

# **17th United European Gastroenterology Week (UEGW/WCOG)**

**London, November 21-25, 2009**

## **Selected endoscopy reports**

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**Introduction:** Julius Spicak (Institute of Clinical and Experimental Medicine, Prague, Czech Republic)

## **Organisation Mondiale d'Endoscopie Digestive (OMED) 2009**

### **Introduction:**

Young Czech fellows in GI endoscopy were offered to report and comment on endoscopic abstracts presented on UEGW/WCOG held in London last year. This initiative gave a chance to actively remodelate and summarize the endoscopic programme of this meeting and thus to show what is constant and what has changed in this rapidly moving field.

Digestive endoscopy maintains the high pace of its growth, exploring new technologies and new issues while its crucial role in clinical routine is undoubtful.

The leading position of endoscopy was demonstrated by the fact that explicitly endoscopic issues made up 9 out of 58 oral presentations and a substantial part of poster presentations.

The current focus of endoscopic techniques and technologies is probably best illustrated by the numbers of titles where particular techniques are mentioned at poster sessions devoted to endoscopy (Endoscopy and imaging, Therapeutic endoscopy/interventional radiology): Small bowel enteroscopy and capsule 24, endosonography 15, EMR/ESD 10, stents 9, NBI 9, NOTES 3, confocal endomicroscopy 3.

To outline the complementation/competition of capsule endoscopy and enteroscopy remains a major issue. The biliary access after intestinal surgery is enhanced by both balloon and spiral overtube. The therapeutic potential of enteroscopy consists mainly of treatment of vascular lesions and polyps. The detection of polyps by colonic capsules is still inferior compared to standard colonoscopy.

NBI and other sophisticated virtual chromoendoscopic techniques make the detection of early neoplastic lesions more efficient, reducing the load of needed biopsy samples and thus potentially changing current searching protocols.

Biodegradable stents were tested in benign strictures. Stenting can be used as a rescue and bridging option in esophageal bleeding.

Endoscopic ultrasound has further established its complementary position to CT/MR, particularly in easy tissue sampling.

Confocal in-vivo virtual histologic technology penetrated through the intestinal lumen into the peritoneal cavity.

In ESD and EMR, despite several numerous European studies, reports from Asian countries still prevailed, with further expanding of indications and instrumental armament.

In NOTES, the attention was attenuated without convincing steps forward.

In conclusion, the UEGW/WCOG in London further outlined the prominent position of endoscopy both in diagnosis and treatment of gastrointestinal disorders.

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## Upper GI

### I. Upper GI - Diagnosis

#### 1. Abstract: P0094

**Session: Oesophageal, gastric and duodenal disorders**

**Date: Monday Nov 23rd, 2009**

#### **NATURAL HISTORY AND MANAGEMENT OF GASTRIC SUBPITHELIAL TUMORS**

**Authors: M. Kim, H. Jung, K. Choi, H. Song, G. Lee, J. Kim, S. Park J. Han, J. Lee, J. Park**

**Reporter: Benes M, IKEM, Prague, Czech Republic**

The diagnosis and accurate evaluation of gastric subepithelial tumours (SET) is uneasy. The aim of the study was to evaluate the natural course of gastric SETs 30 mm or less and to determine follow-up intervals and management plan. The authors reviewed upper endoscopy and/or EUS of 1000 patients who were diagnosed as gastric SETs 30 mm or less and followed up for at least 3 months, retrospectively. 19 patients were diagnosed as gastrointestinal stromal tumors (GISTs), 2 schwannomas, and 1 leiomyoma. The other findings included 1 heterotopic pancreas with duct dilatation, 1 gastritis cystica profunda, 1 lipoma, and chronic gastritis. Among 19 tumors which were diagnosed as GISTs, 3 were classified to high risk, 5 intermediate risk, 9 low risk, and 2 very low risk by risk stratification. All three high risk GISTs showed both an increase in size and change in echo patterns. The authors concluded that only 0.9% with gastric SETs showed interval change during a median follow-up of 23 months. Three high-risk GISTs showed a significant increase in size as well as a change in echo patterns. It could be suggested that two times of 6-month intervals followed by yearly surveillance may be suitable for gastric SETs 30 mm or less in size.

#### 2. Abstract: P0110

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

#### **HOW ACCURATE IS AN ENDOSCOPIST'S HUNCH FOR CANCER? CORRELATION WITH HISTOLOGY**

**Authors: S. K. Butt, K. Jaggs, S. Warren, D. Francis, M. Ward, M. Klein, N. Van Someren, K. Besherdas**

**Reporter: Benes M, IKEM, Prague, Czech Republic**

The aim was to assess the accuracy of the endoscopist's impression of a malignant lesion in the colon and rectum with histology. This was a retrospective single-centre study looking at consecutive patients from July 2005 to April 2008 with an endoscopic report concluding with the diagnosis of 'colorectal cancer'. The histologically confirmed cancer in comparison to endoscopic findings was evaluated. 166 patients were diagnosed with a malignant-looking colonic lesion at the time of colonoscopy. The huge majority (93%) of patients thought to have a malignant lesion at endoscopy were confirmed to be so histologically. It can be concluded that arrangements to stage colorectal lesions thought to be malignant at endoscopy should therefore be made immediately following endoscopy rather than waiting until histology is available. This would save valuable time in finalizing the diagnosis and planning the treatment pathway. Even in the abundance of high-tech reports, a fresh clinical thought can make a valuable contribution.

### **3. Abstract: P0158**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

#### **META-ANALYSIS: UTILITY OF NARROW BAND IMAGING IN CHARACTERISATION OF EARLY NEOPLASIA IN PATIENTS WITH BARRETT'S OESOPHAGUS**

**Authors: J. Mannath, V. Subramanian, K. Raganath**

**Reporter: Benes M, IKEM, Prague, Czech Republic**

Narrow band imaging (NBI), a novel endoscopic technique that highlights mucosal surface structures (pit patterns) and microcapillaries is being increasingly advocated as a tool to detect and characterize early neoplasia in patients with Barrett's oesophagus (BO). The authors aimed to assess the diagnostic accuracy of NBI for the diagnosis of early neoplasia (High Grade Dysplasia or Intramucosal Carcinoma) in patients with BO. The search retrieved 39 papers from various databases including Medline, Cochrane Database, Web of Science and Google Scholar. 5 papers including 327 patients with 1598 lesions met the inclusion criteria. Overall, sensitivity was 0.95 (95% confidence interval 0.91-0.99) and specificity was 0.95 (0.87-1.00). The authors concluded that Narrow Band Imaging is accurate with high diagnostic precision for in-vivo diagnosis of early neoplasia in patients with BO using simple measures of mucosal pit patterns and microcapillary characteristics. Therefore, the current (Seattle) protocol might be modified to lower the load of tissue biopsies.

### **4. Abstract: P0165**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

#### **FINAL REQUIEM FOR 4-QUADRANT BIOPSIES IN BARRETT'S ESOPHAGUS?**

**Authors: J. Pohl, O. Pech, A. May, H. Manner, A. Fissler-Eckhoff, C. Ell**

**Reporter: Benes M, IKEM, Prague, Czech Republic**

The gold standard for endoscopic surveillance of Barrett's esophagus (BO), known as the Seattle protocol of 1993, includes targeted biopsies (TB) from suspicious areas as well as four quadrant biopsies (QB) every 1-2 cm along the visible length of normal appearing BO. In recent years the introduction of high resolution endoscopy (HRE) and acetic acid chromoendoscopy have enhanced visualization of mucosal details and might minimize the number of macroscopically occult high grade neoplasias (HGIN) or early Barrett's carcinomas (EC). The authors investigated in a prospective comparative study the cost-efficiency of biopsy protocols in a large mixed BO population. 608 consecutive BO patients were enrolled. After standard endoscopy and chromoendoscopy with acetic acid, biopsies were taken according to the Seattle protocol. Altogether, 78 patients with 116 lesions containing HGIN/EC were detected. In 74 patients (94.9%), 93 neoplasias were visualized and biopsied (TB) and confirmed by histology. In 10 of these patients, QB additionally detected macroscopically occult areas of neoplastic mucosa. The present study constitutes the largest cost-efficiency analysis of biopsy protocols in BO patients. The authors show that careful observation with advanced endoscopic imaging can effectively reduce the number of biopsies. The additional costs for QB to detect one patient with macroscopically occult lesion are considerable.

**5. Abstract: P0557****Session: Endoscopy and imaging****Date: Monday Nov 23rd, 2009****CAN USING TRANSNASAL ENDOSCOPIC BIOPSY FORCEPS ALTER THE RESULTS OF RAPID UREASE TEST AND HISTOLOGIC DIAGNOSIS?****Authors: S. Shin, S. Jeon, Y. Lee, J. Lee, K. Lee, K. Lee, J. Kim****Reporter: Benes M, IKEM, Prague, Czech Republic**

Transnasal esophagogastroduodenoscopic procedure (TN-EGD) with a small-caliber endoscope offers a higher degree of patient tolerance, acceptance and safety, compared to a conventional upper GI endoscopic procedure, but the forceps caliber could be a problem. The aims of this study were (1) to compare the concordance of CLO test with both 1.8mm and 2.2mm forceps, (2) to compare the histologic diagnostic yield of biopsy specimens obtained by both forceps (3) to determine whether the concordance of CLO test can be improved by increasing the number of biopsies using a 1.8mm forceps. 200 patients were included. In 100 patients, the authors took two sets of CLO test using each sample taken with both forceps, respectively, from the same site of the antrum being cautious of blood contamination. In the other 100 patients, the authors had three sets of CLO test taken, (1) one sample with a 1.8mm forceps, (2) two samples with a 1.8mm forceps, and (3) one sample with a 2.2mm forceps. Positive rates of CLO test were significantly lower when using the 1.8mm biopsy forceps than the 2.2mm biopsy forceps. More than two samples obtained with a 1.8mm biopsy forceps are needed for similar rates of positive results with a 2.2mm biopsy forceps in the CLO test. Using TN-EGD, the protocol of tissue sampling for CLO should be modified adequately.

**6. Abstract: P0619****Session: Endoscopy and imaging****Date: Monday Nov 23rd, 2009****CORRELATION BETWEEN HISTOPATHOLOGIC FINDINGS USING THE UPDATED SYDNEY PROTOCOL FOR GASTRIC BIOPSIES AND NARROW BAND IMAGING STUDIES WITH TARGETED BIOPSIES****Authors: E. Xirouchakis, S. Georgopoulos, F. Laoudi, P. Christoforidis****Reporter: Benes M, IKEM, Prague, Czech Republic**

Accurate assessment of gastric lesions is crucial for therapeutic and prognostic reasons. Several studies indicate that the new endoscopic method of narrow band imaging with magnification endoscopy (NBI/ME) can discriminate accurately normal mucosa from gastritis and other pre-neoplastic lesions (PNL) like atrophy and intestinal metaplasia, especially when accompanied by targeted biopsies. This may obviate the need for routine biopsies using the updated Sydney protocol (USP). The aim was to correlate histopathologic findings using the USP with NBI/ME findings plus targeted biopsies in symptomatic patients referred to the authors' unit for upper GI endoscopy. 41 out of 60 consecutive patients were included. Sensitivity, specificity, PPV and NPV for antral and body gastritis were 90.6% and 76%, 85% and 81%, 93.5% and 92%, and 76% and 56%, respectively. However, agreement between methods for predicting normal mucosa, gastritis and PNL was poor ( $\kappa=0.15, 0.48$  and  $0.45$ , respectively). The authors concluded that NBI/ME is an accurate method to assess histopathologic gastritis of the body and antrum. However, compared to the Updated Sydney system, its value in predicting normal mucosa from gastritis and PNL is poor.

**7. Abstract: P0625**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

**STAGING ACCURACY OF ESOPHAGEAL CANCER BY ENDOSCOPIC  
ULTRASONOGRAPHY? A SINGLE CENTER EXPERIENCE**

**Authors: T. Moreira, F. Castro-Poças, P. Lago, J. Areias**

**Reporter: Benes M, IKEM, Prague, Czech Republic**

Endoscopic ultrasonography (EUS) plays a major role in preoperative staging of esophageal cancer, being superior to any other imaging modality in its locoregional staging.

The aim of this study was to determine EUS accuracy in locoregional (T and N) staging of esophageal cancer. One hundred and one patients were evaluated with EUS staging for esophageal cancer; of these, 29 were submitted to surgical resection without chemoradiotherapy. In 7 of them, the staging was complemented with a 12-MHz EUS miniprobe. Pathological staging was considered the gold standard. EUS staging was as followed: T1: 9 pts; T2: 6 pts; T3: 14 pts; N1: 15 pts. Global accuracy was 74% for T staging and 76% for N staging. It can be concluded that EUS shows good accuracy in the locoregional staging of esophageal cancer.

**8. Abstract: P1274**

**Session: Endoscopy and imaging**

**Date: Tuesday Nov 24th, 2009**

**NARROW-BAND IMAGING ON DETECTION OF ESOPHAGEAL DISORDER  
USING TRANSNASAL-EGD**

**Authors: T. Kawai, K. Yamamoto, M. Fukuwzwa, T. Yamagishi, K. Yagi, M. Fukuwzwa, M. Kataoka, K. Kawakami, Y. Sakai, F. Moriyasu, Y. Takagi, T. Aoki**

**Reporter: Benes M, IKEM, Prague, Czech Republic**

Transnasal esophagogastroduodenoscopy (TN-EGD) is currently gaining widespread acceptance in Japan. However, problems including poor endoscopic imaging quality have been identified with the new technique. In this study, authors investigated the sensitivity of White Light (WL) and Narrow Band Imaging (NBI) for the diagnosis of esophageal disorders including esophageal cancer. Subjects were 104 patients with screening for gastrointestinal tract using an Olympus XP-260N. Esophageal disorder was defined distinct iodine-unstained lesion (DIUL) more than 5mm. Sensitivity and specificity of DIUL were 24% and 100% respectively in WL, and 58% and 96.2% respectively in NBI. In cancer, 1 case without reddening wasn't detected under WL. All cancers were detected under NBI with brownish area. The authors concluded that NBI is a powerful tool for identifying squamous cell carcinoma and disorders in the esophagus using TN-EGD. NBI in particular was useful for detecting esophageal lesions without reddening.

**9. Abstract: P1280**

**Session: Endoscopy and imaging**

**Date: Tuesday Nov 24th, 2009**

**THE USEFULNESS OF MAGNIFYING ENDOSCOPY WITH NARROW BAND  
IMAGING FOR DETERMINING THE TUMOR MARGIN: COMPARISON WITH  
INDIGO CARMINE CHROMOENDOSCOPY**

**Authors: S. Kiyotoki, J. Nishikawa, M. Saito, K. Hamabe, T. Okamoto, I. Sakaida**

**Reporter: Benes M, IKEM, Prague, Czech Republic**

Magnifying endoscopy with narrow-band imaging (ME-NBI) enhances visualization of irregular mucosal structures and the capillaries of early gastric cancer, and may be useful for determining tumor margin. The authors evaluated the usefulness of ME-NBI compared with indigo carmine chromoendoscopy (ICC). A total of 110 patients with 118 gastric tumors undergoing endoscopic submucosal dissection (ESD) were enrolled. Tumor margins were randomly determined by ME-NBI (55 pts) or by ICC (63 pts). Seventeen lesions in the NBI group and 18 lesions in the ICC group were excluded because the distances between the tumor margins and the marking dots were immeasurable histopathologically. The accuracy rate of the NBI group was significantly higher than that of the ICC group (97.4% vs. 77.8%, respectively;  $P < .01$ ). ME-NBI was useful for determining tumor margins compared to ICC. This is one of the many examples showing that new techniques leave a narrowing space for conventional chromoendoscopy.

**10. Abstract: P1287**

**Session: Endoscopy and imaging**

**Date: Tuesday Nov 24th, 2009**

**LUGOL CHROMO-ENDOSCOPY VS NARROW BAND IMAGING FOR  
ENDOSCOPIC SCREENING OF ESOPHAGEAL SQUAMOUS-CELL CARCINOMA  
IN VERY HIGH-RISK PATIENTS : A PILOT STUDY**

**Authors: S. Leclaire, M. Antonietti, I. Iwanicki-Caron, A. Duclos, P. Michel, P. Ducrotté, F. Di Fiore**

**Reporter: Benes M, IKEM, Prague, Czech Republic**

To date, lugol chromo-endoscopy has been the reference technique to detect esophageal neoplasia in patients at high risk of esophageal squamous-cell carcinoma (ESCC). Recently, Narrow Band Imaging (NBI) has been proved to increase the diagnostic accuracy, sensitivity and negative predictive value compared to standard white-light endoscopy. The aim of this pilot study was to compare the sensitivity, specificity, accuracy, and positive/negative values of Lugol and NBI to detect esophageal neoplasia (high-grade dysplasia and cancer) in patients at high risk of ESCC. Twenty-six patients were prospectively included in the study. During routine endoscopic control, esophageal mucosa was examined using white-light video-endoscope, then NBI by a first and then, after Lugol staining, by a second endoscopist. Sensitivity of NBI and Lugol to detect esophageal neoplasia was 100%. Specificity of NBI and Lugol was 81% and 76% respectively, with a PPV of 56% vs. 50% and a NPV of 100% for both coloration techniques. The association of the two techniques to detect an esophageal neoplasia showed a sensitivity of 100%, a specificity of 90%, a PPV of 71% and a NPV of 100%. Sensitivity of NBI and Lugol to detect a lesion, including non-cancerous lesions, was 64% and 71%, respectively. For all lesions, specificity of NBI and Lugol was 92%, PPV was 90% vs. 91%, and NPV was. 69% vs. 73%, respectively. In this pilot study, NBI and Lugol had a similarly high sensitivity to detect an esophageal neoplasia in high-risk patients with ESCC. The association of the two techniques further improved the specificity.

**11. Abstract: P2028**

**Session: Endoscopy and imaging**

**Date: Wednesday Nov 25th, 2009**

## **USEFULNESS OF TRANSNASAL ENDOSCOPY WITH FICE FOR DIAGNOSIS OF RECURRENT ESOPHAGEAL VARICES IN PROSPECTIVE AND RANDOMIZED CONTROLLED STUDY**

**Authors:** Y. Furuichi, T. Kawai, S. Ichimura, Y. Miyata, R. Metoki, T. Sano, E. Murashima, J. Taira, M. Yamada, Y. Imai, I. Nakamura, F. Moriyasu  
**Reporter:** Benes M, IKEM, Prague, Czech Republic

Flexible Imaging Color Enhancement (FICE) is a novel endoscopic diagnosis technique that can spectrally separate any wavelength of lights and process and reconstruct an obtained image. The purpose of this study was to determine the usefulness of transnasal endoscopy (TNE) with FICE for the diagnosis of recurrent esophageal varices (EVs) prospectively. The authors included 43 patients with recurrent EVs 2 years after eradication. All of the patients were examined with conventional upper endoscopy (EGD) and TNE at the same time; the TNE was also performed in combination with FICE. The endoscopic diagnosis equipment included a Fujinon EG-530N and a 590WR for TNE and conventional EGD, respectively. For the diagnosis of EVs, TNE is inferior to conventional EGD in definition, but causes less discomfort and the vividness is clearer with concomitant use of FICE than conventional EGD. These results suggest that TNE with FICE would be very useful for the diagnosis of recurrent EVs and, indirectly, a valuable tool for variceal screening.

### **12. Abstract: P2040**

**Session:** Endoscopy and imaging

**Date:** Wednesday Nov 25th, 2009

#### **DIAGNOSIS FOR THE DEPTH OF INVASION IN SUPERFICIAL ESOPHAGEAL CANCER BY CONVENTIONAL ENDOSCOPY IN COMBINATION WITH NBI MAGNIFIED ENDOSCOPY AND EUS**

**Authors:** K. Ishikawa, H. Kita, S. Arai, K. Nonaka, K. Yoshino, M. Nakao, O. Togawa, K. Koyanagi, I. Koyama

**Reporter:** Benes M, IKEM, Prague, Czech Republic

With the prevalence of the NBI magnified endoscope, there is an increase in the number of the superficial esophageal cancer treated by endoscopy. Accurate diagnosis for the depth of invasion in superficial esophageal cancer is indispensable in order to select the right cases expected to cure by endoscopic treatment. The aim of this study was to evaluate the accuracy of conventional endoscopy, magnified endoscopy, and EUS for determining the depth of invasion in superficial esophageal cancer. 20 patients with superficial esophageal squamous cell carcinoma underwent conventional endoscopy followed by NBI magnified endoscopy and EUS. They were subsequently treated by endoscopic en bloc resection using the ESD method in 13 cases, and by surgical resection in 7 cases. 20 patients with superficial esophageal cancer were classified as m1-2 (11 cases), m3sm1 (2 cases) and sm2-3 (7 cases). Diagnostic accuracy was 80% (16/20) by conventional endoscopy. It was also 85% (17/20) in NBI magnified endoscopy; judgment was difficult in 3 cases due to adhesive materials on the lesion, and 85% (17/20) for EUS; judgment could not be made in one case due to the difficulty in separating the layer. Judgment was difficult with the 3 methods in one case, therefore, 1 of the 20 lesions (5%) could not be assessed by either magnified endoscopy or EUS. Nevertheless, the overall diagnostic accuracy was increased from 80% (16/20) to 95% (19/20) when taking results of NBI magnified endoscopy and EUS into account. The authors concluded that the diagnostic accuracy was considerably increased after NBI magnified endoscopy and EUS, indicating that these two methods are useful as an auxiliary diagnosis.

NBI magnified endoscopy and EUS, in addition to conventional endoscopy, are useful in superficial esophageal cancer.

## **II. Upper GI - Treatment**

### **1. Abstract: P0004**

**Session: Gastrointestinal bleeding**

**Date: Monday Nov 23rd, 2009**

#### **LONG-TERM EFFICACY AND SAFETY OF N-BUTYL CYANOACRYLATE IN ENDOSCOPIC TREATMENT OF GASTRIC VARICES**

**Authors: G. Choudhuri, K. Chetri, G. Bhat, G. Alexander, K. Das, U. Ghoshal, P. Paramasivan, K. Das, P. Chandra**

**Reporter: Frankova S, IKEM, Prague, Czech Republic**

Endoscopic glue (N-butyl-2-cyanoacrylate) injection has emerged as promising therapy for bleeding gastric varices (GVs). The authors evaluated the short- and long-term results with this agent. 170 patients underwent glue injection into GV. Glue was injected intra-variceally under endoscopic vision, 0.5-4ml/aliquot, repeated at 3 weeks till varices were eradicated or had solidified. Efficacy was assessed by hemostasis at 48 h, primary, secondary, definitive success rates, and treatment failure. The overall hemostasis at 48h was 82.3% (51/62). The primary, secondary, definitive success rates were 85.4%, 4.4%, and 89.9%, respectively and treatment failure was 10 %. No significant complications were noted except for injection site ulceration in 32. Sixteen patients died during follow-up. The authors confirmed the prevailing opinion that endoscopic glue injection into bleeding GV was highly effective and safe both in achieving hemostasis and prevention of rebleeding.

### **2. Abstract: P0005**

**Session: Gastrointestinal bleeding**

**Date: Monday Nov 23rd, 2009**

#### **THE EFFICACY OF HEMOSTATIC TREATMENT OF GASTRIC ULCER WITH ARGON PLASMA COAGULATION**

**Authors: T. Ebato, T. Ishii, A. Isono, Y. Mishina, S. Nakayama, K. Nagasawa, K. Abe, K. Hattori, T. Yamamoto, Y. Kuyama**

**Reporter: Frankova S, IKEM, Prague, Czech Republic**

The authors examined bleeding gastric ulcers treated with hemostasis using argon plasma coagulation (APC) and other means such as clipping and injection of ethanol (either alone or in combination with injection of HSE - hypertonic saline epinephrine). A total of 480 cases of bleeding gastric ulcers in which urgent endoscopic therapy was performed between January 1, 1999 and May 27, 2009, were reviewed. The bleeding was classified according to location and intensity (Forrest classification). The rate of hemostasis with APC was 95.7%, while that with other means was 91.4%. Regarding the type of bleeding, there was significant difference between APC and other methods in rate of hemostasis for spurting (96.4% vs. 79%,  $p = 0.056$ ), but not oozing (97.2% vs. 92.7%,  $p = 0.37$ ), or visible vessels (95.4% vs. 92.6%,  $p = 0.3$ ). The authors showed that APC was more efficacious than other methods of hemostasis commonly used to treat bleeding gastric ulcers in general, in spurting bleeding ulcers, and ulcers located on the upper body posterior wall in particular.

### **3. Abstract: P0012**

**Session: Gastrointestinal bleeding**

**Date: Monday Nov 23rd, 2009**

#### **EFFICACY OF THROMBIN-FIBRIN GLUE AND A SCLEROSANT IN THE MANAGEMENT OF BLEEDING GASTRIC VARICES**

**Authors: S. Gupta, P. K. Aggarwa**

**Reporter: Frankova S, IKEM, Prague, Czech Republic**

The aim was to determine the efficacy and safety of thrombin-fibrin glue along with a sclerosant in eradication of gastric varices. All patients with large gastric varices and evidence of hemorrhage were included in the study. Forty patients were injected with thrombin-fibrin glue followed by a sclerosant (polidocanol or ethanolamine oleate). During the same period, 22 such patients were treated with n-butyl-2-cyanoacrylate, either because they had been previously treated with the same or were not suitable for thrombin-fibrin glue. Complete disappearance or marked reduction in variceal size was documented in 39/40 cases treated with thrombin-fibrin glue. Only one case of rebleed was recorded. In the n-butyl-2-cyanoacrylate group, rebleed was recorded in 6/22 patients. No major complication was recorded in either group. The authors concluded that thrombin- fibrin glue and a sclerosant are safe and highly effective in controlling gastric variceal bleed and gives better results than tissue adhesives. This should be confirmed by studies from other centres.

### **4. Abstract: P0114**

**Session: Therapeutic endoscopy/interventional radiology**

**Date: Monday Nov 23rd, 2009**

#### **ENDOSCOPIC SUBMUCOSAL DISSECTION (ESD) IN THE UPPER GI TRACT: CAN WE MATCH THE JAPANESE RESULTS?**

**Authors: P. H. Deprez, A. Jouret, C. Sempoux, R. Yeung, T. Aouattah, H. Piessevaux**

**Reporter: Frankova S, IKEM, Prague, Czech Republic**

Endoscopic submucosal dissection (ESD) was primarily developed in Asian countries as a curative treatment for superficial neoplasias in the stomach and esophagus. The aim of this single-center study was to evaluate the outcomes of and experience with ESD for esophageal, gastric and duodenal tumors. Since 1999, the authors prospectively recorded all endoscopic resections. Out of a total of 298 patients treated for superficial neoplasia (T1N0), 182 were located in the esophagus, 49 in the stomach, and 67 in the duodenum. ESD was performed in 66 patients with the Flex-knife, IT-knife, Hook-knife or Dual knife. High R0 (82%) and CR (complete remission: 92%) rates were observed, confirming the need for ESD in lesions that cannot be removed en bloc with cap-EMR. It can be concluded that indications for ESD in the upper GI tract remain less frequent than in the Eastern world, making appropriate training and a rational cost/benefit attitude an important issue.

### **5. Abstract: P0120**

**Session: Therapeutic endoscopy/interventional radiology**

**Date: Monday Nov 23rd, 2009**

#### **DOUBLE-SCOPE ENDOSCOPIC SUBMUCOSAL DISSECTION (ESD) FOR THE TREATMENT OF EARLY GASTRIC CANCER DIFFICULT TO MANAGE BY CONVENTIONAL ESD**

**Authors: K. Higuchi, S. Tanabe, T. Sasaki, M. Azuma, K. Ishido, C. Katada, K. Nakatani, W. Koizumi**  
**Reporter: Frankova S, IKEM, Prague, Czech Republic**

The authors reported the therapeutic usefulness of double-scope ESD in patients with early gastric cancer difficult to manage by conventional ESD. They used double-scope ESD to treat 10 lesions in 10 patients, who had early gastric cancer with an ulcer scar that was difficult to manage by conventional ESD. Counter-retraction was then applied to the lesion with the use of a grasping forceps, introduced through the forceps channel of a small-caliber upper gastrointestinal endoscope, and the submucosa was dissected. For comparison, they retrospectively reviewed 20 size- and location-matched early gastric cancers with ulcer scars that had been resected by conventional ESD. Their experience indicates that double-scope ESD is useful for the treatment of early gastric cancer difficult to manage by conventional ESD. This is one of techniques moving ESD more to the NOTES category, and one should keep in mind that, primarily, the presumed attributes of endoscopic therapeutic procedures were: short, safe, easy.

**6. Abstract: P0200**

**Session: Therapeutic endoscopy/interventional radiology**

**Date: Monday Nov 23rd, 2009**

**VALIDITY OF ENDOSCOPIC SUBMUCOSAL DISSECTION FOR SUBMUCOSAL INVASIVE OR ULCERATIVE GASTRIC CANCER**

**Authors: S. Hoteya, T. Iizuka, S. Yamashita, D. Kikuchi, M. Nakamura, N. Hirano, Y. Kuroki, T. Mitani, Y. Miyata, N. Yahagi**

**Reporter: Frankova S, IKEM, Prague, Czech Republic**

Endoscopic submucosal dissection (ESD) was developed to enable resection of large and difficult lesions which are unable to be resected with conventional endoscopic mucosal resection (EMR) techniques. The authors aimed to evaluate the validity of ESD performed for early gastric cancer having some difficulty in the submucosal layer. According to histological assessment of 987 lesions treated by ESD, they divided the lesions into three groups: intramucosal cancer without ulceration showing differentiated type, intramucosal cancer with ulceration, and minimally invasive submucosal cancer showing differentiated type (549, 105 and 48 lesions, respectively). En bloc resection rates of each group were 99.3%, 97.1% and 97.9%, respectively. Perforation rates and postoperative bleeding rates were 1.5/1.9/2.1% and 4.5/3.8/2.1%, respectively. No local recurrences were detected in any group within the follow-up period. These results identify ESD as an extremely useful and feasible technique even for submucosal invasive and ulcerative gastric cancer. The outcomes further outline the indications for ESD again showing the efficacy and safety in numbers of patients which can be currently hardly expected in Europe.

**7. Abstract: P0220**

**Session: Therapeutic endoscopy/interventional radiology**

**Date: Monday Nov 23rd, 2009**

**ENDOSCOPIC EMR OR ESD FOR HIGH GRADE DYSPLASIA AND ADENOCARCINOMA IN LONG (L), EXTRA-LONG (XL) AND EXTRA-EXTRA-LONG (XXL) BARRETT'S ESOPHAGUS: HIGH RATES OF COMPLETE REMISSION**

**Authors: P. H. Deprez, A. Jouret, C. Sempoux, T. Aouattah, R. Yeung, H. Piessevaux**  
**Reporter: Frankova S, IKEM, Prague, Czech Republic**

The aim of this study was to review authors' experience of endoscopic resection in long LBE (3cm), extra-long XLBE (5cm) and extraextra-long XXLBE (10cm) Barrett's patients. 61 patients were included, in a total cohort of 185 pts treated by ER for esophageal cancer. Recurrence of HGD was seen in 5 pts (8.8%) at 9, 12, 12, 23, and 94 m and was retreated by EMR. Complete remission was achieved in 51/51 pts (100%). In patients in whom complete removal of BE was attempted and without surgery, recurrence of visible BE mucosa was observed in 8/33 (27%), and 4 (8%) patients had IM detected on the neo-z-line: complete eradication was therefore successful in 64% of pts. Complications - delayed bleeding - occurred in 2 pts at 12 and 24 h, and it was treated with endoscopic techniques. Symptomatic stenosis occurred in 19 pts (32%) and was effectively released by endoscopic dilatation. It was shown that long Barrett's esophagus with HGD/IMC can be effectively treated with extensive endoscopic removal by EMR and or ESD even in lengths exceeding 5 to 10 cm. The recurrence rate close to 30% indicates need for follow-up.

**8. Abstract: P0152**

**Session: Therapeutic endoscopy/interventional radiology**

**Date: Monday Nov 23rd, 2009**

**PATTERNS OF RECURRENCE OF DYSPLASIA POST PHOTODYNAMIC THERAPY FOR HIGH GRADE DYSPLASIA IN BARRETT'S OESOPHAGUS**

**Authors: J. Gray, G. M. Fullarton**

**Reporter: Frankova S, IKEM, Prague, Czech Republic**

Photodynamic laser therapy (PDT) of High Grade Dysplasia (HGD) in Barrett's oesophagus has been shown to decrease the progression to malignancy. The authors report the long term outcome of PDT in 19 patients who were not fit for resectional surgery due to co-morbidity. 3/18 had HGD at the time of the first biopsy signifying failure to treat. Recurrent dysplasia developed in 5/15 patients initially successfully treated (1HGD, 4LGD) at a median 22 months (range 16-34) primarily at the initial site. In 2/15 progressed to adenocarcinoma at 4 and 20 months post treatment. The 2 patients progressing to adenocarcinoma were treated with repeat PDT (1 and 2 courses) and both now have normal squamous epithelium (follow up 43 and 29 months). The authors concluded that although after PDT 83% patients had their HGD successfully treated, 10.5% of HGD patients progressed to adenocarcinoma. In this small cohort of patients there was no obvious pattern of recurrence post PDT for HGD in Barrett's oesophagus, however the lower light dose may increase the likeliness of recurrence. PDT seems to be inferior to other modalities of ablation although direct comparison is not available.

**9. Abstract: P0713**

**Session: Therapeutic endoscopy/interventional radiology**

**Date: Monday Nov 23rd, 2009**

**SYNDROME OF PLUMMER-VINSON AND ENDOSCOPIC DILATION: ABOUT 15 CASES**

**Authors: D. Benajah, R. Zamharir, I. Mellouki, M. Elyousfi, N. Aqodad, M. El Abkari, A. Ibrahimi**

**Reporter: Frankova S, IKEM, Prague, Czech Republic**

The authors aimed to better define the clinical, biological, radiological, endoscopic and evolutionary characteristics of patients presenting with syndrome of Plummer-Vinson (SPV) after endoscopic dilation and medical treatment in a retrospective study. There were 15 cases of SPV listed. All these patients complained of dysphagia, 93.3% of anemia, and all have benefited from endoscopic dilation (and iron supplementation) with a good clinical and biological course in 8 patients (80%). The SPV is a rare entity. The treatment, based essentially on endoscopic dilations, is effective and safe, similar to that of other short-segment strictures.

**10. Abstract: P0720**

**Session: Therapeutic endoscopy/interventional radiology**

**Date: Monday Nov 23rd, 2009**

**AN 11 YEAR EXPERIENCE OF ENDOSCOPIC OESOPHAGEAL STENT INSERTION FOR MALIGNANT STRICTURE IN A DISTRICT GENERAL HOSPITAL**

**Authors: J. Berrill, G. Watts, P. Duane, U. Dave**

**Reporter: Frankova S, IKEM, Prague, Czech Republic**

The primary aim of this study was to examine survival and complications following insertion of self-expanding metallic stents for oesophageal malignant stricture in a district general hospital setting between 1996 and 2007. 104 stents were inserted in 98 patients. Median survival was 97 days (range, 1–803 days). Mortality at 3 days was 3% (3), and at 30 days was 24% (25). Overall complication rate was 21%; this included misplaced stent 3%, bleeding 11%, and pneumonia 6%. This suggests that endoscopic oesophageal stent insertion can be performed safely in the setting of a district general hospital where on average only nine stents were inserted annually. Interestingly, it seems that the volume of patients treated by stent insertion does not play a major role.

**11. Abstract: P0718**

**Session: Therapeutic endoscopy/interventional radiology**

**Date: Monday Nov 23rd, 2009**

**SELF-EXPANDING METAL STENTS FOR ACUTE TREATMENT OF BLEEDING OESOPHAGEAL VARICES**

**Authors: L. Bremholm, F. Bendtsen, E. F. Hansen**

**Reporter: Frankova S, IKEM, Prague, Czech Republic**

The authors present selected cases with ongoing bleeding treated by self-expanding metal stents (SX-ELLA Stent Danis Set) as an alternative to the Sengstaken-Blakemore tube, or where this tube has failed. Stents were placed in case of continuous bleeding in spite of pharmacological and endoscopic treatment. All stents were placed during endoscopy, and were afterwards controlled endoscopically to ensure haemostasis and expansion.

The stent has been placed in 9 cases (3 men/6 female), covering 7 (3 men/4 female) patients, with a mean age of 55.2 years (range 45-73). No immediate complications to the procedures were observed. The SX-ELLA Stent Danis Set is a safe and promising alternative to the Sengstaken-Blakemore tube or acute tranjugular intrahepatic portosystemic shunting (TIPS). The reporter's view is that the Danis stent should be considered rescue therapy 1) in high emergency, 2) as bridging to TIPS, 3) in failure of endoscopic treatment where it should be compared to obliteration.

**12. Abstract: P0719****Session: Oesophageal, gastric and duodenal disorders****Date: Monday Nov 23rd, 2009****POLYDIOXANONE BIODEGRADABLE STENTS IN REFRACTORY BENIGN OESOPHAGEAL STRICTURES? FIRST REPORT OF 4 PATIENTS****Authors: A. Dhar, J. H. Topping, E. C. Johns, A. Allan, D. O'Neill****Reporter: Frankova S, IKEM, Prague, Czech Republic**

Polydioxanone biodegradable stents have recently been introduced in the UK and this is a report of their single-centre use in the first 4 patients. This pilot observation was carried out with the primary aim of assessing the feasibility of the Ella BD® Polydioxanone stent (Ella-CS, Hradec Kralove, Czech Republic) in oesophageal dilatation in patients with refractory benign oesophageal stricture. Four patients with refractory benign oesophageal stricture, defined as symptomatic dysphagia despite endoscopic dilatation to 15mm in the previous 6 months or requiring more than 3 dilatation sessions over the previous 12 months were offered Ella BD® stent placement. One patient had moderate discomfort after stent placement requiring analgesics over 2 days. No displacement was reported or seen at endoscopy in 3 patients; 2cm proximal displacement was seen in third patient. Stent disintegration occurs around 10-12 weeks. There was no need for dilatation in any patient in the short term, and no recurrence of dysphagia at 3 months post disintegration (in 2 patients). The authors concluded that the polydioxanone stent is a feasible option for management of refractory benign oesophageal strictures. Its use may be associated with fewer endoscopic procedures and cost reduction.

**13. Abstract: P1268****Session: Oesophageal, gastric and duodenal disorders****Date: Tuesday Nov 24th, 2009****RISK FACTORS FOR RECURRENCE OF GASTRIC ARTIFICIAL ULCERS AFTER ENDOSCOPIC SUBMUCOSAL DISSECTION****Authors: N. Kakushima, Y. Huang, K. Takizawa, M. Tanaka, H. Ikehara, Y. Yamaguchi, H. Matsubayashi, H. Ono****Reporter: Frankova S, IKEM, Prague, Czech Republic**

The aim of this study was to describe the risk of ulcer recurrence after gastric ESD. This was a retrospective single-center study involving 519 patients who underwent ESD for gastric neoplasms and were followed for 12 months or more after ESD. The median observation period was 32 months (range 12 to 72 months). Seven patients presented with ulcer recurrence at the previous ESD site. The authors concluded that although the frequency is low, there is a possibility of recurrence of gastric artificial ulcers after ESD. A history of peptic ulcer, ESD for lesions with ulceration findings and Helicobacter pylori infection seem to be its risk factors. Valuable information concerning long-term complications of ESD which might be prevented by PPI.

**14. Abstract: P2174****Session: Oesophageal, gastric and duodenal disorders****Date: Wednesday Nov 25th, 2009**

## **ENDOSCOPIC SUBMUCOSAL DISSECTION (ESD) OF LARGE MUCOSAL AND SUBMUCOSAL LESIONS IN THE GI TRACT? EXPERIENCE IN THE WESTERN WORLD**

**Authors: A. Probst, D. Golger, B. Pommer, H. Arnholdt, H. Messmann**  
**Reporter: Frankova S, IKEM, Prague, Czech Republic**

The aims of this study were to evaluate the feasibility and success rates of ESD in the endoscopic treatment of mucosal and submucosal lesions in the upper and lower GI tracts in a European center. 136 lesions were treated by ESD. 10 lesions were esophageal, 84 were gastric, 19 large flat adenomas, 12 submucosal tumors, 1 lesion was duodenal (carcinoid) and 41 were colorectal. ESD was carried out in a standardized way. ESD was technically possible in 120/136 lesions. ESD could not be performed in 14 lesions due to non-lifting and in 2 lesions due to intraprocedural perforation requiring surgery. No procedure-related mortality was observed. Recurrence rates are 3.1% after en bloc resection and 34.8% after piecemeal resections (mean follow-up 26 months). The authors concluded that ESD is a promising technique in the treatment of early cancers, large flat lesions and submucosal tumors. In the majority, en bloc resections are possible with acceptable complications rates.

### **III. Small intestine – Diagnosis**

#### **1. Abstract: P0645**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

#### **NON-SMALL-BOWEL LESIONS ENCOUNTERED DURING DOUBLE-BALLOON ENTEROSCOPY – WHAT LESSONS CAN WE LEARN?**

**Authors: H. Tee, A. J. Kaffes**

**Reporter: Stedra A, IKEM, Prague, Czech Republic**

Non-small-bowel lesions (NSBLs) which are responsible for obscure GI bleeding (OGIB) are often found while performing capsule endoscopy or push enteroscopy. This study aims to report the incidence of NSBLs encountered during DBE procedures and to analyze their significance. A retrospective study was carried out, and a total of 228 (150 antegrade and 78 retrograde) records were available for analysis. All cases were referred for obscure gastrointestinal bleeding (OGIB) with previous gastroscopy, colonoscopy and capsule endoscopy. The incidence of NSBLs encountered during DBE was determined. The positive yield for a bleeding lesion was 65.9%. Of the 179 patients, 44 (24.6%) had NSBL (19 of them had dual pathology with small-bowel lesions and NSBL); 27 (15.1%) had lesions not detected by any previous endoscopic procedure. A significant proportion of patients referred for DBE had bleeding pathology within the reach of conventional endoscopy and 15.1% were completely missed by all previous investigations.

#### **2. Abstract: P0680**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

#### **AN ENDOSCOPIC ANALYSIS OF ULCERS OF SMALL INTESTINE DETECTED BY DOUBLE BALLOON ENTEROSCOPY**

**Authors: T. Lee, J. Kim, H. Kim, W. Kim, Y. Cho, J. Cho, J. Lee, B. Ko, M. Lee**

**Reporter: Stedra A, IKEM, Prague, Czech Republic**

Ulcers of the small intestine (USIs) are rare, yet are characteristic of a broad spectrum of diseases. The authors retrospectively analyzed 55 medical records and endoscopic files of USI detected by double-balloon enteroscopy (DBE). USIs were found in 39 male and 16 female patients. The reasons to perform DBE included bleeding (n=39, 62%), abdominal pain (n=17, 31%), and others (n=4, 7%). A drug-related group with NSAID enteropathy included 15 patients. A malignancy-related group consisted of 4 gastrointestinal stromal tumors, 2 adenocarcinomas, and 2 lymphomas. The authors concluded that endoscopic differential diagnosis of USI was challenging. Considering clinical history, physical examination, radiologic findings, and pathologic findings, DBE is a useful method for diagnosing USIs also allowing to perform endoscopic interventions.

**3. Abstract: P0653**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

**CAPSULE ENDOSCOPY (CE) INCREASES THE DIAGNOSTIC YIELD OF DOUBLE BALLOON ENTEROSCOPY DBE IN PATIENTS BEING INVESTIGATED FOR OBSCURE GASTROINTESTINAL BLEEDING (OGIB)**

**Authors: L. C. Fry, H. Neumann, P. Malfertheiner, K. Mönkemüller**

**Reporter: Stedra A, IKEM, Prague, Czech Republic**

Both capsule endoscopy (CE) and double balloon enteroscopy (DBE) are valuable methods for the evaluation of obscure gastrointestinal bleeding (OGIB). Many experts recommend the use of CE to guide DBE. The aim was to evaluate the impact of CE on the yield of DBE in patients with OGIB. 60 consecutive patients were evaluated for OGIB. The diagnostic yield of DBE was 39.9% during the first period (DBE alone) compared to 62.9% during the second period (DBE after CE). In patients with OGIB, performance of CE prior to DBE increases the diagnostic yield of DBE. Thus, these data further support the concept that CE should serve as a guiding method for the performance of additional invasive small bowel enteroscopy.

**4. Abstract: P0739**

**Session: Endoscopy and imaging**

**Date: Tuesday Nov 24th, 2009**

**THE COMPARISON OF THREE CAPSULE ENDOSCOPY SYSTEMS' SOFTWARE USING FIRST 100 PATIENTS EXPERIENCE**

**Authors: A. Derovs, J. Derova, J. Pokrotnieks**

**Reporter: Stedra A, IKEM, Prague, Czech Republic**

Video capsule endoscopy (VCE) has become a very important tool for diagnosing small bowel disorders. Several types of VCE are commercially available. This study was designed to compare three systems' software (EndoCapsule Software ver. 1.0.7., Given Diagnostic System Rapid Reader ver. 4.1.8., and OMOM Endoscope Capsule System Image Workstation ver. 5.31.): tools, features and convenience in use. Upper or/and lower endoscopy and radiological investigations (SBFT, CT angiography, MRI) were performed before VCE, but the reason was still unclear. In total, 130 capsule endoscopies were performed. All three systems are similar regarding gastric and small bowel transit. The specific advantages were: high image quality of the Olympus system, medical atlas of Given, and image and capsule

control of OMOM. The functionality of all three systems is similar. For beginners, it seems to be easier to start with Given Imaging and after gaining some experience to use the Olympus and OMOM, of which the latter seems to be even more accurate.

**5. Abstract: P2113**

**Session: Endoscopy and imaging**

**Date: Tuesday Nov 24th, 2009**

**CLINICAL IMPACT OF CAPSULE ENDOSCOPY AS A LESS INVASIVE PROCEDURE IN THE EVALUATION OF INTESTINAL COMPLICATIONS FOLLOWING ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION**

**Authors: Y. Kakugawa, T. Gotoda, Y. Saito**

**Reporter: Stedra A, IKEM, Prague, Czech Republic**

Intestinal complications including graft-versus-host disease (GVHD) and cytomegalovirus (CMV) disease after allogeneic hematopoietic stem cell transplantation (allo-SCT) predominantly affect the small intestine. Capsule endoscopy (CE) is now widely accepted as being far less invasive for examination of the entire small intestine. The aim of this study was to investigate the relationship between small intestinal inflammation findings using CE and terminal ileum inflammation findings using ileocolonoscopy in patients with intestinal symptoms after allo-SCT. 21 patients with intestinal symptoms underwent 34 examinations using both CE and ileocolonoscopy after allo-SCT. The authors retrospectively reviewed the records including histology and concluded that intestinal inflammation after allo-SCT was well assessed by CE as well as by ileocolonoscopy.

**6. Abstract: P2112**

**Session: Endoscopy and imaging**

**Date: Wednesday Nov 25th, 2009**

**DIAGNOSTIC YIELD OF WIRELESS CAPSULE ENDOSCOPY IN NON-STEROIDAL ANTI-INFLAMMATORY DRUGS INDUCED ENTEROPATHY IN EXPERIMENTAL PIGS**

**Authors: I. Tachecí, J. Kvetina, J. Bureš, J. Österreicher, M. Kuneš, J. Pejchal, S. Rejchrt, S. Špelda, M. Kopáčová**

**Reporter: Stedra A, IKEM, Prague, Czech Republic**

Non-steroidal anti-inflammatory drugs (NSAIDs) represent a well-recognized cause of small bowel injury. The purpose of this study was to review the methodology of capsule endoscopy in preclinical research and to evaluate the diagnostic yield of capsule endoscopy in NSAID-induced enteropathy in experimental pigs. Thirteen mature female pigs included in this study were divided into two groups and underwent capsule endoscopy. Capsule endoscopes (EndoCapsule system; Olympus) were introduced into the duodenum endoscopically in each of the animals. Five healthy pigs were included in the first (control) group. In the second group, indomethacin (400 mg per day) was administered orally for 10 days to eight pigs. After capsule endoscopy, pharmacological euthanasia and immediate autopsy were performed the following morning. The capsule endoscopy and autopsy findings were compared. Small bowel injury compatible with NSAID-induced enteropathy was observed in 7/8 animals in the second group. The most frequent lesions were red spots and erosions. Ulcers and small intestinal bleeding were identified sporadically. The authors concluded that wireless capsule

endoscopy is a highly accurate non-invasive method for evaluating an experimental porcine model of NSAID-induced enteropathy.

**7. Abstract: P2119**

**Session: Endoscopy and imaging**

**Date: Wednesday Nov 25th, 2009**

**CAPSULE ENDOSCOPY FINDINGS IN THE SMALL BOWEL OF PATIENTS WITH HEPATOCELLULAR CARCINOMA: A PROSPECTIVE STUDY**

**Authors: A. Yamada, H. Watabe, T. Sugimoto, S. Kondo, M. Ohta, S. Obi, G. Togo, K. Ogura, Y. Yamaji, M. Okamoto, H. Yoshida, T. Kawabe, M. Omata**

**Reporter: Stedra A, IKEM, Prague, Czech Republic**

Hepatocellular carcinoma (HCC) develops mainly in patients with chronic liver disease, often cirrhosis. Those patients sometimes suffer from anemia of unknown origin. Portal hypertension may affect the small bowel of HCC patients. However, little is known about small bowel abnormalities in HCC patients. The objective of this study was to estimate the prevalence of small intestinal mucosal abnormalities in HCC patients using capsule endoscopy (CE). The authors prospectively conducted examination with CE in HCC patients using a PillCam SB device. Thirty-six patients underwent CE. No complications were recorded. Abnormal findings in the small bowel were found in 25 patients (69%); red spots in 20 (56%), angiodysplasias in 8 patients (22%), erosions in 5 (14%), varices in 4 (11%), polyps in 4 (11%), and a submucosal tumor in 1 (3%). CE revealed that HCC patients frequently have small intestinal mucosal lesions. In particular, small intestinal angiodysplasia, which may cause obscure gastrointestinal bleeding, seems to be associated with portal hypertension.

**8. Abstract: P0639**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

**COMPLICATIONS OF DOUBLE-BALLOON ENTEROSCOPY: 4 YEARS OF EXPERIENCE**

**Authors: R. Carvalho, N. Almeida, P. Figueiredo, S. Lopes, H. Gouveia, M. C. Leitão**

**Reporter: Stedra A P, IKEM, Prague, Czech Republic**

Double-balloon enteroscopy (DBE) has revolutionized investigation of the small intestine by allowing direct visualization and intervention of this segment. It is a relatively safe procedure with a low overall complication rate. The authors aimed to analyze the complication rate in DBE procedures. Into their retrospective study were enrolled 94 patients undergoing 113 DBE examinations (42 therapeutic). Total enteroscopy was possible in 4 patients (3.5%). The most common finding were angioectasias (32.7%). The authors reported 5 complications (4.4%): respiratory failure, hypotension, jaundice, and acute pancreatitis. The authors concluded that DBE has proven to be a safe procedure with an acceptable complication rate, similar to reports on other series.

**9. Abstract: P0654**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

## **COMPARISON BETWEEN VIDEO CAPSULE ENDOSCOPY AND DOUBLE-BALLOON ENTEROSCOPY IN PATIENTS WITH OBSCURE GASTROINTESTINAL BLEEDING**

**Authors: A. Mussetto, M. L. Brancaccio, A. Buzzi, F. Cantoni, S. Gasperoni, T. Casetti**

The introduction of capsule endoscopy (CE) and double-balloon enteroscopy (DBE) has made it possible to evaluate obscure gastrointestinal bleeding (OGIB). CE allows direct examination of the small bowel. Usefulness of DBE has been reported in many papers, but few studies have made a comparison between these tools. The aim of the study was to compare the diagnostic yield of DBE and CE for OGIB in patients undergoing both procedures.

The authors performed a retrospective evaluation of a prospectively collected database of 59 consecutive patients scheduled for OGIB and undergoing both procedures, CE first. The diagnostic yields of CE and DBE were 79% and 59%, respectively, similar to the previously published rates for these tools. Their concordance was lower in overt-OGIB; this could be explained by the missing rate of small lesions detected with an early CE, missed or healed at the following DBE. Differences in the CE and DBE findings were observed in 28 patients. In 9 out of the 28 patients, DBE did not find the blood in the lumen and, in 11, did not detect small-bowel lesions; 5 false protruding lesions were detected at CE and a different lesion was showed by DBE in 3 cases. The limitation of this study was that total enteroscopy was performed only at the discretion of an endoscopist (only in 7/59 patients, with total concordance between the two procedures). The rate of concordance between DBE and CE is low probably because of the low definition target location and the difficulty to achieve deep insertion into the small bowel with DBE.

### **10. Abstract: P0663**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

#### **THE EFFICACY OF RETROGRADE DEEP INSERTION OF SINGLE BALLOON ENDOSCOPY FOR PATIENTS WITH CROHN'S DISEASE AT TIMES OF CONVENTIONAL COLONOSCOPY ON OUTPATIENTS: PROSPECTIVE, OPEN-LABEL, FEASIBILITY STUDY**

**Authors: K. Watanabe, M. Sogawa, S. Hosomi, Y. Ito, K. Morimoto, M. Takatsuka, N. Kamata, H. Yamagami, T. Watanabe, K. Tominaga, Y. Fujiwara, T. Arakawa**

**Reporter: Stedra A, IKEM, Prague, Czech Republic**

The significance of mucosal healing in patients with Crohn's disease (CD) following treatment with several biologic agents has received attention because of better patient prognosis recently. However, there are some difficulties or problems with endoscopic detection of small bowel CD lesions in spite of the development of capsule endoscopy and double balloon endoscopy.

The authors investigated the efficacy and safety of single balloon endoscopy (SBE) for the purpose of detection of lesions from the upper part to the middle part of ileal and whole colonic lesions at times of conventional colonoscopic examinations on outpatients. They evaluated 44 cases of CD outpatients who had received retrograde deep insertion of SBE and small bowel barium study (SBBS). We compared both findings prospectively. The authors concluded that retrograde deep insertion of SBE to detect CD lesions in the upper or middle part of the ileum for outpatients is safe and more effective for developing appropriate

treatment strategies in individual CD patients compared with conventional ileocolonoscopy examinations.

#### **IV. Small intestine – Treatment**

##### **1. Abstract: P0649**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

##### **DOUBLE-BALLOON ENTEROSCOPY FOR THE DIAGNOSIS AND TREATMENT OF OBSCURE BLEEDING, INFLAMMATORY BOWEL DISEASES AND POLYPOSIS SYNDROMES: AN EASTERN EUROPEAN EXPERIENCE IN 137 EXAMINATIONS**

**Authors: P. L. Lakatos, H. C. Horvath, L. Zubek, P. Fuszek, A. Nagypal, O. Gemela, J. Papp**

**Reporter: Tomsova E, City Hospital, Mlada Boleslav, Czech Republic**

The aim of the study was to report the experience with the Fujinon EN-450 T5 therapeutic double-balloon enteroscope. 137 DBE procedures were conducted in 127 consecutive patients for the diagnosis and treatment of obscure bleeding, polyposis syndromes and suspected or known IBD. In obscure bleeding an abnormal small-bowel finding was observed in 48 patients (60%) including angiodysplasias, erosions, small ulcers, two polypoid lesions (GIST) and a newly diagnosed melanoma. In suspected IBD, IBD was diagnosed in 4 out of 14 cases. The rate of concordance of capsule and DBE findings was only 47.4% (9/19), while, in two cases, DBE added a significant new finding including one malignancy. The average insertion length was 210 cm (range 70–480 cm, SD 114). APC was done in 16 patients. In 6 patients with polyposis syndrome polyps were removed by polypectomy snare. Patients' tolerance of the procedure was excellent. No severe complications were observed. It was again proved that DBE is a safe and useful method for evaluating (if capsule endoscopy is not fully conclusive) and treating small bowel disease in selected patients with obscure bleeding, IBD or polyposis syndromes, including patients with suspected small-bowel strictures, in whom capsule endoscopy is contraindicated.

##### **2. Abstract: P0643**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

##### **THE EXTENT, LIMITS AND COMPLICATIONS OF DIAGNOSTIC AND THERAPEUTIC SINGLE-BALLOON ENTEROSCOPY IN PATIENTS WITH SMALL BOWEL ABNORMALITIES**

**Authors: E. D. Fedorov, E. V. Ivanova, M. E. Timofeev, O. I. Yudin**

**Reporter: Tomsova E, City Hospital, Mlada Boleslav, Czech Republic**

Balloon assisted enteroscopy providing access into all parts of the small intestine has its limitations, mostly due to abnormal anatomical or pathological conditions. The aims of this study were to evaluate the medical and technical aspects of performing single-balloon enteroscopy (SBE) in patients with small bowel abnormalities. SBE was successfully performed in 78 patients. A total of 116 procedures were performed with 108 resulting successfully. Eight exploratory procedures were not completed due to Crohn's induced small bowel stricture in 3 and sharp angulations due to intraabdominal adhesions in 5 patients. The

authors found that, in the deep parts of the small bowel, even a hooked distal end of the scope could not keep the shortened folds in the appropriate position. SBE allowed to diagnose the following abnormalities in 62 (79.4%) patients without complications: inflammation in 15 (19.2%); erosions and ulcers in 10 (12.8%); tumors in 4 (5.1%) including 1 leiomyoma, 2 lymphomas, 1 adenocarcinoma and benign polyps in 7 (9.0%); vessel pathology in 8 (10.3%) (clipped in 2); inheritable pathology in 4 (5.1%) (removal of large epithelial tumors was performed); celiac disease in 3 (3.8%); lymphangiectasias in 7. In 6 patients after surgical operations (B II, Roux-en-Y) the bile ducts were reached, but endoscopic therapy could be completed only in 3. The authors concluded that SBE provides high-quality diagnosis and the possibility to treat small bowel diseases as well as pancreatobiliary diseases with abnormal anatomical conditions. In therapeutic procedures, the results can be influenced by the availability of accessories.

### **3. Abstract: P0638**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

#### **SPIRAL ENTEROSCOPY ERCP IN SURGICALLY ALTERED GASTROINTESTINAL ANATOMY**

**Authors: P. A. Akerman, D. Cantero**

**Reporter: Tomsova E, City Hospital, Mlada Boleslav, Czech Republic**

ERCP after Roux-en-y anastomosis using standard endoscopic techniques has presented particular challenge with success up to a maximum of 50%. The authors' hypothesis was that spiral enteroscopy offers a stable and efficient platform for performing ERCP in these patients. The aim of this retrospective study was to determine the rates of successful ERCP completion. Nine consecutive patients were included in the study. There was a 9/9 (100%) success rate at reaching the pancreatico-biliary small bowel junction, and an 8/9 rate of success in completing ERCP. It can be concluded that spiral enteroscopy provides a stable highly effective platform for reaching the pancreatico-biliary orifice in Roux-en-y patients. Of interest would be a comparison of spiral technique with the balloon assisted one.

### **4. Abstract: P0641**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

#### **DOUBLE BALLOON ENTEROSCOPY ASSISTED POLYPECTOMY IN PEUTZ-JEGHERS SYNDROME: RESULTS FROM THE LARGEST PATIENT COHORT IN THE UK**

**Authors: E. J. Despott, R. K. Phillips, S. Clark, A. O'Rourke, E. Tripoli, K. Konieczko, C. Fraser**

**Reporter: Tomsova E, City Hospital, Mlada Boleslav, Czech Republic**

GI bleeding and small bowel (SB) obstruction due to polyps are the major cause of complications in patients with Peutz-Jegher's Syndrome (PJS). Double balloon enteroscopy (DBE) permits complete SB endoscopy and therapy, therefore offering a potentially less invasive alternative to laparotomy and intra-operative enteroscopy (IOE), the only therapeutic options for these patients until recently. The authors provide prospective experience with DBE-assisted polypectomy. Patients with significant SB polyps (>20mm) found at capsule endoscopy or magnetic resonance enterography were included. 17 patients underwent 22 DBE

procedures, and a mean of 3 polyps were removed per patient. 1 patient required 3 DBE procedures, one of which was laparoscopically assisted for a sessile distal duodenal polyp; 1 patient suffered a post polypectomy bleed which settled spontaneously and 1 patient in whom an emergency DBE and polypectomy were attempted had a perforation with conversion to IOE through the defect. 3 patients were scheduled for surgery as polyps were not endoscopically resectable. The results suggest that DBE-assisted polypectomy has emerged as an acceptable alternative to surgery for PJS patients with SB polyps.

**5. Abstract: P0646**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

**ANTEGRADE DOUBLE BALLOON ENTEROSCOPY FOR CONTINUED OBSCURE GI BLEEDING FOLLOWING PUSH ENTEROSCOPY. IS THERE A ROLE?**

**Authors: R. Chettiar, W. S. Selby, A. J. Kaffes**

**Reporter: Tomsova E, City Hospital, Mlada Boleslav, Czech Republic**

The benefit of double balloon endoscopy (DBE) over push enteroscopy (PE) for the proximal small bowel in patients with obscure GI bleeding (OGIB) remains unclear. The authors aim to quantify the benefit of DBE if PE fails to benefit patients with OGIB in a retrospective study. 33 patients with OGIB who had undergone PE for proximal small bowel lesions were identified from a DBE database of 280 patients. Among patients where no lesion at PE was found, DBE identified an abnormality in 12 (80%). In patients with a positive finding at PE, another lesion was detected in 16 (89%). Endoscopic intervention (argon plasma coagulation, polypectomy, adrenaline injection, heater probe diathermy) was performed in 23/33 patients (70%). Mean follow-up was 19.2 months. In 27 of the 33 (82%) patients a clinical benefit was seen following DBE. In patients with OGIB and proximal small bowel lesions who fail to benefit from PE, DBE offers a very high benefit in finding and treating lesions with good long-term outcomes.

**6. Abstract: P0659**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

**LONG TERM OUTCOME OF PATIENTS WITH VASCULAR SMALL BOWEL LESIONS TREATED WITH DOUBLE BALLOON ENTEROSCOPY**

**Authors: E. G. Samaha, G. Rahmi, J. Canard, B. Landi, T. Maniere, L. Trinquart, F. Bloch, R. Jian, C. Cellier**

**Reporter: Tomsova E, City Hospital, Mlada Boleslav, Czech Republic**

Double balloon enteroscopy (DBE) is a novel technique that allows endoscopic therapy of vascular hemorrhagic small bowel lesions previously detected by capsule endoscopy (CE). The early rebleeding rate after endoscopic therapy varies between 10 and 50% in recent reports, but long-term follow-up of treated patients and rebleeding risk factors are lacking. The authors retrospectively studied 403 consecutive DBE procedures performed in 336 patients. Obscure gastrointestinal bleed (OGIB) was the main indication for DBE. The diagnostic yield of DBE was 68%. In patients with OGIB, small bowel vascular lesions were found in 53% of cases and endoscopic therapy was possible in the majority of these (153 procedures in 129 patients) with Argon plasma coagulation (APC) being the main hemostatic technique used in 98.5% of cases. The rebleeding rate was 55% at 36 months. The

complication rate of therapeutic DBE was 3.4% and there was no mortality. The authors concluded that endoscopic therapy with double balloon enteroscopy of small bowel vascular lesions in patients suffering from OGIB results in a long-term absence of rebleeding in less than 50% of the patients. Independent rebleeding risk factors after endoscopic therapy are a high number (>10) of vascular lesions in the small bowel found at DBE, the association with a cardiac disease and advanced age. A more precise description of bleeding episodes (number, intervals and severity before and consequently to endoscopic treatment) would be beneficial.

**7. Abstract: P0661**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

**SMALL BOWEL GASTROINTESTINAL STROMAL TUMORS: THE ROLE OF COMBINATION OF DOUBLE BALLOON ENTEROSCOPY AND LAPAROSCOPIC-ASSISTED BOWEL SURGERY**

**Authors: M. Su, C. Chen, W. Lin, C. Hsu, C. Sung, C. Chiu, P. Chen**

**Reporter: Tomsova E, City Hospital, Mlada Boleslav, Czech Republic**

GISTs are rare and difficult to diagnose, especially if located in the small bowel because of their nonspecific symptoms and difficult endoscopic access. 11 patients with small intestinal GISTs were included. All patients underwent surgical resection, 7 of them laparoscopic-assisted bowel surgery (LABS) after enteroscopic tattooing localization, and 4 patients laparotomy. No tumor recurrence appeared during follow-up of 1-59 months. The authors concluded that double balloon enteroscopy and laparoscopic-assisted bowel surgery provide an effective and safe treatment modality.

**8. Abstract: PO563**

**Session: Endoscopy and imaging**

**Date: Monday, November 23, 2009**

**ONE STEP DIRECT PERCUTANEOUS ENDOSCOPIC JEJUNAL TUBE INSERTION USING AN ULTRATHIN ENDOSCOPE THROUGH THE GASTROSTOMA – A COMPARISON WITH THE CONVENTIONAL TWO-STEP METHOD**

**Authors: M. Tanaka, N. Hasuike, H. Ono, K. Takizawa, N. Kakushima, T. Inui, H. Ikehara, H. Matsubayashi, Y. Yamaguchi**

**Reporter: Tomsova E, City Hospital, Mlada Boleslav, Czech Republic**

In cancer patients both gastric decompression and feeding can be achieved by tube inserted through percutaneous gastrostomy conventionally in two steps (TS) with few-days interval. In this study one-step (OS) method was implemented and compared to more traditional one. Ultrathin endoscope inserted through gastrostoma was used in 18 patients and compared with those of 17 patients who underwent two-step method. In TS group, the median interval between PEG and tube insertion was 49 days. The median operation time for OS and TS was comparable (36 minutes vs. 16 + 26 minutes, resp.). Three gastrostoma hemorrhage observed in both groups were treated without surgery. OS direct feeding tube using an ultrathin endoscope through the gastrostoma is safe and easy.

**9. Abstract: P0649**

**Session: Endoscopy and imaging**

**Date: Monday, November 23, 2009**

**DOUBLE-BALLOON ENTEROSCOPY FOR THE DIAGNOSIS AND TREATMENT OF OBSCURE BLEEDING, INFLAMMATORY BOWEL DISEASES AND POLYPOSIS SYNDROMES: AN EASTERN EUROPEAN EXPERIENCE IN 137 EXAMINATIONS**

**Authors: P.L. Lakatos, H.C. Horvath, L. Zubek, P. Fuszek, A. Nagypal, O. Gemela, J. Papp**

**Reporter: Tomsova E, City Hospital, Mlada Boleslav, Czech Republic**

The aim was to report the experience with the Fujinon EN- 450 T5 therapeutic double-balloon endoscope. 137 DBE procedures were conducted in 127 consecutive patients for the diagnosis and treatment of obscure bleeding, polyposis syndromes and suspected or known IBD. In obscure bleeding, an abnormal small bowel was found in 48 patients (60%) including angiodysplasias, erosions, small ulcers, polypoid lesions (GIST) and melanoma. Biopsy and APC were done in 16 patients. Suspected IBD was confirmed in 4 out of 14 cases. Polyps were removed by snare polypectomy in 6 patients with Peutz-Jeghers syndrome, while primary adenocarcinoma was diagnosed in two patients. The rate of concordance of capsule and DBE findings was only 47.4%. The average insertion length was approx. 210 cm. The authors concluded that DBE is a safe and useful method for evaluating and treating small bowel disease in selected patients with obscure bleeding, IBD or polyposis syndromes.

**10. Abstract: P2179**

**Session: Therapeutic endoscopy/Interventional radiology III**

**Date: Wednesday, November 25, 2009**

**86 CASES OF STENT PLACEMENT IN PATIENTS WITH MALIGNANT OBSTRUCTION OF GASTROINTESTINAL TRACT: AS A BRIDGE TO CHEMOTHERAPY, IN ADDITION TO A PALLIATIVE ROLE**

**Authors: T. Kayahara, M. Kikuyama**

**Reporter: Tomsova E, City Hospital, Mlada Boleslav, Czech Republic**

Expandable metallic stent (EMS) placement against unresectable malignant gastrointestinal obstruction is recognized as a palliative therapy. The authors performed 86 stent placement procedures for malignant gastrointestinal obstruction. To clarify the role of stent placement, they evaluated improvement of oral intake by gastric obstruction score (GOOS) and prognosis of patients with or without chemotherapy. 70 patients had gastrointestinal obstructions and 16 cases of colorectal lesions. Gastric cancer (40 cases) showed remarkable improvement of GOOS. Mean survival time was 135.7 days in patients with chemotherapy and 85.8 days without chemotherapy after EMS placement. GOOS in 30 patients with pancreato-biliary tumors was also improved. The authors concluded that EMS placement was an effective method for both the patients with upper gastrointestinal stenosis, and in colorectal obstruction.

**V. Colon: diagnostic**

**1. Abstract: OP005**

**Date: Monday, November 23, 2009**

**Session: Endoscopy and imaging I**

## **WIRELESS CAPSULE COLONOSCOPY VERSUS COLONOSCOPY IN PATIENTS AT AVERAGE OR INCREASED RISK FOR COLORECTAL CANCER**

**Authors: S. Sacher-Huvelin, M. Le Rhun, L. Planche, M. Gaudric, R. Benamouzig, J. Boitard, S.**

**Reporter: Martinek A, Central military hospital, Prague, Czech Republic**

In 15 tertiary centers, the diagnostic yield of WCC compared to conventional colonoscopy (CC) in patients at average (asymptomatic subjects, 50-74 years old) or increased (personal or family history of colonic polyps or cancer) risks for colorectal cancer (CRC) was assessed. The colon preparation has changed: 3 day low residue diet (replaced by completely clear diet the day before) and the usual PEG solution and domperidone and laxatives booster. WCC was performed first, CC on the following day (blinded to each other). The primary criterion was the proportion of patients with polyps of  $\geq 6$  mm detected by each procedure. This study is still ongoing, 502 patients have been enrolled. Interim analysis of the first 105 patients is as follows: 30 patients (29%) at average and 75 (71%) at increased risks, WCC expelled within 10 hours in 90% of the patients, colon cleansing level was good to excellent in 55% and 87% of WCC and CC, respectively. 5 adverse events reported, but none of them related to WCC. The prevalence of polyps  $\geq 6$  mm detected by WCC and CC was 22% and 21 %, respectively. The diagnostic yield of WCC (compared to CC) was: sensitivity 55%, specificity 87%, PPV 52% and NPV 88%. In the group of patients with good or excellent cleansing levels, the corresponding values were 69, 84, 56 and 90%. Excellent feasibility, tolerability and safety of WCC was confirmed. Colonic cleansing level was considered insufficient in 45% of subjects leading to a change in colonic preparation during the rest of the study. Diagnostic performance of WCC, especially NPV, is encouraging although sensitivity is not optimal.

### **2. Abstract: P0221**

**Date: Monday, November 23, 2009**

**Session: Endoscopy and imaging I**

### **ARE HYPERPLASTIC POLYPS PRECURSORS OF COLORECTAL CANCER? A LONG-TERM RETROSPECTIVE STUDY**

**Authors: M.W.E. Bouwens, E. Rondagh, B. Winkens, A. Driessen, A. de Bruine, A. Masclee, S.**

**Sanduleanu**

**Reporter: Martinek A, Central military hospital, Prague, Czech Republic**

The aims of this retrospective study were to investigate the relation between hyperplastic polyps (usually considered to be innocent lesions, with no malignant potential) and the development of CRC and to analyze the predictors for colorectal cancer in patients with these polyps. A total of 568 patients were included (mean age: 60 ( $\pm 1$ ) years, 57% males), 410 patients with hyperplastic polyps only and 158 patients with hyperplastic polyps and also adenomas. Prevalence of CRC was 3.5% during a median follow-up period of 11 years (20 CRC cases). CRCs tended to be more frequently located in the right colon compared to the left colon (2.5% versus 1.1%,  $p = 0.074$ ). Multiple hyperplastic polyps (hazard ratio 2.7, 95% CI 1.1-6.9;  $p = 0.043$ ) and presence of large ( $>5$  mm) hyperplastic polyps in the right colon (hazard ratio 7.8, 95% CI 3.0-20.5  $p < 0.0001$ ) were independent risk factors for the development of CRC. The concomitant presence of adenomas was not an additional risk factor for the development of CRC. These data reinforce the potential role of the serrated pathway in the pathogenesis of CRC. This finding should be reflected in guidelines.

**3. Abstract: P0245****Date: Monday, November 23, 2009****Session: Endoscopy and imaging I****CLINICAL CHARACTERISTICS IN ASSOCIATION WITH COLORECTAL NEOPLASM IN PATIENTS OF GASTRIC CANCER****Authors: J.E. Shin, H.Y. Lee, S.Y. Yun, B.H. Lee, H.D. Shin, S.U. Yun<sup>1</sup>, S.B. Kim<sup>1</sup>, H.J. Kim, I.H. Song, Y.J. Lee****Reporter: Martinek A, Central military hospital, Prague, Czech Republic**

Clinical characteristics in association with colorectal neoplasm in patients who underwent colonoscopy before or after 6 months from gastric resection or endoscopic submucosal dissection were retrospectively investigated. From 89 gastric cancer patients (56 male, 33 female) studied, colorectal neoplasm were detected in 49 (55.1%) patients. Of the colorectal neoplasm, colorectal cancer was detected in 9 (18.4%) patients. Mean age was higher in patients with colorectal neoplasm than non-neoplastic lesions. Sex, BMI, total cholesterol, sugar, smoking and alcohol consumption did not differ between patients with colorectal neoplasias and non-neoplastic lesions. Patients older than 50 years had higher incidence of colorectal neoplasm than younger ones ( $p < 0.05$ ). In conclusion, colorectal neoplasm had a strong association with gastric cancer. Screening colonoscopy may be necessary in gastric cancer patients older than 50 years.

**4. Abstract: P0425****Date: Monday, November 23, 2009****Session: Endoscopy and imaging I****COST-EFFECTIVENESS OF FOLLOW-UP STRATEGIES IN COLON CANCER****Authors: E. Una****Reporter: Martinek A, Central military hospital, Prague, Czech Republic**

Cost and effectiveness of the follow up (FU) tests used in 73 patients who underwent potentially curative surgery (PCS) were assessed. Patients were divided into two groups. Group 1 (standard FU): CEA, history and physical examination every 3-4 months for two years, then every 6 months for two years and annual the fifth year, ultrasonography every 6 months for two years and then annual for three years, colonoscopy every 3 years, chest x-ray every 6-12 months for five years. Group 2 (minimal FU): CEA, history and physical examination every 6-12 months for three years, then annual for two years, ultrasonography annual for two years, colonoscopy every 5 years, chest x-ray every 6-12 months for the first year. The cancers were as follows: 36% distal CC, 23% proximal CC. 43 CC were well differentiated tumors, stage II: 48.5%, 35.5% stage III, median analyzed nodes: 5 (0-34). 56% patients have received adjuvant chemotherapy (100% in stage III and 40% in stage II). At 60 months of follow-up 62% were recurrence-free. Radical reoperations underwent: 3/15 in Group 1 and 1/13 in Group 2; from 28 recurrences. Mean survival (SD) in Group 1 and 2 were 46 (16) and 37 (17) months respectively. Global cost was: 191.131. CEA monitoring: 35.430 Group 1 and 11.577 Group 2. No survivors 5 years after a recurrence when it was detected by physical examination, chest x-ray or ultrasonography. Based on these results, the follow-up schedule should only include CEA monitoring for the diagnosis of recurrence, which according to reporter's opinion could be hardly universally accepted.

**5. Abstract: P0940**

**Date: Tuesday, November 24, 2009**

**Session: Endoscopy and imaging I**

**CONFOCAL ENDOMICROSCOPY (CEM) WITH PORTABLE MINI PROBES FOR CHARACTERIZATION OF POLYPOID AND NON-POLYPOID COLORECTAL LESIONS: A NEW TOOL FOR THE NEXT GENERATION**

**Authors: R. Manta, E. Dabizzi, H. Bertani, M. Manno, A. Mussetto, P. Trande, G. Olivetti, R. Conigliaro**

**Reporter: Martinek A, Central military hospital, Prague, Czech Republic**

Diagnostic accuracy of CEM (with portable mini probes) in differentiation of benign and malignant, polypoid (PL) and non-polypoid (N-PL) CRLs was evaluated. The procedure was performed in 14 patients during colonoscopy under conscious sedation, with use of i.v. fluorescein dye. Lesions were excised or biopsied. Blinded endoscopic and histological assessments were obtained, using predefined morphologic criteria. The video sequences of 19 lesions (5 adenocarcinoma, 11 adenomas, 3 hyperplastic) were evaluated. 7/11 had low grade and 4/11 had high grade dysplasia. The accuracy and a concordance of hyperplastic, adenomas and adenocarcinomas were 100%. The loss of mucosal pattern, typical of dysplasia, was detected by CEM with an overall accuracy of 82% that reached 90% in high grade dysplasia. However, the diagnosis of tubular tubulovillous and villous pattern with CEM is still controversial. This new technique is a helpful tool in the management of patients with colorectal lesions, which gives a real-time evaluation of the lesion, leading the endoscopists' consequent therapeutic choices. The length of the procedure was not mentioned.

**6. Abstract: P1163**

**Date: Tuesday, November 24, 2009**

**Session: Endoscopy and imaging I**

**ADVANCED NEOPLASIA OF THE LEFT HEMICOLON ARE BETTER DETECTED BY FIT THAN RIGHT SIDED LESIONS**

**Authors: F.A. Oort, R.W.M. Van der Hulst, J.S. Terhaar sive Droste, S.T. Van Turenhout, H.A.**

**Reporter: Martinek A, Central military hospital, Prague, Czech Republic**

Difference in sensitivity of fecal immunochemical tests (FIT) for right (caecum, ascending and transverse colon including the splenic flexure) and left (descending colon, sigmoid and rectum) sided advanced neoplasia (all cancers and advanced adenomas i.e.  $\geq 1$  cm in diameter and/or villous architecture and/or high-grade dysplasia) was assessed. 1808 adult patients scheduled for a colonoscopy in 5 participating hospitals underwent a FIT (OC sensor®, Eiken chemical Co, Japan) on one bowel movement the day prior to colonoscopy. The analyses were done with the cut off value set at 100 ng/ml according Test results were compared with colonoscopy outcome as gold standard. In total, 193 advanced adenomas and 62 cancers were found. 41 advanced adenomas and 23 cancers in the right colon, 104 advanced adenomas and 23 cancers in the left hemicolon. The OC-sensor at cut off 100 ng/ml positivity was 11.7%. Detection rate for right sided advanced neoplasia was 39.1% months (range 2-34 months). versus 56.6% for left sided advanced neoplasia, ( $P = 0.01$ ). In conclusion, left sided colonic advanced neoplasias are better detected by FIT than right sided lesions.

**7. Abstract: P1312****Date: Tuesday, November 24, 2009****Session: Endoscopy and imaging I****IS FULL COLONOSCOPIC EXAMINATION NECESSARY IN YOUNG SOUTH ASIAN PATIENTS WITH FRESH BLEEDING PER RECTUM?****Authors: A. Khalid, S. Majid, M. Salih, W. Jafri****Reporter: Martinek A, Central military hospital, Prague, Czech Republic**

The aim of this study was to find out the frequency of endoscopic lesions in young patients with fresh bleeding per rectum (FBPR) and to assess the necessity of full colonoscopic examination. In 173 young (15-50 years) patients (109 males, 61.6%) with this symptom, colonoscopy up to terminal ileum was performed. Weight loss and abdominal pain were the most commonly associated symptom. Mean hemoglobin was  $11.7 \pm 2.1$  gm/dl. Family history of colorectal cancer was found in 2.2%. Endoscopic lesions were found in 99 (55.9%), in 93 in distal colon. The most common lesions were hemorrhoids (in 68 patients). On histopathology 7 had adenocarcinoma, 3 each had adenomatous polyp, hyperplastic polyp, retention polyp, solitary rectal ulcer, ulcerative colitis. In 1 patient serious pathology (adenocarcinoma) in the proximal colon was found. Because lesions were found mostly in distal colon with hemorrhoids being the commonest etiology, it is concluded that flexible sigmoidoscopy can be an alternative to full colonoscopic examination in young Asian patients with FBPR.

**8. Abstract: P0946****Date: Tuesday, November 24, 2009****Session: Endoscopy and imaging I****COLORECTAL SERRATED LESIONS; CLINICOPATHOLOGICAL FEATURES AND MAGNIFYING ENDOSCOPIC FINDINGS INCLUDING ENDOCYTOPSCY****Authors: N. Ikehara, H. Kashida, S. Hamatani, K. Wakamura, M. Kutsukawa, H. Miyachi, Y. Wada, S. Kudo****Reporter: Martinek A, Central military hospital, Prague, Czech Republic**

The clinical features of colorectal traditional serrated adenomas and sessile serrated polyps by investigating their endoscopic features using a magnifying colonoscope and integrated type endocytoscope were revealed. Colorectal serrated lesions more than 5 mm in diameter were included; 174 traditional serrated adenomas (TSAs), 71 hyperplastic polyps (HPs) and 27 sessile serrated polyps (SSPs). Magnifying colonoscopy with magnification power up to  $\times 80$  was employed to observe the pit patterns of the subject lesions. The pit patterns were divided into star-like, fern-like and pinecone-like. Endocytoscopic (EC) findings were classified into 5 groups, non-neoplastic lesions as EC1a, b and neoplastic lesions as EC2 (adenomatous) or EC3a and EC3b (cancerous) based on pathological tissue diagnoses. 14 lesions (9 HPs, 2 SSPs, and 3 TSAs), detected by an ordinary view, were stained with 1% methylen blue, and observed with EC view. The fern-like and pinecone-like pit patterns were characteristic of the TSAs. The pit pattern analysis may prove useful for the endoscopic diagnosis of colorectal serrated lesions, in particular, to distinguish between TSAs and SSPs.

**9. Abstract: P1366****Date: Tuesday, November 24, 2009****Session: Endoscopy and imaging I**

**THE PILLCAM© COLON CAPSULE FOR THE STUDY OF COLONIC PATHOLOGY IN CLINICAL PRACTICE. STUDY OF AGREEMENT WITH COLONOSCOPY**

**Authors: J. Herrerías Gutiérrez, F. Argüelles Arias, A. Caunedo Alvarez, M. San Juan Acosta, J. Romero Vazquez, F. Pellicer Bautista**

**Reporter: Martinek A, Central military hospital, Prague, Czech Republic**

The agreement in the diagnosis of CCE with the conventional colonoscopy as well as its sensibility and specificity and to description of the findings of the CCE was assessed. 144 subjects were included, 93% were without any case of retention, the preparation (after PEG and sodium phosphate) was good-very good in 65.6%, fair in 19.4% and poor in 15% of the cases. The median colonic transit was 140.76 mi. No adverse effect was notified. In 39 cases a colonoscopy was carried out after CCE (blinded to each other). The rate of agreement was 85%, the sensibility was 91% and the specificity 50%. VPP was 77% and VPN was 75%. The colonic findings in 134 CCE were: 34 cases with no lesions, 63 diverticulosis, 43 polyps, 15 angiodysplasias, 9 Cohn's diseases and ulcerous colitis and 8 other cases. It was concluded as high agreement of CEE with colonoscopy. This was only a pilot study and its enthusiastic conclusion should be further evaluated by the trials with controlled setting.

**10. Abstract: P1466**

**Date: Wednesday, November 25, 2009**

**Session: Endoscopy and imaging I**

**COLONIC DIVERTICULAR BLEEDING AND LOW-DOSE ASPIRIN**

**Authors: Y. Tomomatsu, J. Yoshino, K. Inu**

**Reporter: Martinek A, Central military hospital, Prague, Czech Republic**

Association between colonic diverticular bleeding and the use of low-dose aspirin, compared with other types of lower GI bleeding was evaluated in 545 patients with hematochezia. As a main cause of lower GI bleeding were detected hemorrhoids (17.8%), ischemic colitis (16.0%), colonic neoplasia (14.5%), diverticular bleeding (11.0%), acute colitis (10.5%), ulcerative colitis 35 (6.4%), and acute hemorrhagic rectal ulcer (3.3%). 9.9% of all patients received oral low-dose aspirin. The prevalence of using low-dose aspirin was significantly higher in patients with diverticular bleeding ( $p < 0.05$ ; 25.0%) than in those with other diseases. The mean age of the patients with diverticular bleeding was 75.4 years. In 76.7% patients, bleeding was observed on the left side of the colon and in 23.3% on the right side. Colonoscopy revealed adherent clot filling the diverticulum in 50 patients (83.3%), oozing in 9 (15.0%), and spurting in 1 (1.7%). Nine patients (15.0%) required blood transfusions. The treatments included surgery in 3 patients, trans-arterial embolization in 1, and endoclipping in 6. Fifteen patients (25.0%) of colonic diverticular bleeding used low-dose aspirin. There was no significant difference in the bleeding site, the bleeding pattern, severity of the bleeding and methods of treatment between the low-dose aspirin group (15 cases) and the group without low-dose aspirin medication (45 cases). The use of low-dose aspirin might be a risk factor for colonic diverticular bleeding.

**11. Abstract: P1694**

**Session: Endoscopy and imaging I**

**Date: Wednesday, November 25, 2009**

## **A STUDY OF ANORECTAL LESIONS RECOGNIZED BY RETROFLEX COLONOSCOPY IN HEALTHY CASES**

**Authors: W. Adachi, O. Komatsu, K. Kishimoto, H. Shiozawa**

**Reporter: Martinek A, Central military hospital, Prague, Czech Republic**

Clinical characteristics of anorectal lesions in consecutive retroflex colonoscopies (to observe the anal canal and lower rectum) were clarified. Rectal polyp was detected in 14 cases (1.6%). The number of polyp was one in 13, and 2 in 1, and the size of polyp is 2-3mm in 10, and 4-6mm in 4 cases. Among 757 anorectal cases, internal hemorrhoids were detected in 48 cases (6.3%), and hypertrophied anal papillae were detected in 153 cases (20.2%). In cases with internal hemorrhoids, the age was older, the incidence of male cases was higher, anal bleeding or anal prolapse was frequently observed, compared to the cases without them. The number of hypertrophied anal papillae was one in 52, 2 in 38, and more than 3 in 63 cases. In these patients anal bleeding or anal pain was frequently observed with significant difference compared to the cases without them. In conclusion, incidence of rectal polyp, internal hemorrhoids, and hypertrophied anal papillae which were detected by the retroflexion in healthy cases was 1.6%, 6.3% and 20.2%, respectively. Multiple hypertrophied papillae were commonly observed being related to anal bleeding or pain. The question remains whether the authors are convinced that rectal retroversion should be a regular part of the colonoscopic examination.

### **VI. Colon: therapeutic**

#### **1. Abstract: P0576**

**Date: Monday, November 23, 2009**

**Session: Therapeutic endoscopy/Interventional radiology III**

#### **IS 5 DAYS HOSPITALIZATION REALLY NECESSARY FOR COLORECTAL ENDOSCOPIC SUBMUCOSAL DISSECTION (ESD)?**

**Authors: T. Aoki, Y. Saito, T. Matsuda, T. Nakajima, T. Sakamoto**

**Reporter: Suchanek S, Central military hospital, Prague, Czech Republic**

This retrospective study included 189 patients who were admitted after the ESD procedure. Standard hospitalization length is 5 days. Two groups of patients were compared: group A (less than 5 days of hospitalization) and group B (admitted for more than 5 days) due to following characteristics: average hospitalization period, location of tumor, mean size of tumor, hemorrhage that needed emergency colonoscopy, perforation occurred during and after ESD, abdominal pain, fever (>38), blood results (WBC, Hb) after ESD. Majority of all patients (83%) were discharged within 5 days. Delayed bleeding (4 and 6 days after discharge) was diagnosed in 2 cases, delayed perforation was not noticed. Abdominal pain appeared in the day of the procedure and first day after the procedure. An extended hospitalization period was necessary for 86% of the perforation cases (7), 100% of the hemorrhage (in hospital) cases (5) and 37% of the abdominal pain cases (7). The incidence of serious complications was rather low. The other non-clinical reasons for extended hospitalization were patients' requests (7 cases). To conclude, perforations, exposures of muscle layer and hemorrhages were main reasons for extended hospitalization.

#### **2. Abstract: P1321**

**Date: Tuesday, November 24, 2009**

**Session: Therapeutic endoscopy/Interventional radiology III**

**FEASIBILITY OF ENDOSCOPIC SUBMUCOSAL DISSECTION FOR TREATMENT OF RECTAL CARCINOID TUMORS**

**Authors: D. Lee, S. Jeon, S. Park, M. Jung, C. Cho, W. Tak, Y. Kweon, S. Kim, Y. Choi**

**Reporter: Suchanek S, Central military hospital, Prague, Czech Republic**

37 consecutive patients (19 male and 18 female; average age, 50.2 years; range 35 to 75 years) who underwent ESD for the treatment of rectal carcinoid tumor were included in this study. Following items were analyzed: en bloc resection rate, endoscopically complete resection rate, and histological complete resection rate (100%, 100%, and 78.4%), the mean size of tumor (7.3 mm, range 3-15 mm), complications (no serious bleeding, one case of delayed bleeding and one case of delayed perforation). Majority of the lesions (64.9%) were located in lower rectum. The mean time of procedure was 19.3 minutes (range, 8-36 minutes). Involvement of vertical resection margin was found in 7 cases. Lymphovascular invasion occurred in one case. 7 patients with the tumor resected incompletely have been followed up regularly. Local recurrence did not occur during a median follow-up period of 13 months. These data showed that ESD is an effective and safe technique for resection of small rectal carcinoid tumors.

**3. Abstract: P1324**

**Date: Tuesday, November 24, 2009**

**Session: Therapeutic endoscopy/Interventional radiology III**

**A RANDOMIZED PROSPECTIVE STUDY OF ENDOSCOPIC BIPOLAR AND ARGON PLASMA CAUTERIZATION ON CHRONIC RECTAL BLEEDING SECONDARY TO RADIATION TELANGIECTASIAS**

**Authors: L. Lenzi<sup>1</sup>, F. Prata Martins, J. Tafarel, M. Santos, R. Rodrigues<sup>1</sup>, G. de Paulo<sup>1</sup>, F. Nakao, E. Della Libera, R. Rohr, A.P. Ferrar<sup>1</sup>**

**Reporter: Suchanek S, Central military hospital, Prague, Czech Republic**

Chronic Radiation Coloproctopathy (CRCP) is a well-recognized complication of radiotherapy, with rectal bleeding as the most common symptom. Very often, it is refractory to eradications and may lead to transfusion-dependent anemia. This study compared the efficacy and safety of bipolar electrocoagulation (BEC) and argon plasma coagulation (APC) in 30 patients with active bleeding from telangiectasias. Colonoscopy was the first exam to rule out synchronous lesions and follow-up was performed with flexible sigmoidoscopy. BEC settings were 50 W and APC settings were 40 W and 1.0 l/min. Success was defined as eradication of all telangiectasias and failure as necessity of 7 sessions or other therapies. Complications were analyzed. The mean age of patients was 67.4 years (range 33-82), with 14 women and 16 men. There was no significant difference regarding the number of sessions ( $p = 0.313$ ), sensory ( $p = 0.245$ ) hemorrhagic ( $p = 0.169$ ) or anatomic/motor ( $p = 0.700$ ) complications between both groups. Only one failure was observed on each group ( $p = 1.000$ ). Both of the methods are equally safe, effective and well-tolerated, the choice should be tailored on the experience of the endoscopists and facilities available.

**4. Abstract: OP244**

**Date: Tuesday, November 24, 2009**

**Session: Therapeutic endoscopy/Interventional radiology III**

## **AIMING FOR ZERO LOCAL RECURRENCE IN RECTAL CANCER PATIENTS: IS THIS REALLY THE HOLY GRAIL?**

**Authors: W. Truin, J.G. Bloemen, R.G.H. Beets-Tan, G.L. Beets**

**Reporter: Suchanek S, Central military hospital, Prague, Czech Republic**

Neoadjuvant treatment, consisting of short-term radiotherapy or chemoradiotherapy together with TME surgery, reduces the local recurrence (LR) of rectal cancer significantly. In 2001 this multimodal treatment became standard practice. This study reviewed patients with a primary resectable adenocarcinoma of the rectum operated in years 1998 - 2007 in one center. The incidence of local recurrences in 344 patients has decreased dramatically since the introduction of intensive multidisciplinary treatment. This was accompanied with a higher rate of postoperative morbidity and mortality. Also, the overall survival did not improve, which may be explained by the fact that patients still die of distant metastasis. There may be a trade off point in which 'overtreatment' to minimize the local recurrence rate is not weighed off against increased postoperative morbidity and mortality. Therefore, the authors propose a switch of treatment focus from prevention of local recurrence to early detection of distant metastasis and to accept a small number of local recurrences as part of systemic disease.

### **5. Abstract: OP432**

**Date: Wednesday, November 25, 2009**

**Session: Therapeutic endoscopy/Interventional radiology III**

#### **USEFUL OF DUAL KNIFE IN ENDOSCOPIC SUBMUCOSAL DISSECTION FOR COLORECTAL NEOPLASMS**

**Authors: N. Hirano, N. Yahagi, S. Yamashita, N. Nishida, A. Matsui<sup>1</sup>, D. Kikuchi<sup>1</sup>, M. Nakamura, Y. Kuroki, T. Mitani, Y. Miyata, T. Iizuka, S. Hoteya, T. Otsuka, S. Sato, Y. Igarashi**

**Reporter: Suchanek S, Central military hospital, Prague, Czech Republic**

Endoscopic submucosal dissection (ESD) for colorectal neoplasms using the new therapeutically tool (Dual knife) have been retrospectively studied. In consecutive 131 lesions of colorectal neoplasm, ESD was performed, using Dual knife (group A) or conventional knives such as Flex knife, Flush knife, Hook knife (group B) and their clinical outcomes were compared. The mean tumor size, the en bloc resection rate and complete resection rate, the number of knives to perform ESD and the complication rate such as bleeding, perforation, and required emergency operation were not significantly different between both groups. The mean procedure time of group A ( $48.9 \pm 42.5$ min) was significantly shorter than group B ( $72.2 \pm 64.4$ ), ( $p < 0.01$ ). In conclusion, operators who are familiar with using short shaped conventional needle knives were able to perform smoothly Dual knife ESD.

### **6. Abstract: OP433**

**Date: Wednesday, November 25, 2009**

**Session: Therapeutic endoscopy/Interventional radiology III**

#### **DO ELDERLY PATIENTS BENEFIT FROM ENDOSCOPIC SUBMUCOSAL DISSECTION OF COLORECTAL TUMORS?**

**Authors: T. Mitani, Y. Kuroki, N. Yahagi**

**Reporter: Suchanek S, Central military hospital, Prague, Czech Republic**

Endoscopic submucosal dissection (ESD) for colorectal lesions has not yet been established as a standard therapeutic method because of demanding a high level of technical skill. The potential benefits and risks of colorectal ESD in elderly compared to younger patients were assessed. In single center, 368 colorectal ESDs were retrospectively analyzed, divided in two groups due to age: younger than 70 years (A) and 70 years of age or older (B). More patients in group B had significantly severe comorbid diseases, post operative state in abdomen and anticoagulant drugs than in group A. Postoperative hospitalization was shorter in group A. Tumor size, operation time, rate of complete en bloc resection, recurrence and perforation rate were similar but postoperative hemorrhage rate in group A were significantly higher than in group B (4.2% vs. 0.6%:  $p < 0.05$ ). In group B, there were no severe complications with surgical rescue or blood transfusion. The potential benefits and risks of colorectal ESD in elderly patients are almost similar to that noted in younger patients. Elderly patients benefit from ESD of colorectal tumors if preoperative assessment of comorbid conditions and perioperative care were ensured.

**7. Abstract: OP470**

**Date: Wednesday, November 25, 2009**

**Session: Endoscopy and imaging I**

**A COMPARISON OF TRANSANAL EXCISION AND ENDOSCOPIC RESECTION FOR EARLY RECTAL CANCER**

**Authors: S. Lee, S. Jeon, M. Jung, S. Kim, Y. Choi**

**Reporter: Suchanek S, Central military hospital, Prague, Czech Republic**

This study compared the outcomes of endoscopic resection with transanal excision in patients with early rectal cancer. The complications, length of hospital-stay, disease recurrence and follow up outcomes were assessed in 32 patients with early rectal cancer who were treated by transanal excision (16 patients) or endoscopic resection (16 patients). There were seen no significant differences in the baseline characteristics between the two groups (endoscopic resection x transanal excision): the rate of complete resection (93.8% x 87.5%), the mean length of hospital-stay ( $2.7 \pm 1.1$  days x  $8.9 \pm 2.7$  days). During the follow up period (median 15.0 months), there was no case of recurrent disease in either group. Of major concern is the length of hospital-stay after transanal excision.

**8. Abstract: P1666**

**Date: Wednesday, November 25, 2009**

**Session: Endoscopy and imaging I**

**COLONIC STENT USAGE IN MODERN DAY MANAGEMENT FOR COLONIC OBSTRUCTION**

**Authors: M. Aljabir<sup>1</sup>, C. Thorne, K. Jaggs, S. Uppal, H. Defoe<sup>1</sup>, C. Kelly, N. Joshi, N. van Someren, K. Besherdas**

**Reporter: Suchanek S, Central military hospital, Prague, Czech Republic**

The success of colonic self expandable metal stents (SEMS) with subsequent bridge to surgery or as an effective palliation for patients with bowel obstruction attributable to incurable malignancy was retrospectively assessed. 104 colonic stents (Boston Ultra-flex and metal TTS stents, length 5.7-10 cm, diameter 22-30 mm) were performed under fluoroscopic and direct endoscopic visualization, 103 cases for colonic cancer, 1 for benign stricture. Successful deployment was achieved in 94% patients. Perforations requiring emergency

surgery occurred in 2 patients. Surgery ranged from anterior resection, subtotal colectomy, defunctioning colostomy to left hemicolectomy. Stent migration was documented in 13% of patients (5% late migrations). In 2 stents wire was trapped. 57% of patients subsequently underwent palliative chemotherapy, 15% went to successful resection. 25% of patients were not suitable for chemotherapy or surgery. There were no SEMS related deaths. These results show that colorectal stenting can be considered a safe and effective procedure with a low mortality and morbidity. The retrospective setting does not allow to assess selective bias.

**9. Abstract: P2042**

**Date: Wednesday, November 25, 2009**

**Session: Endoscopy and imaging I**

**BLEEDING PROPHYLAXIS AFTER CONVENTIONAL POLYPECTOMY:  
COMPARISON BETWEEN POLIDOCANOL AND EPINEPHRINE-SALINE  
SUBMUCOSAL INJECTION FOR LARGE COLON POLYPS**

**Authors: N. Muscatiello, M. Di Maso, C. Panella<sup>1</sup>, E. Ierardi<sup>1</sup>, S. Prencipe<sup>1</sup>, M.C. Nacchiero<sup>1</sup>**

**Reporter: Suchanek S, Central military hospital, Prague, Czech Republic**

The clinical outcomes of prophylactic submucosal polidocanol injection and epinephrine-saline injection for large colon polyps by conventional colonoscopic polypectomy with diathermic snare were evaluated. In 103 consecutive patients a total of 118 colorectal polyps with a diameter great of 1 cm and inferior or equal to 2.5 cm were found. The polypectomy was performed, with submucosal epinephrine or polidocanol injection. There was no significant difference between the two groups in clinical features, and size, distribution, shape and pathological diagnosis of the polyps. Bleeding complications occurred in 6% of the patients, including 9% in the epinephrine group, and 2% in the polidocanol group. There was statistical significance differences in the overall PPB (post polypectomy bleeding) between the two groups. In conclusion, prophylactic submucosal injection of polidocanol may be an efficacious and safe technique and does appear to provide an additional advantage for the prevention of PPB.

**10. Abstract: P2063**

**Session: Endoscopy and imaging III**

**Date: Wednesday Nov 25th, 2009**

**CLOSURE OF TRANS-COLONIC ACCESS AND FULL-THICKNESS COLONIC  
RESECTION USING A NOVEL FLEXIBLE STAPLING DEVICE**

**Authors: M. H. Sodergren, J. Clark, J. Beardsley, T. Bryant, K. Horton, A. Darzi, J. Teare**

**Reporter: Suchanek S, IKEM, Prague, Czech Republic**

Reliability of closure of full-thickness colonic resections and colotomy access sites for Natural Orifice Transluminal Endoscopic Surgery (NOTES) will prove crucial in the uptake of both these techniques. The aim of this study was to evaluate a novel prototype flexible endoscopic stapler device (Covidien, North Haven, CT) for use in the mentioned applications. A standardised colotomy was created in ex-vivo porcine colons and closed followed by leak pressure testing in 8 separate study arms: 1) endostapling device with 3.5mm cartridge, 2) endostapling device with 2.5mm cartridge, 3) hand-sewn interrupted sutures, 4) endostapling with the cutting mechanism disabled, 5) using the commercial EGIA stapling device, 6) using

the endostapler from the outside of the colon, 7) native tissue as control, and 8) no closure as control. The flexible endoscopic stapler device was easy to deploy (mean time 4 min 40 sec) under endoscopic vision in an ex-vivo setting. The native tissue had significantly higher leak pressures than the rest ( $p=0.005$ ) however there was no statistically significant difference in leak pressures between the study arms. The results suggest that the flexible endoscopic stapler is a relatively simple and robust method of colotomy closure under endoscopic guidance in ex-vivo tissue and that the leak pressures achieved are higher than those using interrupted sutures.

## **VII. Pancreato-biliary diagnosis**

### **1. Abstract: P0631**

**Session: Endoscopy and imaging I**

**Date: Monday Nov 23rd, 2009**

#### **ENDOSCOPIC ULTRASONOGRAPHY-GUIDED FINE NEEDLE ASPIRATION (EUS-FNA) VS EUS-GUIDED CYTOBRUSHING TO ASSESS CELLULAR DIAGNOSIS IN CYSTIC PANCREATIC LESIONS. DEFINITIVE RESULTS OF A PROSPECTIVE AND COMPARATIVE STUDY**

**Authors: O. Sendino, G. Fernandez-Esparrach, M. Sole, L. Colomo, A. Pardo1, C. Guarner, M. Pellise, J. Llach, A. Cardenas, J. Bordas, A. Gines**

**Reporter: Hucl T, IKEM, Prague, Czech Republic**

It has been suggested that EUS-cytobrushing could improve the results of EUS-FNA in pancreatic cystic lesions. The authors aimed at comparing EUS-FNA and EUS-cytobrushing in obtaining cellularity from pancreatic cystic lesions and to evaluate the complications associated to them. Thirty patients were included but 8 patients failed for technical reasons. EUS-FNA obtained epithelial cellularity in 6 patients (27%) as compared with 16 (73%) with brushing ( $p=0.035$ ). A mucinous neoplasm was diagnosed in 5 patients (23%) with FNA and in 11 (50%) with brushing ( $p=0.016$ ). Two major complications were registered, one lethal. In conclusion, EUS-cytobrushing was more effective than EUS-FNA in obtaining cellularity for the diagnosis of cystic pancreatic lesions. However, the incidence of complications related to cytobrushing has to be assessed in larger series of patients.

### **2. Abstract: P0633**

**Session: Endoscopy and imaging I**

**Date: Monday Nov 23rd, 2009**

#### **FREQUENCY OF INCIDENTAL FINDINGS IN PATIENTS ON ENDOSCOPIC ULTRASONOGRAPHY**

**Authors: R. Sotoudehmanesh, P. Arab, M. Khatibinan, J. Mikaeli, R. Ansari, S. Merat**

**Reporter: Hucl T, IKEM, Prague, Czech Republic**

The issue of incidental findings in medicine gains attention due to rapid progress in powerful diagnostic technologies and an aging population. The authors performed a prospective analysis of the frequency and clinical importance of incidental findings on endoscopic ultrasonography (EUS) with a radial EUS instrument in 552 patients. Forty four (8%) of patients (mean age  $61 \pm 16$ ; 23 males, 21 females) had a total of 48 incidental findings (IF's). Of these, 24 abnormalities in 22 patients (4%) were of high clinical significance. The frequency of incidental findings were higher in older patients ( $P=0.001$ ). The most frequent

IF's were gallstones (n=22). Significant IF's include pancreatic mass (n=6), subepithelial lesions (n=6), pancreatic cyst (n=3), gallbladder polyp (n=3), visceral artery aneurysm (n=2), mediastinal lymphadenopathy (n=2), ascites (n=2) and liver mass (n=1). In 33 (75%) of patients with IF's, CT scan and/or transabdominal ultrasonography had been performed before EUS evaluation which had not been able to detect a total of 37 IF's. It was concluded that IF's on EUS were not uncommon in clinical practice and might be a clue to significant pathology.

### **3. Abstract: P0665**

**Session: Pancreas I**

**Date: Monday Nov 23rd, 2009**

#### **PREDICTIVE FACTORS OF POSITIVE DIAGNOSIS OF BILIOPANCREATIC ULTRASOUND ENDOSCOPY IN ACUTE PRESUMED IDIOPATHIC PANCREATITIS**

**Authors: H. Montialoux, S. Leclaire, S. Grigioni, M. Antonietti, I. Iwanicki Caron, P. Ducrotté, E. Lerebours**

**Reporter: Hucl T, IKEM, Prague, Czech Republic**

The aim of the current study was to point out clinical, biological and/or radiological factors associated with diagnostic efficiency of biliopancreatic endoscopy (BPUS) in patients with presumed idiopathic acute pancreatitis by a retrospective analysis of data of 145 consecutive patients, hospitalised for a presumed idiopathic acute pancreatitis. BPUS found an etiology for acute pancreatitis in 50 patients (35% of included patients). For 30 patients (21%), the pancreatitis was from biliary origin, 6 (4.1%) had signs of parenchymatous pancreatic tumor, 6 (4.1%) of an intraductal papillary mucinous tumour of the pancreas, 3 (2.1%) of a duodenal diverticulum, 2 (1.4%) of ampulloma. In univariate and multivariate analyses, abnormal hepatic tests at the time of admission for acute pancreatitis and absence of previous cholecystectomy were significantly associated to a better diagnostic efficiency of BPUS. The authors concluded that BPUS showed a significantly better diagnostic efficiency if hepatic tests were abnormal or if there was no previous cholecystectomy.

### **4. Abstract: P0692**

**Session: Pancreas I**

**Date: Monday Nov 23rd, 2009**

#### **EUS-GUIDED FINE NEEDLE TATTOOING (EUS-FNT) FOR PREOPERATIVE LOCALIZATION OF SMALL PANCREATIC NEUROENDOCRINE TUMORS: A SINGLE CENTER EXPERIENCE**

**Authors: T. Seerden, S. Alfieri, D. Galasso, M. Rafaelli, F. Rosa, A. Fusco, R. Bellantone, G. Doglietto, L. De Marinis, G. Costamagna, A. Larghi**

**Reporter: Hucl T, IKEM, Prague, Czech Republic**

To facilitate intraoperative detection, the authors performed preoperative endoscopic ultrasound guided fine needle tattooing (EUS-FNT) of cytologically proven pancreatic neuroendocrine tumors (NETs) and evaluated the safety and efficacy of this new technique. Six consecutive patients underwent EUS-FNT of an insulinoma (4) and of a non-functional neuroendocrine tumor (2). Tattooing was performed by injection of a sterile, biocompatible, non-pyrogenic suspension containing highly purified carbon particles directly into the lesion using a 22 gauge needle. The procedure was well tolerated in all patients and no

complications were encountered. The tattooed lesions were easily recognized in all patients 1 to 24 days after parking and there was no evidence of inflammation, bleeding, or scarring in the surrounding tissue. Pathological examination of the resection specimen showed that tattooing did not troubled the anatomical evaluation of the resected pancreas and the margins of the specimen could be easily evaluated for tumor infiltration. These results suggest that EUS-guided FNT is a safe and useful method to mark preoperatively small pancreatic NET.

#### **5. Abstract: P1336**

**Session: Endoscopy and imaging II**

**Date: Tuesday Nov 24th, 2009**

#### **COMBINING ANALYSIS OF PER ERCP BILE ASPIRATION AND ENDOBILIARY BRUSHING IMPROVE THE DIAGNOSTIC YIELD OF CYTOLOGY IN MALIGNANT STRICTURES OF THE BILIARY TRACT. MONO-CENTRIC PROSPECTIVE STUDY.**

**Authors: P. Bichard, J. Auroux, M. Fior Gozlan, F. Chelbabi, E. Germain, A. Tatu, V. Leroy, J. Zarski**

**Reporter: Hucl T, IKEM, Prague, Czech Republic**

Improving diagnostic yield of biliary brushings by bile exfoliate cytology has been suggested but is rarely performed in clinical practice. The aim of this prospective study was to assess the diagnostic performance of bile aspiration associated with biliary brushing during ERCP. One hundred and three consecutive patients submitted to ERCP for the treatment of a symptomatic biliary stricture suspected of malignancy, were included. 3 to 10 ml of bile were aspirated in a brush catheter and collected in a dry sterile tube before and after brushing. The biliary strictures were related to 48 pancreatic cancers, 19 cholangiocarcinomas and 10 other malignancies including 4 metastatic tumors. Twenty-five were benign strictures. The higher diagnostic sensitivities were obtained for cholangiocarcinomas (89.5%) and pancreatic cancer (87.5%). For the diagnosis of a malignant stricture, the performance of combination of cytological analysis of bile and brushing was significantly higher than sensitivity of isolated brushing (Se = 84.4%, Sp = 100%, PPV = 100%, NPV = 63.6%). Thus, nalysis of bile before and after brushing in combination with brushing increase significantly the sensitivity of cytological diagnosis of malignant biliary strictures.

#### **6. Abstract: P1351**

**Session: Endoscopy and imaging II**

**Date: Tuesday Nov 24th, 2009**

#### **ENDOSCOPIC ULTRASOUND-GUIDED TRUCUT BIOPSY (EUS-TCB) IS SAFE AND ACCURATE FOR THE DIAGNOSIS FOR MEDIASTINAL MASSES OR LYMPHADENOPATHY**

**Authors: M. W. James, T. Thomas, M. Sovani, P. Kaye, K. Ragnath, G. P. Aithal**

**Reporter: Hucl T, IKEM, Prague, Czech Republic**

The authors evaluated the use of EUS-TCB in 70 consecutive patients with mediastinal pathology. Indication for investigation was either mediastinal lymphadenopathy (n=46; mean  $\pm$  SD maximal node diameter 2.15  $\pm$  0.88cm) or mass (n=24; mean  $\pm$  SD maximal mass diameter 3.2  $\pm$  0.89cm) identified at either CT, MRI or PET. TCB was used alone in 59, FNA alone in 4 and combined TCB/FNA in 7 cases. Final diagnosis was: lung cancer n=32 (small cell cancer n=7, non-small cell cancer n=25; adenocarinoma n=15, squamous cell

cancer n=5, large cell cancer n=5), sarcoidosis or chronic granulomatous tissue n=13, benign tissue n=9, tuberculosis n=4, lymphoma n=3, vasculitis n=3, metastatic adenocarcinoma n=3. Inadequate tissue for diagnosis was reported in 3 (4.3%) patients. Overall, EUS-TCB and FNA sampling of mediastinal lesions was feasible, safe and had a high diagnostic yield in over 95% of cases.

#### **7. Abstract: P2097**

**Session: Endoscopy and imaging III**

**Date: Wednesday Nov 25th, 2009**

#### **HOW EFFECTIVE AND SAFE IS EUS-GUIDED FINE NEEDLE ASPIRATION (EUS-FNA) IN THE EVALUATION OF CYSTIC LESIONS OF THE PANCREAS?**

**Authors: K. De Jong, M. J. Bruno, M. Visser, Y. C. Nio, D. J. Gouma, J. J. Hermans, C. H. J. Van Eijck, J. W. Poley, P. Fockens**

**Reporter: Hucl T, IKEM, Prague, Czech Republic**

Consecutive patients with pancreatic cysts (PCs) of unknown etiology were enrolled in the PC protocol, which included abdominal MRI and EUS-FNA. EUS was performed by two experienced endosonographers with a linear array echoendoscope (GF-UC(T)140(P), Olympus). PC fluid was analyzed primarily for cytopathology, secondly for tumormarkers (CEA, CA 19.9, amylase). Management was determined by the combination of clinical presentation, morphologic features on MRI and EUS, and PC fluid analysis. The median amount of fluid was 3.6 ml (0.5-250). FNA was feasible in 90% of all cases and not possible in 10%. Complications occurred in 1.2%. A cytopathologic diagnosis was possible in 35% and tumormarkers could be determined in 47%. Failure of determination of tumormarkers was mainly caused by a high viscosity of the fluid or small size of the cysts. Eventually 29 patients (30%) were operated and 67 (70 %) entered a surveillance program. In the surgical group FNA-cytology showed a PPV of 59%. Surgery showed the following histological diagnoses: (2 adenocarcinoma, 1 acinar cell carcinoma, 4 malignant IPMN's, 9 benign IPMN's, 5 mucinous cystadenomas, 1 serous cystadenoma, 5 pseudocysts, 1 lymphatic malformation, 1 neuro endocrine lesion).

#### **8. Abstract: P2101**

**Session: Endoscopy and imaging III**

**Date: Wednesday Nov 25th, 2009**

#### **ENDOSCOPIC ULTRASONOGRAPHY (EUS) STRAIN RATIO (SR-EUS) VS. CONTRAST-ENHANCED EUS (CE-EUS) FOR THE DIAGNOSIS OF FOCAL PANCREATIC SOLID LESIONS**

**Authors: M. Giovannini, F. Figuereida, G. Monges, E. Bories, C. Pesenti, F. Caillol**

**Reporter: Hucl T, IKEM, Prague, Czech Republic**

New image processors that include the ability to assess and measure tissue stiffness (elastography) and the use of contrast agent to enhance the color Doppler pattern have been introduced. The aim of the current study was to prospectively compare the ability of the SR-EUS and CE-EUS to differentiate between benign and malignant focal pancreatic lesions. Thirty-eight patients with a focal pancreatic lesion were included. The final diagnosis is based on the histological assessment of the EUS-FNA samples and/or surgical specimens when available. For negative cytological specimens, the diagnosis was confirmed by a surgery or a follow-up of at least six months. The authors found 12 (32%) benign and 26 (68%)

malignant pancreatic lesions. Logistic regression analysis determined that hypovascular lesions at CE-EUS (odds ratio 6.2 [95% CI, 1,2-32,1], p=0,03) was the only variable independently predictive of malignant pancreatic lesion. Thus, in this small group of patients, CE-EUS was superior to SR-EUS for the differentiation between benign and malignant focal pancreatic lesions.

**9. Abstract: P2102**

**Session: Endoscopy and imaging III**

**Date: Wednesday Nov 25th, 2009**

**EUS-FNA PREDICTS 5-YEAR SURVIVAL IN PANCREATIC ENDOCRINE TUMORS**

**Authors: M. Giovannini, F. Figuereda, G. Monges, E. Bories, F. Caillol, C. Pesenti**

**Reporter: Hucl T, IKEM, Prague, Czech Republic**

The aim of this study was to determine the performance of EUS-FNA for diagnosing PETs and for classifying their underlying malignant potential based on the WHO classification.

A detailed review of the medical records from January 1999 to August 2008 was performed to identify patients who had been diagnosed with PETs and submitted to EUS-FNA. The diagnosis of PET was established by evaluation of micro-biopsies or monolayer cytology obtained by EUS-FNA and/or histopathologic evaluation obtained by surgical resection of a pancreatic mass and/or a metastasis site. Overall, 90% (77/86) of patients had the diagnosis of PETs obtained by EUS-FNA. The sensitivity did not vary with size, type, location, and presence of hormonal secretion. Of 86 patients, 30 (35%) were submitted to surgical resection. The kappa correlation index between the WHO classification obtained by EUS-FNA and by surgery was 0.38 (p=0.003). The 5-year survival rates were 68% for well-differentiated endocrine carcinomas, and 30% for poorly-differentiated endocrine carcinomas (p=0,008, log rank test). In conclusion, the study demonstrated high accuracy of EUS-FNA in diagnosing and determining the malignant behavior of PETs. EUS-FNA findings predict may 5-year survival in patients with PETs.

**10. Abstract: P1407**

**Session: Pancreas II**

**Date: Tuesday Nov 24th, 2009**

**COMPARATIVE YIELD OF ENDOSONOGRAPHY AND MAGNETIC RESONANCE IMAGING IN INDIVIDUALS AT HIGH-RISK FOR PANCREATIC CANCER**

**Authors: F. Harinck, I. Kluijdt, J. W. Poley, A. Cats, C. M. Aalfs, D. J. Gouma, Y. Nio, P. Fockens, M. J. Bruno**

**Reporter: Hucl T, IKEM, Prague, Czech Republic**

The authors present preliminary results of a comparative study between baseline EUS and MRI investigations in high-risk individuals of developing pancreatic cancer entering a yearly surveillance program. Fifty-four individuals underwent both baseline EUS and MRI. In 14 individuals (25%) focal lesions were detected by EUS and/or MRI; 10 with cystic lesions, two with a mass lesion and two with focal areas of hypoechogenicity. Cystic lesions were detected by EUS and/or MRI in 10 individuals. The total of cysts detected by EUS was 11 (median size 5 mm) and by MRI 18 (median size 4 mm). Communication between cysts and the pancreatic duct (PD) was more often reported by EUS (4 vs. 1). Both mass lesions were only

detected by EUS, of which one latter proved to be a malignancy and in one no signs of malignancy were found. Both focal areas of hypoechogenicity were detected by EUS only. In one individual this 'lesion' had spontaneously disappeared at follow-up investigations after 3 months. In conclusion, EUS and MRI seem complementary techniques to detect (pre)malignant lesions in individuals at high-risk for developing PC.

#### **11. Abstract: P1338**

**Session: Endoscopy and imaging II**

**Date: Tuesday Nov 24th, 2009**

**FACTORS PROMOTING BILE DUCT CANNULATION IN ERCP. DATA FROM 11069 ERCP EXAMINATIONS IN THE SWEDISH REGISTER FOR GALLSTONE SURGERY AND ERCP (GALLRIKS) 2007-2008.**

**Authors: L. Enochsson, F. Swahn, U. Arnelo, M. Löhr, G. Persson**

**Reporter: Hucl T, IKEM, Prague, Czech Republic**

The aim of this study was to identify factors that promote the bile duct cannulation success rate in ERCP. The overall bile duct cannulation success rate was 91.8%. The success rate in patients without a previous sphincterotomy was affected by the type of sedation used. Failure rate using midazolame alone was the highest (11.5%) followed by propofol (8.6%), propofol MAC-sedation (7.4%) and intubation (7.0%). The use of a guide wire decreased the failure rate significantly, from 22.5% to 7.5%. Furthermore, endoscopists needed an experience from as many as 500 ERCP to achieve a significantly higher success rate. Thus, several factors such as long experience, the use of a guide wire and an optimal sedation were identified as factors promoting high cannulation rates in this study.

#### **VIII. Pancreato-biliary treatment**

##### **1.Abstract: P0613**

**Session: Endoscopy and imaging I**

**Date: Monday Nov 23rd, 2009**

**EFFECTIVENESS OF PROPHYLAXIS OF POST-ERCP PANCREATITIS FOR RISK GROUP BY ENDOSCOPIC PANCREATIC SPONTANEOUS DISLODGE MENT STENT -RANDOMIZED CONTROLLED MULTICENTER TRIAL**

**Authors: A. Sofuni, H. Maguchi, T. Itoi, on behalf of the Japan Pancreatic Stent Study Group**

**Reporter: Kamenar D, IKEM, Prague, Czech Republic**

The authors reported results of a randomized controlled multicenter study to evaluate whether placement of a pancreatic spontaneous dislodgement stent (PSDS) will prevent pancreatitis after ERCP-related procedures for patients with any risk factors of post-ERCP pancreatitis, and to identify risk factors of post-ERCP pancreatitis. A 5Fr 3 cm straight unflanged stent was used. A total of 426 patients were randomized into a stent placement group (S group) or non-stent placement group (nS group). Success rate of the stent placement was 89%, and spontaneous stent dislodgment was 95.2%. The mean duration to the dislodgment was 1.8 days. The frequency and severity of post-ERCP pancreatitis in the S and nS groups was 9.1% (19/210 patients; mild, moderate and severe in 15, 4 and 0 patients) and

14.6% (mild, moderate and severe in 22, 8 and 1 patients), respectively, with the difference not being significant. The authors also established factors associated with an increased risk of pancreatitis in their group of patients. According to the reporter's view, transitory pancreatic stent should be inserted in all high risky patients to inhibit post ERCP pancreatitis.

## **2. Abstract: P0615**

**Session: Endoscopy and imaging I**

**Date: Monday Nov 23rd, 2009**

### **A SEQUENTIAL CANNULATION PROTOCOL INCLUDING EARLY PANCREATIC STENT PLACEMENT AND NEEDLE KNIFE SPHINCTEROTOMY: INTERIM ANALYSIS OF A RANDOMISED TRIAL**

**Authors: M. P. Swan, M. J. Bourke, S. Alexander, A. Moss, A. A. Bailey, S. J. Williams**

**Reporter: Kamenar D, IKEM, Prague, Czech Republic**

The authors aimed at evaluating the use of early needle knife sphincterotomy (NKS) after a pancreatic stent placement in a randomized study. A strict wire guided cannulation protocol was followed in all patients with allowance of a maximum of 5 minutes, 4 attempts or 2 pancreatic duct (PD) cannulations. When failed, the patient was randomized to either early NKS or continued standard cannulation (SC) for a further 10 minutes at which time cross over to NKS was allowed. PD stent insertion was performed if PD instrumentation had occurred and NKS was required. 429 patients were enrolled in the study. 268 had early biliary cannulation success, 51 were randomized. Cannulation success was 98.4% (314/319) in the entire group - 24/26 (92%) in NKS arm and 12/25 (48%) in SC arm ( $p < 0.005$ ); 13 of the SC group required salvage NKS of which 10 were successful, final success in the SC arm was 22/25 (88%). No difference in PEP was observed between the randomized groups (19% NKS, 20% SC). Risk of PEP though increased with greater time to cannulation and increasing cannulation attempts. Important study showing again safety of NKS in experienced hands.

## **3. Abstract: P0618**

**Session: Endoscopy and imaging I**

**Date: Monday Nov 23rd, 2009**

### **HIGHER RATE OF BLEEDING AFTER SPHINCTEROTOMY IN LIVER TRANSPLANTED PATIENTS**

**Authors: A. Tenca, D. Pugliese, D. Consonni, P. Cantu', G. Rossi, F. Donato, D. Conte, R. Penagini**

**Reporter: Kamenar D, IKEM, Prague, Czech Republic**

The aim of the study was to evaluate immediate (IB) and delayed (DB) post-ES bleeding and associated risk factors in liver transplanted (LT) patients compared to a group of chronic liver disease (CLD) and a large series of non-CLD patients by a retrospective review. 35 LT (29 M; 54 yr), 36 CLD (25 M; 63 yr) and 195 non-CLD patients (90 M; 66 yr) were studied. It was found that after sphincterotomy in LT patients, need of haemostasis for IB and especially the rate of DB were increased. Thrombocytopenia and ASA use were associated with the former, but not with the latter. The data alert for judicious use of ES in LT patients and careful monitoring after the procedure.

**4. Abstract: P0620****Session: Endoscopy and imaging I****Date: Monday Nov 23rd, 2009****COVERED AND UNCOVERED SELF EXPANDABLE METALLIC STENTS ARE EQUALLY EFFICACIOUS IN BILE DUCT STRICTURES****Authors: K. Ung, P. Stotzer, L. Rydberg, A. Kylebäck, Å. Nilsson, M. Gustavsson, E. Johnsson****Reporter: Kamenar D, IKEM, Prague, Czech Republic**

The aims were to compare covered and uncovered stents in terms of patency, efficacy, manageability and complication rate. Patients with jaundice due to non-resectable malignancy were randomized to covered or uncovered SEMS before ERCP. Hanaro stents were used. There was no difference in stent patency; (mean:169 days (CI 95% 124, 214) vs. mean:156 days (CI95% 114, 198)); patient survival: (mean:172 days (CI95% 127, 216) vs 189 days (CI95% 134, 244)); procedure time: (mean: 32 min (CI95% 25, 38) vs. 33 min (CI95% 27, 38)) between covered (n=35) and uncovered (n=36) stents. Eighty seven percent died with functioning covered and 83% with uncovered stent. Two early complications occurred (sepsis; pancreatitis), both in covered stents. Thus, this prospective study shows that both covered and uncovered SEMS are efficacious with long patency, low complication rate and easy to place.

**5. Abstract: P0623****Session: Endoscopy and imaging I****Date: Monday Nov 23rd, 2009****LARGE BALLOON ENDOSCOPIC PAPILLARY DILATATION (OVER 15 MM) NEVER CAUSE SEVERE PANCREATITIS IN PATIENTS WITH APPROPRIATELY DILATED COMMON BILE DUCT FOR CLEARING BILE DUCT STONE.****Authors: Y. Youn, H. Lim, S. Jang, J. You, S. Lee, D. Lee****Reporter: Kamenar D, IKEM, Prague, Czech Republic**

The purpose was to evaluate the efficacy and safety of endoscopic papillary large balloon dilatation (EPLBD) with relatively large balloon (15-20 mm) after EST, and to evaluate the clinical factors related to post-EPLBD pancreatitis in a retrospective analysis of 101 patients with common bile duct (CBD) stone who underwent EST and EPLBD using balloon larger than 15 mm. All patients have dilated CBD over 11 mm, and the mean diameter of the CBD was  $22.62 \pm 5.7$  mm. The mean size of CBD stone was  $21.8 \pm 8.5$  mm and the mechanical lithotripsy was required in 7 patients (6.9%). The rate of complete stone removal in the first session was 92.1%. There were 5 cases (5.4%) of post-procedural pancreatitis (graded as minimal in 3, mild in 1 and moderate in 1), two cases (2.0%) of bleeding and one case (1%) of perforation, recovered with conservative management. Lesser dilatation of CBD, longer cannulation times, and longer stone removal times were associated with post-procedural pancreatitis. Thus, EPLBD with a large-diameter balloon (15-20 mm) in conjunction with EST for bile duct stone removal was an effective and safe procedure. The post-procedural pancreatitis developed in only 5.4% and most of them were graded as minimal. However, to reduce post-EPLBD pancreatitis, the selection of patient with sufficient CBD dilatation may be important. Longer procedure time rather than larger balloon size itself was found to be another risk factor for post-EPLBD pancreatitis.

**6. Abstract: P0624****Session: Endoscopy and imaging I****Date: Monday Nov 23rd, 2009****SINGLE BALLOON ENTEROSCOPY (SBE) VERSUS DOUBLE BALLOON (DBE) ERCP IN PATIENTS WITH ROUX-EN-Y ANASTOMOSIS.****Authors: H. Neumann, L. C. Fry, S. Rickes, P. Malfertheiner, K. Mönkemüller****Reporter: Kamenar D, IKEM, Prague, Czech Republic**

The aim of this study was to assesses the technical success of performing ERCP with the DBE versus SBE in patients with Roux-en-Y anastomosis with or without hepaticojejunostomy in a prospective study. A total of 24 patients underwent 33 ERCPs using the DBE (17 ERCPs in 11 pts; 1 F, 10 M, mean age 59.7 years, range 25 to 77) or SBE (16 ERCPs in 13 patients (3 F, 10 M, mean age 64.4 years, range 36 to 77). The mean duration of the procedure did not differ among both groups (DBE-ERCP, 60 min (range 35-240), SBE-ERCP, 52 min, (range 25-90) (p=0.1). The overall diagnostic success for DBE-ERCP was 82%, as compared to 77% for SBE-ERCP (p=0.2). The overall therapeutic success was 58% for DBE-ERCP and 55% for SBE-ERCP (p=0.2). In conclusion, ERCP using SBE was as efficient as using DBE in patients with Roux-en-Y anastomosis, permitting diagnostic and therapeutic interventions in an equal percentage of cases.

**7. Abstract: P1293****Session: Endoscopy and imaging II****Date: Tuesday Nov 24th, 2009****PANCREATIC FLUID COLLECTIONS: CLINICAL OUTCOME OF ENDOSCOPIC DRAINAGE AS AN ALTERNATIVE TO PERCUTANEOUS AND SURGICAL DRAINAGES****Authors: S. Lopes, A. Rosa, F. Portela, E. Camacho, D. Gomes, P. Amaro, M. Ferreira, J. M. Romãozinho, H. Gouveia, M. C. Leitão****Reporter: Kamenar D, IKEM, Prague, Czech Republic**

The authors aimed to evaluate the clinical outcome of medical or invasive treatment of pancreatic fluid collections (PFC). They identified 44 patients with PFC (29 male). Medical management was performed in 20 PFC, median diameter of PFC was 10±5cm (4-20), resolution of PFC occurred after 7±4 months. Drainage was performed in 24 PFC, median diameter of PFC was 14±6cm (5-30). A total of 51 procedures were performed with a median of 2 procedures per patient (range 1-7). The drainage technique was transmural (n=21), transpapillary (n=3), percutaneous (n=17) and surgical (n=11). No significant differences in success rate were observed, when type of PFC or drainage technique were considered, although, organized pancreatic necrosis and endoscopic drainage were associated with more retreatment sessions (p=0.03 and p=0.01, respectively). Recurrence rates were as follows: endoscopic (13%), percutaneous (35%), surgical (27%). Complications occurred in 9.8%, none in the endoscopic group. In conclusion, about half of the PFC had spontaneous resolution without drainage. Endoscopic drainage provided an effective approach to the management of PFC (clinical success around 70%), avoiding the use of more aggressive therapeutic modalities.

**8. Abstract: P1339****Session: Endoscopy and imaging II**

**Date: Tuesday Nov 24th, 2009**

**ENDOSCOPIC SNARE PAPILLECTOMY: OUTCOMES OF A LARGE CONSECUTIVE SERIES OF PATIENTS.**

**Authors: P. Familiari, M. Martino, M. Mutignani, M. Pandolfi, A. Tringali, V. Perri, F. Di Matteo, G. Costamagna**

**Reporter: Kamenar D, IKEM, Prague, Czech Republic**

The aim of the study was to evaluate the outcomes of ESP in a large consecutive series of patients. The study included 58 patients (25 men, mean age 58 years, 10 affected by FAP) with a neoplasm of the duodenal papilla without any endoscopic and histological feature of malignancy, who underwent ESP. ESP was performed en-bloc in 47 patients (81%). After resection, 45 patients (77.6%) were diagnosed with an adenoma (23 with HGD/in-situ carcinoma), 11(18.9%) with an adenocarcinoma (AdCa), 2(3.4%) with a neuroendocrine tumor (NET). Five patients with AdCa underwent pancreatico-duodenectomy; 6 patients were not operated because of comorbidities or because refused surgery. Two patients with a NET did not experience recurrence during a 33.5 months follow up. All the patients with an adenoma (n=45) were successfully treated by ESP alone: during a 18.9 months follow up, 36 patients did not experience any recurrence; 9(20%) had a recurrence but were successfully treated by endoscopy. Five recurrences occurred in FAP patients. Early complication rate was 12% (including 4 severe bleedings, 2 perforations, 1 mild pancreatitis). Late complications occurred in 2 patients who experienced a stricture of the biliary and pancreatic duct. The patients were treated by endoscopy.

**9. Abstract: P1345**

**Session: Endoscopy and imaging II**

**Date: Tuesday Nov 24th, 2009**

**THE RESULTS OF THE TOKYO TRIAL OF PREVENTION OF POST-ERCP PANCREATITIS WITH RISPERIDONE (TOKYO P3R)**

**Authors: H. Isayama, T. Tsujino, Y. Nakai, Y. Ito, O. Togawa, N. Toda, T. Arizumi, H. Kogure, K. Yamamoto, S. Mizuno, Y. Yashima, H. Yagioka, T. Sasaki, S. Matsubara, K. Hirano, N. Sasahira, M. Tada, M. Omata<sup>1</sup>, K. Koike<sup>1</sup>**

**Reporter: Kamenar D, IKEM, Prague, Czech Republic**

Ulinastatin has been shown to prevent post ERCP pancreatitis, risperidone has been shown to prevent experimental pancreatitis. In this multicenter, randomized, controlled trial, patients undergoing a therapeutic-ERCP were randomly assigned to risperidone (1 mg) and ulinastatin (150,000 U) or ulinastatin alone. Risperidone tablet was taken orally per 30-60 minutes before ERCP and ulinastatin was infused by intravenous route for 10 minutes just prior to ERCP. A total of 226 cases were analyzed.

Prophylactic risperidone revealed additional effect to ulinastatin only by showing decreased levels of amylase and lipase, but had no effect in preventing pancreatitis.

**10. Abstract: OP116**

**URGENT ENDOSCOPIC SPHINCTEROTOMY IS BENEFICIAL FOR PATIENTS WITH ACUTE BILIARY PANCREATITIS (ABP) WITHOUT COMMON BILE STONES (CBDS) - A PROSPECTIVE RANDOMIZED STUDY**

**E. Nowakowska-Dulawa, A. Novak, T. Marek, R. Kaczor, A. Dziurkowska-Marek**

**Reporter: Kamenar D, IKEM, Prague, Czech Republic**

Urgent sphincterotomy is recommended in patients with acute biliary pancreatitis and proved biliary obstruction. Aim of this study is to find out whether this approach could be applied in all patients with biliary pancreatitis. Within 5 years till 2005 1024 patients with acute biliary pancreatitis were treated with 976 meeting the criteria of early acute biliary pancreatitis. Sphincterotomy was uniformly performed in the case of symptoms or sign of obstruction, patients without stones were randomly selected to either sphincterotomy (ES, n=131), or conservative management (CM, n=126). Both systemic complications (14% vs. 26%) and mortality (0.8% vs. 4.8%) were reduced in ES group. Concluding recommendation to consider ES in all patients with biliary pancreatitis is highly debatable.

## **IX. NOTES**

### **1. Abstract: P0569**

**Session: Endoscopy and imaging I**

**Date: Monday Nov 23rd, 2009**

#### **SYSTEMATIC EVALUATION OF THE OVER-THE-SCOPE-CLIP (OTSC) FOR NOTES GASTRIC CLOSURE**

**Authors: R. P. Voermans, M. I. Van Berge Henegouwen, W. A. Bemelman, P. Fockens**

**Reporter: Wohl P, IKEM, Prague, Czech Republic**

Secure transluminal closure remains a fundamental barrier to safe translation of transgastric NOTES into humans. Recently a novel Over-The-Scope-Clip (OTSC; Ovesco Endoscopy) was introduced which aims to close gastrotomies in a simple and reproducible way. The authors compared acute ex vivo strength OTSC gastrotomy closure to surgical suture and evaluated feasibility, safety and reliability of gastrotomy closure using OTSC in acute and survival porcine experiments. Mean leak pressures was 224 mmHg (SD 61), which was non-inferior to the prior set gold standard ( $p=0.003$ ). Closure was endoscopically successful in all acute experiments and all 16 survival experiments (100%). All survival animals thrived during 10 days follow up. At necropsy there were no signs of infection or other complications. The gastrotomy was macroscopically full-thickness closed in all cases. Thus, the use of OTSC for gastrotomy closure was feasible, easy to apply and resulted in safe and reliable. Furthermore, it provides ex vivo burst pressures comparable to surgical closure.

### **2. Abstract: PO570**

**Session: Endoscopy and imaging I**

**Date: Monday Nov 23rd, 2009**

#### **NATURAL ORIFICE TRANSLUMINAL ENDOSCOPIC SURGERY (NOTES): CARDIOPULMONARY SAFETY OF TRANSESOPHAGEAL MEDIASTINOSCOPY**

**Authors: S. Von Delius, J. Sager, H. Feussner, D. Wilhelm, S. Hiemer, T. Schuster, A. Schneider, R. M. Schmid, A. Meining**

**Reporter: Wohl P, IKEM, Prague, Czech Republic**

The purpose of this experimental study was to assess cardiopulmonary changes during transesophageal mediastinoscopy in the acute porcine model. Mediastinal access was achieved via an 8-10 cm submucosal tunnel. Cardiac index (CI), global enddiastolic volume index (GEDVI; reflecting preload) and other hemodynamic parameters were recorded. In three animals, small tears in the parietal pleura resulted in pneumothoraces. The associated

cardiopulmonary deterioration was fatal in one pig. The other two pigs recuperated after decompression with a chest tube. In the remaining five animals there were only mild hemodynamic and respiratory changes during mediastinoscopy. In conclusion, NOTES mediastinoscopy carries a substantial risk for the inadvertent development of a pneumothorax. Otherwise, it leads to only mild hemodynamic and pulmonary changes.

### **3. Abstract: P1388**

**Session: Endoscopy and imaging II**

**Date: Tuesday Nov 24th, 2009**

#### **THREE-DIMENSIONAL NAVIGATION FOR NOTES TRANSGASTRIC SURGERY USING HIGH-SPATIAL-RESOLUTION MAGNETIC RESONANCE ENDOSCOPY AND MAGNETIC SCOPE DETECTION SYSTEM**

**Authors: M. Sugimoto, Y. Morita, Y. Matsuoka, H. Yoshinaka, T. Sanuki, M. Yoshida, T. Toyonaga, H. Kutsumi, K. Kuroda, T. Azuma**

**Reporter: Wohl P, IKEM, Prague, Czech Republic**

The first barrier of transgastric NOTES is a safe gastric wall management including percolation and access to the peritoneal cavity. Because of the unpredictable nature of scope location and formation, these forced situations may result in an incomplete or lengthy procedure with narrow and upside-down endoscopic viewing. To overcome these problems, novel 3-D navigation systems were developed. A high-spatial-resolution magnetic resonance endoscopy to detect the microstructures of the gastric wall and the vascular architectures and a magnetic scope detection system to depict scope position and scope movement three-dimensionally in the abdominal cavity were tested. T1 and T2 MR images clearly depicted four layers and vascular architectures in proper muscle layers of the gastric wall (50.0% at ex-vivo, 66.7% at in-vivo). These were confirmed to correspond to blood vessels by histological examinations. Using a low intensity magnetic field, this 3-D Imager enabled to display a real-time three-dimensional view of the position and orientation of the endoscope in the abdominal cavity without the risk of x-ray exposure. In conclusion, MR endoscopy may provide sufficient detail for gastric wall layer differentiation. The 3D NOTES navigation systems may improve endoscope orientation and manipulation.

### **4. Abstract: P2034**

**Session: Endoscopy and imaging III**

**Date: Wednesday Nov 25th, 2009**

#### **GASTRIC WALL NOTES ACCESS SITE CLOSURE BY DOUBLE ENDOLOOP TECHNIQUE**

**Authors: T. Hucl, M. Benes, M. Kocik, M. Krak, J. Maluskova, E. Kieslichova, M. Oliverius, J. Spicak**

**Reporter: Wohl P, IKEM, Prague, Czech Republic**

Effective and safe access site closure is critical for clinical application of natural orifice transluminal endoscopic surgery (NOTES). The current study evaluated a simple novel technique of gastric wall closure. Following peritoneoscopy and tubal ligation, gastric closure was performed using an endoscopic grasper and sequential application of two endoloops. After a follow-up period of 1-4 weeks, the the pigs were sacrificed for postmortem examination. The positioning and delivery of endoloops was achieved in all animals in a median time of 18 min (range 13-25). All animals survived well. Postmortem examination

demonstrated patent gastric closure without infection or adhesions. In conclusion, the described double endoloop technique proved to be a simple and safe means of NOTES access site closure.

**5. Abstract: P2157**

**Session: Surgery III**

**Date: Wednesday Nov 25th, 2009**

**NO INCISION (NOTES) VS SINGLE INCISION (SILS) SURGERY FOR ACCESS TO ELECTIVE SITES OF PERITONEAL CARCINOMATOSIS: BACK-TO-BACK COMPARISON IN A LIVE PORCINE MODEL**

**Authors: Y. Ladjici, X. Dray, M. Camus, P. Marteau, P. Valleur, M. Pocard**

**Reporter: Wohl P, IKEM, Prague, Czech Republic**

The authors aimed to compare the rates of access to elective sites of PC with Natural Orifice Transluminal Endoscopic Surgery (NOTES) and with Single Incision Laparoscopic Surgery (SILS). Twelve acute experiments were performed in a live porcine model. None of the 2 techniques allowed access to the whole 11 elective sites of PC. NOTES and SILS achieved a 100% rate of access to the left & right diaphragmatic domes and to the left & right paracolic gutters ( $p>0.99$ ). NOTES vs SILS access rates to other elective sites of PC were the following: root of mesentery (67% vs 0 %,  $p=0.01$ ), origin of the inferior mesenteric vein (42% vs 0%,  $p=0.04$ ), inferior vena cava (83% vs 67%,  $p=0.64$ ), hepatic pedicle (8% vs 100%,  $p<0.001$ ), splenic area (67% vs 100 %,  $p=0.09$ ), pelvic floor (83% vs 100%,  $p=0.48$ ), trigonal bladder (83% vs 100%,  $p=0.48$ ). Both transgastric NOTES and SILS provided quick and easy access to most elective sites of PC, except for reaching the mesenteric vessels (better achieved by NOTES) and the hepatic pedicle (better achieved by SILS).

**6. Abstract: P2167**

**Session: Surgery III**

**Date: Wednesday Nov 25th, 2009**

**RANDOMIZED CONTROLLED TRIAL COMPARING LAPAROSCOPIC AND NOTES GASTROJEJUNOSTOMY FOR DUODENAL OBSTRUCTION**

**Authors: M. C. Vassiliou, D. Von Renteln, D. Mckenna, P. Swain, R. I. Rothstein**

**Reporter: Wohl P, IKEM, Prague, Czech Republic**

The purpose of this pilot study was to develop a model for a NOTES gastrojejunostomy, with duodenal occlusion, and to compare it to the laparoscopic technique. Ten female swine were randomized to either laparoscopic (LG) or NOTES gastrojejunostomy (NG). The NG technique was conducted with a double channel endoscope and a new NOTES toolbox (Ethicon-Endosurgery, Cincinnati, OH). The median time in minutes for LG was 70 (65-75) compared to NG, which was 210 (197-220);  $p=0.01$ . Nine animals survived. One animal in the NG group died secondary to bowel ischemia from volvulus of the jejunal loop. Two NG animals had small amounts of peritoneal fibrin deposition and one animal had microabscesses adjacent to the duodenal staple line. All anastomoses were intact and patent. No t-tags were identified in adjacent organs. The results show that NOTES gastrojejunostomy using this technique and these novel devices is feasible and seems to result in an adequate anastomosis for relief of duodenal obstruction, though the technique needs to be refined with regards to selection of the appropriate small bowel loop and prevention of volvulus.

**7. Abstract: P2166**

**Session: Surgery III**

**Date: Wednesday Nov 25th, 2009**

**TRANSGASTRIC LAPAROSCOPIC ASSISTED ENDOSCOPIC  
CHOLECYSTECTOMY: A SAFE AND INEVITABLE BRIDGE TO NOTES**

**Authors: R. P. Voermans, W. A. Bemelman, P. Fockens, M. I. Van Berge Henegouwen**

**Reporter: Wohl P, IKEM, Prague, Czech Republic**

NOTES cholecystectomy is increasingly being performed. However, with current endoscopic technology it is challenging to obtain the essential critical view of safety (CVS). The aim of the study was to evaluate feasibility and safety of transgastric laparoscopic assisted NOTES cholecystectomy using an endoscope and 2 mm laparoscopic instruments in a survival porcine model. Laparoscopic access to the abdominal cavity was obtained by two 2 mm (left and right upper abdomen) and one 2 or 5 mm optical trocar(s) (umbilical). The gastrotomy was closed endoscopically using the Over-The-Scope-Clip (Ovesco). Hybrid cholecystectomy was successful in all 3 non-survival and 16 survival(100%, 95% CI: 81-100%) experiments. Mean procedural time was 73 minutes(SD 22). In all experiments CVS was obtained satisfactorily. At necropsy there were no signs of bile leakage or other complications. Transgastric laparoscopic assisted endoscopic cholecystectomy with mini-instruments was feasible, safe and resulted in optimal CVS.

**8. Abstract: P2160**

**Session: Surgery III**

**Date: Wednesday Nov 25th, 2009**

**TRANSGASTRIC APPROACH DOES NOT INCREASE POSTOPERATIVE  
INFECTIONS OR COMPLICATIONS IN SWINE UTERINE HORN RESECTION**

**Authors: A. Azadani, M. Bergstrom, H. Jonsson, P. Park**

**Reporter: Wohl P, IKEM, Prague, Czech Republic**

The aim of this study was to compare the postoperative course in open, laparoscopic and transgastric surgery, specially concerning infections and postop well being in a randomized porcine survival study. 18 landrace pigs were randomized. Animals received a single dose of prophylactic antibiotics, Cefuroxim, at start of the procedure. The stomachs were not washed prior to the transgastric group. Peritoneal fluid was sampled for bacterial culture at the time of peritoneal access, prior to closure and at post mortem. The gastric access site was closed using TAS T-tags (Ethicon Endosurgery). All animals survived until euthanised at 4 weeks. Despite a long operating time the transgastrically NOTES operated animals recovered just as quickly as the other animals and showed no infectious complications.

**9. Abstract: P2159**

**Session: Surgery III**

**Date: Wednesday Nov 25th, 2009**

**ADHESION FORMATION AND FIBRINOLYTIC RESPONSE IN OPEN,  
LAPAROSCOPIC AND NOTES TRANSGASTRIC SURGERY.**

**Authors: M. Bergstrom, A. Azadani, H. Jonsson, P. Park**

**Reporter: Wohl P, IKEM, Prague, Czech Republic**

The aim of this study was to compare postoperative adhesion formation and peritoneal t-PA concentrations after a standardized surgical procedure using open, laparoscopic or NOTES transgastric technique. 15 landrace pigs were randomized to open, laparoscopic or NOTES (transgastric) uterine horn resection with a survival time of 4 weeks. The gastric access site was closed using TAS T-tags (Ethicon Endosurgery). Analyses of t-PA concentrations in peritoneal tissue were performed in batches using ELISA technique. Adhesion formation was scored at post mortem. The total operating time was recorded. The authors could not show that NOTES procedures are less adhesiogenic than open or laparoscopic procedures. This can possibly be explained by a long operating time in this group and a simple and swift procedure using open or laparoscopic technique.

**10. Abstract: P0720**

**Session: Therapeutic endoscopy/interventional radiology**

**Date: Monday Nov 23rd, 2009**

**A TWO MICRON CONTINUOUS WAVE LASER SYSTEM IS SAFE AND EFFECTIVE FOR PERITONEAL ACCESS & HIGH PRECISION DISSECTION DURING NOTES PROCEDURES**

**Authors: X. Dray, G. Donatelli, D. Mukkai Krishnamurty, R. J. Wroblewski, L. Assumpcao, S. A. Giday, J. M. Buscaglia, E. J. Shin, E. Dubcenco, P. Magno, L. J. Pipitone, M. R. Marohn, S. V. Kantsevov, A. N. Kalloo**

**Reporter: Wohl P, IKEM, Prague, Czech Republic**

The aim of the study was to evaluate the safety and efficacy of thulium lasers (TLs) for transcolonic and transgastric access for NOTES and to determine the ability to dissect tissue during NOTES procedures. TL was used for transcolonic access to the peritoneal cavity by puncture of the colonic wall with insertion of the TL probe as a guide wire followed by balloon dilation over TL probe. TL was also used for transgastric access to the peritoneal cavity followed by laser-assisted dissection of the caudal pole of the kidney. Transcolonic access to the peritoneal cavity was achieved in 2 to 3 minutes and transgastric access in 7 to 10 minutes. Laser dissection of the parietal peritoneum & perinephric connective tissue was quick and efficient allowing easy access to the retroperitoneum. TL dissection demonstrated clean and rapid cutting, and excellent hemostasis. In conclusion, the 2 µm continuous wave laser system was safe and effective for peritoneal access with ability to perform precise and safe dissection during NOTES procedures.

**X. New technologies**

**1. Abstract: P0171**

**Session: Oesophageal, gastric and duodenal disorders I**

**Date: Monday Nov 23rd, 2009**

**DETECTION OF NEOPLASTIC TISSUE IN PATIENTS WITH BARRETT'S ESOPHAGUS USING PROBE CONFOCAL ENDOMICROSCOPY: INTERIM RESULTS FROM THE 'DONT BIOPCE' TRIAL**

**Authors: P. Sharma, A. Meining, H. Wolfsen, A. Bansal, M. Bajbouj, G. Lauwers, M. Wallace**

**Reporter: Saglova A, IKEM, Prague, Czech Republic**

Surveillance guidelines for Barrett's esophagus (BE) recommend a 4-quadrant random biopsy protocol. Probe-based Confocal Laser Endomicroscopy (pCLE) has the potential to target biopsies and improve the accuracy of the procedure. 'DONT BIOPCE' is a prospective randomized controlled multi-center trial using tandem endoscopic procedures by independent, blinded endoscopists to evaluate the per lesion sensitivity (Se) and specificity (Sp) of pCLE in addition to white light endoscopy (WLE) for the detection of high grade dysplasia (HGD) and early adenocarcinoma (EAC) in BE compared to WLE alone. Comparison to Narrow Band Imaging (NBI) alone and WLE + NBI are secondary objectives. The authors here report the preliminary findings from an interim pre-specified analysis after 36% enrollment of the required sample size. Addition of pCLE to WLE alone improved Se by 85% (relative Se; p=0.03). In terms of overall procedure, addition of pCLE to WLE + NBI increased Se by 50% (relative Sp; p=0.005) but with a small (7%) decrease in Sp (relative Sp; p=0.01). In conclusion, these preliminary results show that addition of pCLE to current practice may aid in the detection of BE neoplasia by better targeting of high risk lesions.

## **2. Abstract: P0568**

**Session: Endoscopy and imaging I**

**Date: Monday Nov 23rd, 2009**

### **ROLE OF CONFOCAL ENDOMICROSCOPY IN THE DIAGNOSIS OF CELIAC DISEASE**

**Authors: K. Venkatesh, A. Abou-Taleb, M. Cohen, C. Evans, P. Oliver, C. J. Taylor, M. Thomson**

**Reporter: Saglova A, IKEM, Prague, Czech Republic**

Confocal laser endomicroscopy (CLE) is a recent development which enables surface and subsurface imaging of living cells in vivo at x1000 magnification. The aims of the present study were to define confocal features of celiac disease (CD) and to evaluate the usefulness of the CLE in the diagnosis of CD in children in comparison to histology. 9 patients suspected with CD and 10 matched controls underwent oesophago-gastro-duodenoscopy (OGD) using the confocal laser endomicroscope (EC3870CILK; Pentax, Tokyo, Japan). Histologic sections were compared with same site confocal images. The sensitivity, specificity, and positive predictive value for the confocal images in comparison to the histology were 100%, 80% and 81%. In summary, confocal endomicroscopy offers the prospect of diagnosis of CD during ongoing endoscopy. It also enables targeting biopsies to abnormal mucosa and thereby increasing the diagnostic yield especially when villous atrophy is patchy in the duodenum.

## **3. Abstract: P0579**

**Session: Endoscopy and imaging I**

**Date: Monday Nov 23rd, 2009**

### **DOSE FINDING FOR INTRAVENOUS APPLICATION OF FLUORESCEIN FOR MINIPROBE BASED CONFOCAL LASER SCANNING MICROSCOPY IN PIGS**

**Authors: V. Becker, F. Vandenbroek, M. Wallace, S. Delius, R. Schmid, A. Meining**

**Reporter: Saglova A, IKEM, Prague, Czech Republic**

The aim of the presented study was to investigate the ideal fluorescein concentration for best pCLE imaging by objective parameters in a standardized pig model. Rectal mucosa of 25 anesthetized pigs was examined directly with a portable confocal miniprobe. After single shot injection of fluorescein intravenously (0.1 ml/kg body weight) in different concentrations

(0.5%, 1%, 2%, 5%, 10%), the miniprobe was attached slightly to the mucosa and video sequences (each 20-30 seconds) were recorded after 1 and 5 minutes. In total, 17805 images from 50 video sequences in 25 animals were analyzed. The mean SNR increases constantly from the lowest (0.5%; SNR 6.71±3.41) to the highest concentration (10%; SNR 9.64±4.68). There was a significant higher SNR of the 10% solution in comparison to fluorescein 0.5%. This was noted after 1 minute (p=0.007) and after 5 minutes (p=0.001, T-Test). In conclusion, fluorescein based pCLE of the gastrointestinal tract shows best objective results using single shot IV fluorescein 10%. These results might improve diagnosis and facilitate standardisation of miniprobe based pCLE.

#### **4. Abstract: P0658**

**Session: Endoscopy and imaging I**

**Date: Monday Nov 23rd, 2009**

#### **SPIRAL ENTEROSCOPY USING THE DISCOVERY SMALL BOWEL DEVICE AND VISTA SYSTEM: TECHNIQUE, FEASIBILITY AND PRELIMINARY RESULTS**

**Authors: M. Riccioni, C. Spada, A. Cazzato, A. Bizzotto, G. Costamagna**

**Reporter: Saglova A, IKEM, Prague, Czech Republic**

Indications for small bowel enteroscopy are increasing but small bowel enteroscopy is challenging and all present push and pull techniques have significant limitations. The Endo-Discovery SB device (Spirus Medical Stoughton, MA), a novel spiral-shaped overtube FDA approved for small bowel enteroscopy, and Vista System (Spirus Medical Stoughton, MA), a spiral overtube created for anal enteroscopy may allow for simple and quick intubation of the ileum comparable to current methods. The authors aimed to assess the feasibility of this new technology in 9 patients. There were no technical failures. Total procedure time was 40.4± 6 min. Mean depth achieved was 180± 34 cm beyond the ligament of Treitz (oral procedures) and 30 cm beyond the ileo-cecal valve (anal procedures). No lesions were found in 4 patients; GIST were present in 2 patients, ulcers in 1 case, inflammation in 1 case, polyps in 1 case. No complications occurred. Minor trauma was recorded in pylorus and ligament of Treitz in 2 patients (oral procedures). Thus, the Spirus system seems to be safe and useful in the diagnosis of several small bowel diseases. The direct comparison with balloon assisted enteroscopy would be desirable.

#### **5. Abstract: P1271**

**Session: Endoscopy and imaging II**

**Date: Tuesday Nov 24th, 2009**

#### **PHOTODYNAMIC DIAGNOSIS OF EARLY GASTRIC CANCER USING 5-AMINOLEVULINIC ACID? FIRST CLINICAL EXPERIENCES**

**Authors: Y. Kawahara, T. Tsuzuki, K. Hori, D. Kawai, S. Kawano, M. Inoue, D. Tanioka, H. Okada, K. Yamamoto**

**Reporter: Saglova A, IKEM, Prague, Czech Republic**

The aim of the study was to evaluate the feasibility of 5-aminolevulinic-acid (5-ALA)-induced photodynamic diagnosis (PDD) for the patients with early gastric cancer (EGC). A total of 56 patients with EGC underwent Endoscopic Submucosal Dissection (ESD). All patients received 5-ALA (20 mg/kg) orally 2 hours before ESD. To study the protoporphyrin IX (PPIX) accumulation after application of 5-ALA, in vivo PDD was performed during ESD

using a fluorescence endoscopy(GIF-FQ260Z,Olympus,Japan). Out of 56 patients, 45 patients demonstrated fluorescence-positive endoscopic images that could be used to confirm negative margins during ESD. EGC lesions resected by ESD method showed PPIX fluorescence under the PDD examination. This is the first report of PDD for EGC using 5-ALA and fluorescence endoscopy. These initial results have demonstrated that PPIX is selectively enhanced in malignant tissue, an essential prerequisite of PDD.

**6. Abstract: P1632**

**Session: Esophageal, gastric and duodenal disorder III**

**Date: Tuesday Nov 24th, 2009**

**ENDOSCOPIC SUBMUCOSAL DISSECTION (ESD) USING NEW DEVICE  
MUCOSECTOM2 FOR ESOPHAGEAL CANCER**

**Authors: Y. Kawahara, H. Okada, K. Yamamoto**

**Reporter: Saglova A, IKEM, Prague, Czech Republic**

The authors developed a new device (Mucosectom2, Pentax, Japan) to carry out ESD safely. The blade length of Mucosectom2 has been shortened from 5mm to 2.5mm and the diameter has become thinner than that of the conventional type. Here they report its use in the swine esophagus. Using this new device, the authors could incise the mucosa and dissect the submucosa very quickly. No perforation occurred in all cases. The average operation time was approximately 25 minutes. In conclusion, the authors present a novel method of ESD for early esophageal cancers using Mucosectom2, which can realize safer, easier, and less time-consuming ESD compared to previous methods using other devices (e.g. ITknife, Hook knife, Flex knife, etc.).

**7. Abstract: P1361**

**Session: Endoscopy and imaging II**

**Date: Tuesday Nov 24th, 2009**

**PERFORMANCE OF THE FORWARD VIEWING LINEAR ECHOENDOSCOPE  
FOR FINE NEEDLE ASPIRATION OF SOLID AND CYSTIC LESIONS  
THROUGHOUT THE GI TRACT: A LARGE SINGLE CENTER EXPERIENCE**

**Authors: A. Larghi, E. D. Rossi, D. Galasso, M. Stobinski, K. Zachariah, G. Fadda, G. Costamagna**

**Reporter: Saglova A, IKEM, Prague, Czech Republic**

A newly developed forward viewing linear echoendoscope (FV-EUS) has recently become available. To date, no data on the performance of the FV-EUS for FNA of solid and cystic lesions throughout the GI tract are existing. 285 consecutive patients who underwent attempted EUS-FNA using the FV-EUS were evaluated. A total of 300 FNA were attempted. Overall, FNA could not be performed in 6 out of the 300 attempts (2%) due to inability to extend the needle from the accessory channel in 5 (uncinate cyst, 2 periduodenal lymph nodes, 2 peripapillary lesions) or because the lesion could not be visualized (a paraduodenal lesion). In the latter patient, CLA-EUS was subsequently able to find and puncture the lesion. On the other hand in one patient, FV permitted sampling of a pancreatic cyst after the CLA failed. Sensitivity, specificity, positive and negative predictive values, and diagnostic accuracy were 83.6%, 100%, 100%, 53.2%, 86.2%, respectively. In conclusion, EUS-FNA of lesions throughout the GI tract is highly effective with a performance that seems at least comparable to that of the CLA-EUS.

**8. Abstract: P1376****Session: Endoscopy and imaging II****Date: Tuesday Nov 24th, 2009****STRING, CLING FILM COVERED VIDEO CAPSULE ESOPHAGOSCOPY (EVCE) WITH METHYLENE BLUE STAINING FOR BARRETT'S ESOPHAGUS. A FEASIBILITY STUDY.****Authors: K. Papaxoinis, I. Binas, S. D. Ladas****Reporter: Saglova A, IKEM, Prague, Czech Republic**

The authors aimed to develop a string EVCE system with widely available material and assess the feasibility of methylene blue EVCE chromoendoscopy for identification of BE. A PicCam ESO videocapsule was wrapped in 0.01 mm thick, cling film. The film was tightened on the capsule and a fishing thread line of 100 cm length was attached to the caudal end. The fishing thread line was then passed through a 50 cm length soft, plastic tube. Four healthy volunteers and 4 patients with suspected BE were studied in the sitting position. A 10 ml of 0.5% methylene blue solution was then injected and after 2 mins it was rinsed with 20 ml of water. The examination was successful in all 8 subjects. No cling film was disrupted and no fishing line was broken. Videos generated by the EVCE were of excellent quality in all 8 patients. The throat discomfort score with the tube was much less (range 2-4) compared with the fishing line (6-8). In conclusion, the string EVCE system, using widely available material, produced excellent quality videos and for the first time makes possible EVCE chromoendoscopy of Barrett's esophagus.

**9. Abstract: P2012****Session: Endoscopy and imaging III****Date: Wednesday Nov 25th, 2009****NEEDLE-BASED CONFOCAL ENDOMICROSCOPY FOR IN-VIVO HISTOLOGY OF INTRAABDOMINAL ORGANS: FIRST RESULTS IN A PORCINE MODEL****Authors: V. Becker, M. Wallace, P. Fockens, S. Delius, R. Voermans, T. Woodward, M. Raimondo, A. Meining****Reporter: Saglova A, IKEM, Prague, Czech Republic**

Probe based confocal laser scanning endomicroscopy (pCLE) enables in vivo real time histopathology of the mucosa layer close to traditional histopathology. Recently, a prototype of a new confocal miniprobe (MKT, France) has been developed that is small enough to be introduced through a 22G puncture needle. The aim of the study was to evaluate the feasibility of such needle based confocal laser scanning endomicroscopy (nCLE) for in vivo histology of various organs in a porcine model. The confocal miniprobe could be introduced into the 22-gauge in all cases. The tip of the probe could be visualized by endoscopic ultrasound and acquisition of images was possible in all cases. The microstructure of different organs such as lymph nodes, red and white pulp of the spleen, ovaries, and lobules of liver and pancreas could be identified. In single cases, image quality was compromised by leakage of blood or cellular debris. In conclusion, nCLE of intraabdominal organs is feasible in a porcine model. This innovative minimally invasive technique has the potential to facilitate in-vivo histology during EUS-punctures or NOTES-peritoneoscopy.

**10. Abstract: P2062****Session: Endoscopy and imaging III****Date: Wednesday Nov 25th, 2009****THIRD EYE RETROSCOPE RANDOMIZED CLINICAL EVALUATION - ("TERRACE" STUDY): INITIAL RESULTS****Authors: A. M. Leufkens, A. Repici, P. Deprez, B. Saunders, F. P. Vleggaar, G. Rando, K. Azzouzi, O. Dewit, J. East, A. Ignjatovic, P. D. Siersema**

This prospective study is designed to compare the diagnostic yield using the Third Eye Retroscope with a standard colonoscope (TER) vs. the diagnostic yield of a standard colonoscope alone (COLO) during same-day, back-to-back procedures. This report describes results for the initial 81 completed subjects. Patients scheduled for screening, surveillance or diagnostic colonoscopy are randomized to COLO followed by TER (Group A) or TER followed by COLO (Group B). Initial results for this multi-centre study trend towards more total polyps being detected during the first pass with the TER compared to the first pass with the COLO, but at this early stage of study enrolment, not enough data have been collected to draw definitive conclusions.

**Management****1. Abstract: P0001****Session: Gastrointestinal bleeding****Date: Monday Nov 23rd, 2009****THE APPLICATION OF A CONTINUOUS QUALITY IMPROVEMENT PROGRAM IMPROVES THE ENDOSCOPIC OUTCOMES OF UPPER GASTROINTESTINAL BLEEDING****Authors: A. Amato, G. Imperiali, S. Paggi, F. Radaelli, G. Spinzi, N. Lenoci, N. Terreni, G. Mandelli, A. Toldi, V. Terruzzi****Reporter: Suchankova G, IKEM, Prague, Czech Republic**

Continuous quality improvement (CQI) is recommended as part of endoscopy programs, but little is known about its effectiveness in improving the endoscopic management of upper gastrointestinal bleeding (UGIB). The present study was aimed at evaluating the evolution of "bad post-endoscopic UGIB outcomes" after the introduction of a CQI program. Since 2003 to 2008, in a single centre community hospital, 7-day rebleeding and 30-day mortality rates ("bad outcomes") were assessed for all urgent upper GI endoscopies in which endoscopic treatment for UGIB was performed or active bleeding was diagnosed. The CQI program included: - (1) the training of Emergency and Gastroenterology ward staff for medical and pharmacological management of pre- and post-endoscopic phases (monthly meetings for the first year) - (2) the presence of a tutor for less experienced endoscopists - (3) the standardization and homogenization of treatment procedures for both variceal and non-variceal hemorrhage - (4) the execution of "an endoscopic second look" within 24 hours, in case of missed identification of the bleeding source or uncertain complete treatment of the lesions according to the endoscopist's judgment. The "bad outcome" rates involving early rebleeding and mortality decreased from 35% to 9%. The authors concluded that the introduction and progressive implementation of a CQI program in everyday endoscopic

practice has a positive impact on the effectiveness of endoscopic management of UGIB. Similar programs should be launched in all endoscopic centers.

## **2. Abstract: P0115**

**Session: Oesophageal, gastric and duodenal disorders**

**Date: Monday Nov 23rd, 2009**

### **MANAGEMENT OF PREMALIGNANT LESIONS OF GASTRIC CANCER BY EUROPEAN GASTROENTEROLOGISTS: PRELIMINARY RESULTS OF AN ON-LINE SURVEY**

**Authors: J. Matos, T. Salazar, F. Silva, D. Oliveira, A. Carvalho, M. Santiago, R. Ramos, R. Loureiro, H. Sousa, J. Cardoso, P. Morais, A. Silva, C. Leite, C. Laranja, L. Vale, J. Jacome, R. Santos, M. Dinis-Ribeiro**

**Reporter: Suchankova G, IKEM, Prague, Czech Republic**

No guidelines exist for the adequate management of patients with atrophic chronic gastritis (ACG), intestinal metaplasia (IM) or dysplasia. The aim of this study was to survey options currently used by European gastroenterologists for the diagnosis, monitoring and treatment of premalignant lesions of gastric cancer. Between April and May 2009, European researchers with manuscripts published during 2007 and 2008 under the subject of 'pre-malignant gastric lesions' were asked to answer an on-line questionnaire (n=133). 43% of participants use protocols for management of premalignant lesions, but only 18% on a standard institutional basis. Approximately half the participants propose endoscopic follow-up even if patients with ACG or IM are asymptomatic. For approximately one in six to one in four authors, this should be done only if patients are symptomatic. 67% proposed a follow-up endoscopy after 24-48 months for those without dysplasia, but 82% perform endoscopy several times within the first year in patients with dysplasia. The results reflect the lack of consensus among gastroenterologists for the management of patients with precancerous gastric lesions, particularly as regards the frequency of endoscopies and their timing. As this may lead to early diagnosis of gastric cancer with improvement in survival, better adherence to guidelines would be desirable.

## **3. Abstract: P0148**

**Session: Oesophageal, gastric and duodenal disorders**

**Date: Monday Nov 23rd, 2009**

### **RADIOFREQUENCY ABLATION IS A COST EFFECTIVE TREATMENT FOR HIGH GRADE DYSPLASIA IN BARRETT'S OESOPHAGUS? A UK BASED ECONOMIC EVALUATION**

**Authors: P. C. Boger, D. Turner, P. J. Roderick, P. Patel**

**Reporter: Suchankova G, IKEM, Prague, Czech Republic**

Oesophagectomy, currently recommended for the treatment of high grade dysplasia, is costly, and associated with a high incidence of operative mortality or morbidity, and a reduced quality of life. Radiofrequency ablation (RFA) with the Barrx HALO device and subsequent surveillance is a new technology with promising early trial results. It is uncertain if it represents a cost-effective treatment option in the UK when compared with oesophagectomy. The authors developed a Markov model to simulate the natural history of a cohort of 64-year-old male patients with HGD in Barret's oesophagus (BO) undergoing one of two treatment options; oesophagectomy or RFA followed by endoscopic surveillance with oesophagectomy

for HGD recurrence/persistence. RFA dominated as it generated 0.36 extra quality-adjusted life years (QALYs) at a cost saving £2269. Sensitivity analysis revealed that the model results were most sensitive to changes in oesophageal mucosa after RFA, utility post RFA with neo-squamous oesophagus, and utility fully received post oesophagectomy. For oesophagectomy to become a more cost-effective option, the RFA treatment failure rate would have to be higher than 30% (current upper range is 19%). The authors concluded that RFA is likely to be a cost-effective option for HGD in BO in the UK. Long-term outcome data are not yet available for RFA, but the model predicts that the treatment failure rate (HGD persists or progresses to cancer post treatment) would need to be higher than 30% for oesophagectomy to become a more cost-effective option. According to the reporter's view, this would not be surprising and, since oesophagectomy has almost completely been replaced by EMR, a comparison of both endoscopic methods would be most appropriate.

#### **4. Abstract: P0548**

**Session: Oesophageal, gastric and duodenal disorders**

**Date: Monday Nov 23rd, 2009**

##### **APPROPRIATENESS OF UPPER GI ENDOSCOPY IN PATIENTS WITH GERD: RESULTS OF A 2-WEEK MULTICENTRE SURVEY**

**Authors: M. Lombardini, G. Spinzi, W. Piubello, F. Cosentino, M. Dinelli, E. Masci, A. Frosi, G. Manes, F. Pace**

**Reporter: Suchankova G, IKEM, Prague, Czech Republic**

Several guidelines largely restrict the indications for upper GI endoscopy (UGIE) in uncomplicated GERD patients without alarming symptoms. However, these guidelines appear not to be universally adopted, either by gastroenterologists or by GPs. The aim of this study was to conduct a survey to assess the appropriateness of indications for UGIE in GERD patients. Approximately 40% of all UGIE procedures were conducted with an indication related to GERD. The majority of patients were not on PPI therapy prior to the examination. Esophagitis was found in approximately 20% and Barrett's esophagus in 10% of patients. The authors concluded that UGIE is inappropriately prescribed in most patients with GERD, and non-erosive GERD is the most frequently manifestation of GERD. Current guidelines do not appeal to the majority of gastroenterologists and GPs. A crucial role in this may be played by motivation, i.e., the technique of reimbursement.

#### **5. Abstract: P0549**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

##### **A STRATEGY FOR ENDOSCOPIC SUBMUCOSAL DISSECTION TRAINING WITH PIG MODELS: ARE THEY USEFUL FOR OVERCOMING THE LEARNING CURVE?**

**Authors: A. Parra-Blanco, M. Arnau, D. Nicolás-Pérez, A. Z. Gimeno-García, N. González, J. A. Díaz-Acosta, A. Jiménez, E. Quintero**

**Reporter: Suchankova G, IKEM, Prague, Czech Republic**

Endoscopic submucosal dissection (ESD) is technically challenging, and an estimated 30 ESD procedures need to be performed to overcome the learning curve. Before being applied in humans, ESD should be carried out in animal models. The aim of this study was to test a strategy for ESD training to overcome the initial learning curve. ESD was attempted in ex

vivo and in vivo pig models by a single experienced endoscopist. Before starting the study, he observed around 25 ESDs and performed 7 cases in an ex vivo model (not included in the current study), supervised by experts. Thirty ESD procedures were attempted in the esophagus (n=9) or the stomach (n=21). The ex vivo model was used until initial competence was achieved. In the in vivo model, several ESD procedures were performed in up to 3 sessions. The following variables were analyzed: specimen size, complete and en bloc resection rates, time for circumferential incision, time for submucosal dissection, total ESD duration, and complications. Complete resection was achieved in 28 cases, the mean total resection time was significantly increased for the initial 11 gastric cases compared to the last 10 ones. ESD is a technically enormously challenging procedure and the learning curve is a relevant issue, as suggested by this study. As potentially serious complications are of concern, the procedure should not be applied to humans without any previous animal training. The learning strategy described provided good results both in terms of efficacy and safety.

#### **6. Abstract: P0554**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

#### **ACCURACY OF ASSESSMENT OF PATIENT DISCOMFORT DURING ENDOSCOPIC PROCEDURES**

**Authors: A. Sachdeva, R. Barton, K. Seymour**

**Reporter: Suchankova G, IKEM, Prague, Czech Republic**

Endoscopic procedures are a safe and efficient tool in the diagnosis of gastrointestinal diseases. However, due to their invasive nature, patients undergoing these procedures experience pain and discomfort, leading to poor patient satisfaction. This audit was undertaken to determine the accuracy of reporting of discomfort by endoscopists and nurses, compared to patients' self-reported scores. A prospective questionnaire survey of patients, endoscopists and nurses for 107 endoscopic procedures (42 gastroscopies, 29 flexible sigmoidoscopies, 22 colonoscopies and 14 combined procedures) was carried out over a one-week period. Patients, endoscopists and nurses independently reported overall discomfort scores on a three-point scale after each procedure. Reported scores were compared with the patient's assessment of overall discomfort, to assess their accuracy. Accurate scores were more frequently reported for female patients and those older than 60 years of age. Endoscopists under-reported discomfort in 24% cases, especially for unsedated patients. Nurses over-reported discomfort in 21% cases, especially for patients undergoing endoscopy under sedation. The endoscopy practitioner and attending nurse reported congruent scores in 68% of cases, of these 48% corresponded to the patients' experience. In 11% of cases, both failed to recognize patient discomfort. The authors concluded that neither endoscopists nor nurses are highly accurate in assessing patient discomfort, and thus audit standards were not met. Endoscopists tend to under-estimate patient discomfort while nurses tend to over-estimate patient discomfort. Poor assessment of discomfort in male patients and those under 60 years of age needs to be addressed.

#### **7. Abstract: P0571**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

#### **QUALITY CONTROL IN UPPER GASTROINTESTINAL ENDOSCOPY: DETECTION RATES OF GASTRIC CANCER**

**Authors: S. D. Vradelis, N. Maynard, B. F. Warren, S. Keshav, S. P. L. Travis**  
**Reporter: Suchankova G, IKEM, Prague, Czech Republic**

Whereas advanced gastric cancer (AGC) has a dismal prognosis, early gastric cancer (EGC) is potentially curable. Endoscopy (with biopsies) is the gold standard for detection of GC, but a false negative rate of up to 19% is reported. Detection of GC is a patient-related outcome that is a relevant quality measure for endoscopy. The aim of this study was to determine whether patients with GC had had an oesophagogastroduodenoscopy (OGD) in the year preceding diagnosis that might reasonably have been expected to detect the cancer, as a measure of quality assurance of endoscopic practice in Oxford. Patients with histologically proven GC (1/1/05-29/2/08) were identified from pathology records. Endoscopy reports and case notes were examined to identify any OGD prior to diagnosis, the interval and endoscopic findings. EGC was defined according to accepted criteria; all other GC was defined as AGC. A false negative OGD was defined as one where GC was neither suspected nor shown at pathology, but where a diagnosis of GC was made within 12 months. 9764 OGDs were performed and 74 patients diagnosed with GC. 68/74 (92%) presented with alarm symptoms and 6 (8%) had uncomplicated dyspepsia. 19 patients had a total of 29 OGDs at a median 227 days (7-2160) prior to the date of definitive diagnosis. In 66/74 (89%), the diagnosis was made or suspected before histologic confirmation. A 0% false negative rate for diagnosis of GC is reassuring, but an inadequate number of biopsies compromises the quality assurance of endoscopy. GC presents without alarm symptoms in <10%.

#### **8. Abstract: P1385**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

#### **USEFULNESS OF GASTROINTESTINAL ENDOSCOPY IN EXTREMELY ELDERLY PATIENTS**

**Authors: A. Barbado, G. Cacho, I. Gomez, G. Rodriguez, J. L. U. I. Lledó, C. Fernández Rodríguez**

**Reporter: Suchankova G, IKEM, Prague, Czech Republic**

Gastrointestinal endoscopic procedures are increasingly performed in the aging population. However, the clinical benefit of this approach in the very elderly population (85 years or older) remains undefined. The authors aimed at evaluating the clinical usefulness of gastrointestinal endoscopic procedures in very elderly patients. A cohort of 110 consecutive patients aged 85 or older undergoing GI endoscopy was prospectively included. Type of procedure, co-morbidity, endoscopic associated complications, endoscopic findings, changes in management and outcomes were analyzed. 7 complications occurred with no procedure-related mortality. There were no relevant findings in 40% of CASE. The endoscopies did not lead to substantial changes in management in 66.7% of patients. The mortality rate at three months was 17%. Overall, gastrointestinal endoscopy is safe even in extremely elderly patients. However, these procedures did not lead to a change of clinical management in a substantial proportion of these patients. Since the mortality rate at three months of follow-up in patients with ASA status IV was high, indication of endoscopy should be carefully individualized in this subpopulation.

#### **9. Abstract: P0619**

**Session: Endoscopy and imaging**

**Date: Monday Nov 23rd, 2009**

**MONITORING OF RADIATION EXPOSURE IN THERAPEUTIC ERCP AND EVALUATION TO REDUCE RADIATION EXPOSURE**

**Authors: F. Garcia Fernandez, J. Infantes, F. Mendoza, Y. Torres Dominguez, F. Alcazar, A. Piñar**

**Reporter: Suchankova G, IKEM, Prague, Czech Republic**

Exposure to radiation during radiological procedures and the cumulative effect of radiation on patients and staff is an increasing concern. There is little information about how much actual exposure hospital staff, and even less so patients, receive during ERCP. The authors retrospectively analyzed radiation doses in patients after therapeutic ERCP, stratified in 6 periods of 6 months, as well as the results of a reduction to radiation exposure (RE). They also evaluated fluoroscopy time, success rate, and the relation to RE and compared radiation in ERCP with other digestive tract radiological procedures. 421 therapeutic ERCP were done. Analyzing the results, there were significant differences ( $p < 0.001$ ) between the 1st and 2nd periods, between the 2nd and 3rd, 3rd and 4th, and 5th and 6th periods. Modifications used in order to reduce RE were: working with half intensity, avoiding continuous x-ray exposure, taking images directly from the scope monitor, and working with the guide-wire in cannulation. It can be concluded that reducing RE in patients during ERCP without affecting duration time of the examination or success rate is possible (and desirable). It is difficult to reduce mean radiation doses to less than 5 mGy. These levels of radiation are reasonable, similar, and even lower than those in common radiological procedures (abdominal computed axial tomography 10 mGy, barium enema 7 mGy or gastro-intestinal transit 3 mGy).

**10. Abstract: P0740**

**Session: Endoscopy and imaging**

**Date: Tuesday Nov 24th, 2009**

**Authors: S. H. Pang, J. Ching, J. Y. Lau, J. J. Sung, F. K. L. Chan**

**Reporter: Suchankova G, IKEM, Prague, Czech Republic**

The Blatchford score predicts the need for inpatient management in patients with upper gastrointestinal haemorrhage (UGIH). The need for therapeutic endoscopy at the index oesophagogastroduodenoscopy (OGD) is important in determining the risk and disposition of these patients. It is not clear whether the Blatchford score could be applied to specifically predict the need for therapeutic endoscopy / presence of high-risk lesions. This study aims to test the Blatchford score against the need for therapeutic endoscopy as the primary outcome. 1087 patients who presented with UGIH symptoms, and had an inpatient OGD entered the study. The Blatchford score was prospectively calculated for all patients, and the need for therapeutic endoscopy was determined during the OGD. The Blatchford scores in those who needed therapeutic endoscopy were compared to those who did not. The mean Blatchford score for those requiring therapeutic endoscopy was significantly higher (10.3 vs. 7) The authors concluded that the Blatchford score is more useful for predicting low-risk patients not requiring therapeutic endoscopy, who may be suitable for outpatient management.