with superficial submucosal invasion was treated with EMR. A male patient with several duodenal depressed type (IIc) villous adenomas was followed up and finally a male patient with duodenal high-grade dysplasia superficial elevated (IIa) type adenoma was treated with EMR.

Early superficial alimentary tract carcinomas and their precursors.

n	gender	age	organ involved	type	size (mm)	histology	therapy	notice
1	M	53	esophagus	II b	5	m	surgery	Barrett's esophagus
2	F	58	stomach	II a	8	m	EMR	
3	M	64	stomach	II a + II c	10	sm_1	EMR	poor surgical candidate
4	M	40	duodenum	II c	5	adenoma	O	FAP
5	M	72	duodenum	II a	15	high grade dysplazia adenoma	EMR	
6	F	57	colon	II c	10	sm_3	surgery	
7	M	70	colon	II a + II c II a	15 25	m	surgery	AFAP
8	M	72	rectum	II a	15	sm_1	EMR	

F = female **m** = intramucosal **FAP** = Familial Adenomatous Polyposis
M = male **sm** = submucosal invasion **AFAP** = Atenuated FAP

Conclusion

We were able to diagnose early superficial neoplastic lesions in the alimentary tract of 8 patients. Although dye spraying was helpful, knowledge of endoscopic appearance together with careful scrutiny of the mucosa were essential for their detection. Endoscopic mucosal resection could be used in a selected group of 4 patients. The other 4 patients proceeded to surgery. Further investigation is urgently needed to characterize the epidemiology, genetic patterns, natural history and clinical implications of early neoplasms in Western countries, the Czech Republic included.

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PERCUTANEOUS ENDOSCOPIC GASTROSTOMY IN HEAD AND NECK CANCER PATIENTS

Vítek P.[1], Urban O.[1], Komínek, P.[2], Vantuch P.[2], Chalupa J.[1], Řeha P.[1], Mrozek V.[1]

[1] *Internal Medicine Department*
[2] *ENT Department, District Hospital Frydek-Mistek, Czech Republic*

Objective

The main objective is to evaluate the use of percutaneous endoscopic gastrostomy in patients with head and neck cancer during the period of 1999–2002.

Patients and Methods

A group of 27 patients underwent percutaneous endoscopic gastrostomy during the course of the disease. We used the pull method of insertion. Gastrostomy was applied in 17 patients during postoperative or separate radiotherapy. In 4 patients with advanced tumors it was applied only as a palliation without any radical treatment. In 3 patients gastrostomy was performed due to postoperative local complication and in 3 patients gastrostomy was performed perioperatively immediately after resection of tumour.

Results

Only 4 (14.8%) minor complications were observed (extraction by patient, leaking around the cathether, exit site infection and gastroparesis). Major complications were not observed. Only 5 patients were weaned off gastrostomy after normal oral food intake was restored (2 patients with postoperative and 2 patients with perioperative insertion after the course of radiotherapy, 1 patient after the postoperative wound dehiscence had healed). The average period of gastrostomy placement in these patients was 65 days.

Conclusions

1. Patients with head and neck cancer accounted for 30% (27/89) of all patients referred for percutaneous endoscopic gastrostomy insertion in our hospital.
2. Percutaneous endoscopic gastrostomy is a safe method for this group of patients.
3. When an operation is planned, the perioperative gastrostomy insertion is convenient and should be preferred.