

Abstracts

Oral Presentations On 23-24 October 2011

Session 1: Free Paper Session I

L-1

Everything you say, won't be used against you: Nurses in the lead in multidisciplinary safety management system in dept of gastroenterology and endoscopy

Maria de Jong, Evelien Dekkers, Ingeborg Goes, Academic Medical Center, Department of Gastroenterology & Endoscopy, Amsterdam, Amsterdam, The Netherlands

Introduction: Incidents related to health care are common and partly avoidable. We need to identify how and why incidents or near misses occur to improve patient safety. Both doctors and nurses believe they should report errors and near misses, but nurses do so more frequently than doctors.¹ The biggest challenge in moving towards a safer health care system is changing the culture from one of blaming individuals for errors to one in which errors are treated not as a personal failures, but as opportunities to improve the system and prevent harm.²

Aim: To improve patient safety by 1) taking inventory 2) creating awareness of risks and 3) achieving an increased readiness in reporting medical incidents or near misses through both timely feedback and implementation of improvements.

Design: We recently started a new safety management system at our department of Gastroenterology and Endoscopy. Every staff member (doctors, nurses and supporting staff), are requested to report incidents or near misses in an electronic incident reporting system. All incidents are handled confidentially within one week by a nurse practitioner who analyses all reported incidents. The safety management team, consisting of an administrative assistant, two doctors and four nurses make a risk-inventory every 3 weeks. The anonymized inventory will be presented to the daily management team who will organize focused large-scale improvement projects together with the senior nurse. These projects will be reported back to all personnel in plenary meetings.

Methods: A retrospective analysis of received incident reports was conducted at the department of Gastroenterology and Endoscopy of the Academic Medical Center in the Netherlands.

Results: Since we started the safety management system in January 2011, the number of reports increased tenfold. 95 incidents were reported in five months, 19 by doctors, 25 by administrative assistants and 51 by nurses. 59(62%) reports concerned planning or preparation for endoscopy, 19(20%) reports were about erroneous patient data/information and 17(18%) reports involved other issues, such as missing materials.

Conclusion: The new safety management system with confidential handling, anonymization, risk-

inventories and improvement projects led to a tenfold increase in the number of reports.

Learning outcomes: A safety management system is a valuable source of information on medical incidents and near misses. Confidentiality and rapid feedback with structural changes are key factors increasing support and readiness to report and hopefully lead to better patient-care.

References

1. Evans SM, Berry JG, Smith BJ, et al. Attitudes and barriers to incident reporting: a collaborative hospital study. [Qual Saf Health Care](#) 2006 Feb;15(1):39-43.
2. Institute of Medicine. Crossing the quality chasm: a new healthy system for the 21st century. Washington, DC: National Academy Press, 2001

L-2

A rehabilitation out-patient clinic managed by nurses for patients discharged after hepatic encephalopathy improves survival

Astrid Reher-Langberg, Michala Andersen, Søren Aunt, Nanna Jensen, Christian Homann, Frank Schiødt. Section of Gastroenterology and Hepatology, Department of Internal Medicine I, Bispebjerg Hospital, University of Copenhagen, Denmark

Introduction: The 1-year mortality of cirrhotic patients with hepatic encephalopathy (HE) is very high (approximately 60-70%). Most of them are complex alcoholic patients with a general low compliance. Often these patients are younger than 65 years for whom the Social Services' offer of rehabilitation is inadequate.

Aim: We aimed at establishing a rehabilitation out-patient clinic (RC) managed by nurses for cirrhotic patients surviving HE for frequent visits and easy access to contacting the clinic in case of any liver related or general symptom in order to improve survival.

Methods: From September 1, 2009 and one year forward patients surviving HE were offered participation in the RC. The clinic was open on Tuesdays and was located at the same department for which the patients had been treated for HE. Patients were seen by a nurse for a one-hour interview with 1-3 weeks interval after discharge and also by a doctor if needed. Clinical, psychological and social problems were identified and addressed in close cooperation with a social worker and a nurse from the primary sector. The RC nurses' approach to the patient was theoretically based on Lazarus' theory of coping. The nurse listened to the patient's narrative story and put quality questions to specific incidents. Based on the incidents the patient and nurse identified problems and set goals to address them. Alcohol consumption was recorded and alcohol cessation was encouraged at each visit. The patient or their relatives had the opportunity to call a clinic nurse or a basic nurse 24 hours a day. They often used this option seeking advice, guidance or psychological support. Survival of patients was compared with HE patients discharged in 2008.

Results: One-year survival was significantly higher in the RC group (16/19 (84%) compared to 5/14 (36%), $p = 0,012$) in the 2008 group. In the RC group, alcohol consumption was unchanged in two patients. Five patients stopped alcohol intake completely and the remaining patients decreased their intake.

Conclusion: Survival was significantly improved in patients attending the rehabilitation clinic. This was probably in part due to decreased alcohol consumption and earlier referral to hospital when complications developed.

Key messages:

1: We hypothesize, that involving the patient in his plans of action, compliance will increase and further improve quality of life.

2: In order to see if the RC has improved the patient's quality of life, we believe it is necessary to establish a nursing research project.

References:

1: Lazarus, Richard S. *Stress og følelser – en ny syntese*. 1. edition, 2006.

2: Jepsen P, Ott P, Andersen PK, Sorensen HT, Vilstrup H. Clinical course of alcoholic liver cirrhosis: a Danish population-based cohort study. *Hepatology* 2010; 51(5): 1675-1682

L-3

Integrating Lean Management to Reduce Waiting Time for Patients undergoing Endoscopy at Outpatient Services

Siriporn Ratanalert RN*, Wanpen Pinyopasakul**, Kaniitha Sriwanayos RN***, Sopa Boonviriya*, Varaporn Senapitakkul*, Sulee Saengnil*, Ruankwan Pongprayoon*. * NKC Institute of Gastroenterology and Hepatology, Songklanagarind Hospital, ** Faculty of Nursing, Mahidol University, *** Surgical Day Care Unit, Songklanagarind Hospital, Thailand

Introduction: Recently, endoscopic procedures have widely been performed at the outpatient department, with more patients attending these ambulatory services. Endoscopic nurses and health care team are required to provide outpatient services more efficiently so as meet patients' demands. Previously, quality of care was greatly investigated in these services¹, although its efficiency such as waiting time has remained an issue. Lean management is a strategy used in health care industries to maximize time and resource management while minimize wastes². Integration of lean management into patient care processes therefore might yield better care outcomes.

Aim: The purpose of the study was to examine the effect of using lean management on waiting time of patients undergoing endoscopy at outpatient services.

Method: This study was conducted at an endoscopic unit, Thailand, from 16 July to 8 October 2010. The samples comprised 116 persons attending ambulatory endoscopy services. Data collection began by examining preliminary information about routine care and an average waiting time of patients, starting from time of arrival to discharge. Endoscopy nurse, as a team leader, gathering with outpatient nurses and Endoscopist initiated lean management program. These included restructuring the appointment time for individuals to decrease batching and allow flexibility. Another strategy included informing relatives in advance to pick up patients post procedures. This provided a speedy discharge and effective patient throughputs. On completion, waiting time was recorded. Data were analyzed by using frequency and percentage to reveal the average waiting time of all procedures and each procedure.

Results: Resulted showed that the average waiting time of patients undergoing all ambulatory endoscopy

procedures at the pre-lean management period was 388.5 minutes, whereas at the post-lean management period was 287.8 minutes. The average waiting time of those undergoing colonoscopy, sigmoidoscopy, and panendoscopy was 111.5, 64.7, and 91.1 minutes, respectively. The time reduction yielded efficiency at 17.10%.

Summary: This study found that the use of lean management in ambulatory endoscopy services helped reduce waiting time for patients.

Conclusion: The findings demonstrate that lean management could be integrated into routine care and quality improvement programs so as to maximize ambulatory service outcomes.

References

1. Johanson JF, Schmitt CM, Deas TM, et al. Quality and outcomes assessment in gastrointestinal endoscopy. *Gastrointest Endosc*. 2000; 52: 827–30.

2. Supachutikul, A. New HA standards: Concept and overview. Paper presentation in 9th HA National Forum, March 11-14, 2008 at Impact Arena, Thailand. 2008.

Learning Outcomes

Efficiency is an important aspect in health care services. Strategies to improve care processes could contribute to greater efficiency and more positive patient outcomes.

L-4

Reducing waiting lists: impact of a service redesign incorporating a nurse-led endoscopy assessment clinic

Dianne Jones, Charlie Vaughan, Endoscopy Unit, Logan Hospital, Queensland, Australia

Introduction: With the increase in referrals for endoscopy procedures, lengthy waits for a gastroenterology outpatient appointment occurred at our hospital. The existing model of care was that all patients had Specialist consultation in the outpatients department, with those requiring endoscopy procedures then booked with the endoscopy unit. Post-procedure follow up also required an additional outpatient clinic appointment. In early 2009, the clinic waiting list reached 2500 patients. This model of care was clearly unsustainable.

Aims and objectives: The project aimed to introduce a redesign of the processes for gastroenterology outpatient appointments and endoscopy procedures to provide a model of care that would facilitate the provision of endoscopy procedures for the majority of patients referred, without involving a specialist consultation.

Method: In addition to a review of the literature, other nurse-led clinics and direct referral endoscopy services were consulted to provide advice on the management of referrals through an open-access system. A Clinical Nurse Consultant was recruited to conduct the nurse-led Endoscopy Assessment Clinic (EAC). The majority of patients referred for gastroscopy were directly booked with the endoscopy unit without specialist consultation, whilst patients referred for colonoscopy who were deemed suitable were referred through the EAC. Upon completion of their endoscopic procedures, if further specialist care was not required, patients were discharged back into the care of their General Practitioner. Funding to conduct the clinic and the endoscopies generated from those consultations was

obtained for a one month pilot of the project in June 2009 and patients who had been waiting for the longest time were the target group. Upon completion of the pilot project, funding was provided for 2 further six-month projects in 2010.

Results: 151 patients had endoscopies during the 3 weeks of the pilot project. 88 patients who were contacted for appointment no longer required care and in total, 239 patients were removed from the waiting list. In the 12 months of the 2 funded projects, the waiting list was reduced by a further 2047. This included 940 patients who no longer required care. The pathology found included carcinomas, carcinoid, adenomas, coeliac disease, colitis, Barrett's oesophagus.

Conclusion: Endoscopy procedures can be efficiently performed with a direct access model of care. A nurse-led assessment clinic provides an efficient and safe process for booking colonoscopy procedures in a direct-access model. Long public hospital waiting lists may be artificially inflated with patients no longer requiring care and a clinical audit is valuable in reducing the numbers on those lists.

Summary: Service redesign positively impacted on the length of time patients waited for both specialist gastroenterology consultation appointments and endoscopy procedures.

Learning Outcomes: This paper will alert managers to the value of a clinical audit of waiting lists. It will also provide evidence for other nurses wishing to establish nurse-led endoscopy assessment clinics as to the efficacy of that service.

References:

- Sullivan PB, Burnett CA, Juszczak E. Parent satisfaction in a nurse led clinic compared with a paediatric gastroenterology clinic for the management of intractable, functional constipation. *Arch Dis Child.* 2006 Jun;91(6):499-501. Epub 2006 Mar 10.
- Pearson C. Establishing an inflammatory bowel disease service. *Nurs Times.* 2006 Jun 6-12;102(23):28-9.

L-5

What gastroenterologists and ibd nurses say about complementary and alternative treatments

Annelie Lindberg¹, Britt Ebbeskog², Per Karlen¹, Lena Oxelmark². ¹Dept. of Clinical Science and Education, Karolinska Institutet, Gastroenterology and Hepatology Södersjukhuset Stockholm, ²Dept. of Neurobiology, Care sciences and Society, Div. of Nursing, Karolinska Institutet, Huddinge, Sweden

Introduction: The World Health Organization defines complementary and alternative medicine (CAM) as a broad set of healthcare practices not part of the country's own tradition and not integrated in the dominant healthcare system. The use of CAM in patients with inflammatory bowel disease (IBD) is increasing. IBD patients choose CAM because they have been unresponsive to conventional treatments, or because they desire control over their illness situation and appreciate CAM's focus on the treatment of the whole person. Corticosteroid therapy may influence use of CAM as well as negative stress and disease related concerns. Use of CAM is not without risk; side effects such as liver toxicity and interaction with conventional medicine have been reported. Research

on IBD patients use of CAM in Sweden and healthcare professionals awareness of CAM use is limited.

Aim/ Objective: To explore the views of CAM in gastroenterologists and IBD nurses.

Method: A qualitative descriptive design was used. Interviews were conducted. The respondents (n=16) were recruited from five hospitals. Content analysis according to Krippendorff was used to explore the views of CAM.

Results: The analysis resulted in four themes. *Respect for patient wishes concerning their own treatment* comprising three categories: 1) A wish to treat patients in a respectful manner when they communicate about CAM, 2) A desire to learn more and have increased awareness of CAM methods and 3) A feeling of confidence and acceptance in CAM. *Hopes and expectations of CAM* comprising two categories: 1) Hope that CAM will bring improved health and well-being to the patient and 2) Diverse reasons for using CAM among patients. *Barriers to accepting the use of CAM* comprising two categories: 1) Attitudes that stand in the way of acceptance of CAM among healthcare staff and 2) Circumstances that make acceptance of CAM difficult. *Personal experience with CAM* comprised one category: 1) Previous experiences with CAM that influence healthcare staff positively or negatively.

Summary: The result from the content analysis of the 16 interviews with gastroenterologist and IBD nurses showed respect for patients' wishes concerning their own treatment, hopes and expectations of CAM but also barriers in accepting CAM.

Conclusion: Our study found that healthcare professionals had positive attitudes towards CAM, were open to the use of CAM by IBD patients out of respect for their patients and patient choice, and they wish to learn more about CAM methods. However, we found that some were sceptical of CAM and worried about potential side effects in patients.

Learning outcomes for audience

- Health care professionals respect patients' choice, but should be aware of the increasing number of IBD patients using CAM treatments. The incorporation of evidence based CAM aspects in the care of the IBD patients is important in order to ensure patient satisfaction, safety and to optimize healthcare.
- The result underlines the need of CAM education in healthcare professionals.

References

- Krippendorff K, *Content analysis: an introduction to its methodology.* 2004, Thousand Oaks, Calif.: Sage.
- WHO *Traditional Medicine Strategy 2002-2005.* http://whqlibdoc.who.int/hq/2002/who_edm_trm_2002.1.pdf

Session 2: Hygiene

L-6

ISO EU 15 883 - Development of a national guideline for validation of reprocessing flexible endoscopes

Beilenhoff, Ulrike, Ulm, Germany;
Biering, Holger, Düsseldorf, Germany

Validation is an important tool of quality assurance in hygiene and infection control. Up till now, clinical service providers have had to rely on the correct functioning of automated washer disinfectors (WD). But without validation, therefore routine maintenance and microbiological surveillance are now the current tools for regular quality control.

The European Norm EN ISO 15883 "washer disinfectors", part 1,4,5 describes requirements for WD and gives recommendation for validation of WD (1-3). Based on the European norm, national authorities for hygiene and infection control have the duty to implement DIN EN ISO 15883 in their national regulations. Furthermore the ESGE-ESGENA-Guideline addresses the necessity of validating the whole reprocessing cycle of flexible endoscopes and their accessories (4).

The aims of this presentation are:

- To describe the process of implementing EN ISO 15883 on a national level
- To demonstrate necessary organizational and scientific structures and co-operations
- To present selected results of sub-groups of the German guideline committee

Establishment of a national guideline committee

Table 1: Committee members

Groups involved	Profession	Expertise
German Society of Hospital Hygiene (DGKH)	Hygienists & microbiologists	scientific background
German Society of Gastroenterology (DGVS), German Society of Endoscopy Nurses and Associates (DEGEA), German Society of Sterile Supply (DGSV)	Endoscopists Endoscopy nurses Reprocessing specialists	Users
Working Groups of Manufacturers (AKI, AK RDG)	Manufacturers of endoscopes, accessories, washer-disinfectors and process chemicals	Technical knowledge and expertise

Table 2: subgroups and their working results

Sub-groups	Members of sub-group	Results
1. Type test	Manufacturers of WD, endoscopes, process chemicals	<ul style="list-style-type: none"> • Definition of requirements and data necessary for type test
2. Endoscope	Endoscope manufacturers Endoscopy nurses society	<ul style="list-style-type: none"> • Development of first definition of endoscope families
3. Performance test methods	Independent institutes which validate reprocessing cycles	<ul style="list-style-type: none"> • Qualification of test methods from ISO 15883 part 5 • Development of a master test body to evaluate commercially available test bodies • Performance of round-robin tests

A national guideline committee has been established which represents all professional groups involved in hygiene and infection in Endoscopy (Table 1). The multidisciplinary structure of the guideline committee is the basis for a national wide acceptance and consensus.

Content of guideline

The guideline describes

- basic requirements for validation of WD
- test procedures for installation (IQ), operational (OP) and performance qualification (PQ)
- checklists for implementation
- test procedures (e.g. for cleaning efficacy, microbiological surveillance)

Establishment of subgroups

During the guideline development, the committee group identified three open questions which could not be answered efficiently by the European norm and which needed to be clarified for the national level:

1. Which data should be relevant for the type testing?
2. To what extent should endoscopes be included in type testing?
3. Which standardised method can be used to test the cleaning efficacy of reprocessing cycles?

Under the chairmanship of the committee members, three sub-groups were founded (table 2).

Summary:

The implementation of the European Norm EN ISO 15883 on the national level is a complex process which should involve all official bodies relevant for hygiene and infection control in the respective country. Open questions should be clarified on evidence based practice and research.

References:

1. EN ISO 15883-1: 2006. Washer-disinfectors -- Part 1: General requirements, terms and definitions and tests
2. EN ISO 15883-4: 2008 Washer-disinfectors -- Part 4: Requirements and tests for washer-disinfectors employing chemical disinfection for thermolabile endoscopes
3. DIN ISO/TS 15883-5: 2005. Washer-disinfectors -- Part 5: Test soils and methods for demonstrating cleaning efficacy
4. Beilenhoff U., Neumann C, Biering H. et al. ESGE guideline for process validation and routine testing for endoscope reprocessing. *Endoscopy* 2007; 39: 85-94

L7

Establishing new department under hygiene aspect

Christina Bradley, Birmingham, UK

Abstract not submitted

Session 3: Free Paper Session II

L-8

The effect of a national training programme for sedation and emergency management on the quality of daily practise in Endoscopy

K. Leicht¹, D. Schilling¹, U. Beilenhoff², E. Kern – Waechter³, A. Riphaut⁴; ¹ Diakoniekrankenhaus, Mannheim; ² Ulm; ³ ekw-concept, Walldorf; ⁴ Knappschafts Krankenhaus, Bochum, Germany

Introduction: Short-acting hypnotic Propofol is increasingly being used in German endoscopy departments, often replacing standard sedation with Benzodiazepines. With the introduction of the German S3-Guideline „Sedation in gastrointestinal endoscopy“ and following legal advice, medical endoscopists in Germany can now perform propofol sedation for GE endoscopy, provided the physician is trained in advanced resuscitation techniques and is experienced in the use of iv sedatives (1). To enable qualified nurses to assist in and monitor the sedation process during low risk endoscopy (after a qualified physician has induced sedation) a national core curriculum for nurse training in sedation and emergency management was developed based on this guideline. The curriculum covers training in sedation and emergency management, comprising of 16 hours theory and 8 hours practice (2). 363 courses have now been officially recognized. From 2009 until May 2011 over 4000 nurses passed the three-day course,

Aim: To evaluate the effect of this training course on the structure quality (equipment, staff) and process quality in endoscopy (risk assessment, documentation, sedation management, recovery and discharge).

Method: Course participants completing the course between January 2009 and June 2010 were sent a questionnaire. Only those having completed the course for more than 6 months were included, as changes needed time to be implemented. The survey compared the working conditions before and after completing the course. Only one completed questionnaire per department was accepted.

Results: 2113 nurses from 1043 departments were sent a questionnaire. 219 departments (119 in hospitals, 100 in private practice) returned the questionnaire (20.99% response rate). In 85% of departments improvements were implemented (see table)

Results in % before and → after the courses		
Changes in structure quality and process	In hospitals	In private practice
Increased number of staff or changed working hours	54,6	25
Resuscitation equipment available in endoscopy room	75,6 → 89,9	81 → 92
additional informed consent for sedation	41,8 → 58,0	68 → 81
Use of scores and classifications to assess patient's risks, satisfaction and pain	55,6 → 93,9	82 → 99
Automated blood pressure monitoring during procedures	86,6 → 98,3	82 → 96
Preparation of medication immediately before use	79,0 → 96,0	82 → 89
Use of standardised discharge criteria	17,6 → 80,3	17 → 58
Nurse Discharge authorised by physician	68,1 → 80,6	78 → 86
Patients are accompanied on discharge	79,0 → 91,6	86 → 100

Summary

The survey showed that special training courses in sedation and emergency management improved structure quality (equipment, staff) and process quality in endoscopy (risk assessment, documentation, sedation management, recovery and discharge).

References:

1. Riphaut A et al. S3-Leitlinie „Sedierung in der gastrointestinalen Endoskopie“ 2008 (AWMF-Register-Nr. 021/014) *Z Gastroenterol* 2008; 46: 1298–1330. English version: Riphaut A et al. S-3 Guideline: Sedation for gastrointestinal Endoscopy 2008. *Endoscopy* 2009; 41: 787-815
2. Beilenhoff et al. DEGEA-Curriculum Sedation and Emergency Management in Endoscopy. *Endo-Praxis* 2009; 1; 32-35. English version on www.degea.de

Learning outcomes: Participants should be aware of

- the nurses role in sedation and monitoring
- the effect of structured training on the quality of patient care in endoscopy

L-9

Stress increases the risk for relapse in patients with inflammatory bowel diseases: A case-crossover study

Susanna Jäghult¹, Fredrik Saboonchi^{1 2 4}, Jette Möller³, Regina Wredling¹, Marjo Kapraali¹

¹ Karolinska Institutet, Department of Clinical Sciences, Danderyd Hospital, ²Sophiahemmet University College, ³ Karolinska Institutet, Department of Public Health Sciences, Division of Public Health Epidemiology, ⁴Stockholm University. Sweden

Objective: Inflammatory bowel diseases (IBD), including Crohn's disease (CD) and ulcerative colitis (UC), are chronic diseases, characterized by alternating periods of remission with relapses. There is still unknown if some factors can be considered as causing a relapse in IBD. However, a host of factors such as diet, smoking, infection, NSAID have been suggested to trigger relapses. During the last decade, psychological stress has been reported to be potential trigger of relapses in IBD [1, 2, 3]. Earlier studies that have investigated possible trigger factors for relapse in IBD have been retrospective. There is a need for controlled studies with a prospective data collection. The present study has a prospective, case-crossover design in order to examine if stress can be identified as a potential trigger to relapses in IBD.

Method: Sixty patients with CD or UC and in remission were included in this prospective case-crossover study. The patients should not have any other chronic diseases and they should not have had the disease for longer than two years. The case-crossover method was developed to examine trigger factors to acute events. It is based on the assumption that most people in their daily life cross over short periods of exposure to hypothetical triggers and much longer periods of unexposed time. By comparing the two different periods each patient can serve as his or her own control. Information about relapse, symptoms and potential triggering factors, such as perceived stress, were collected from a structured diary that the participants filled out daily during six months. A total of 50 patients completed the study.

Results: During the data collection there were 25 patients that had one or several relapses. A total of 42 relapses were identified. The analyses showed that perceived stress can be a triggering factor to relapses in IBD. High level of stress increases the risk of relapse the next day. The level "quit a lot" displayed an increased risk with OR 4.8 (CI 1.1-21.1). Stress in the level "some", also showed an increased risk, although not statistically significant. Perceived stress in the level "a little" did not display an increased risk.

Conclusion: Present study shows that perceived stress seem to be an important factor in triggering relapses in IBD. The result is strengthened by the design of the study where the patients are working as their own controls.

Learning outcomes: The result contributes to important knowledge in a clinical view. This information can lead to a better caring for the patients and in the prolongation the relapses may decrease.

References:

1. Levenstein, S., et al., Stress and exacerbation in ulcerative colitis: a prospective study of patients enrolled in remission. *Am J Gastroenterol*, 2000. 95(5): p. 1213-20.

2. Sing, S., et al., Do NSAID, antibiotics, infections, or stress trigger flares in IBD? *Am J Gastroenterol*, 2009. 104:p. 1298-1313

3. Maunder, R.G, Evidence that stress contributes to inflammatory bowel disease: Evaluation, synthesis, and future directions. *Inflamm Bowel Dis*, 2005. 600-608

L-10

Nursing care of clinical research patients with advanced esophageal cancer

Suzana Muller, RN, MsC, PhD, Clinical Research Center of Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil

Background: Esophageal cancer is the ninth most common and endemic neoplasia in developing countries. In Brazil the estimated incidence is 8.64 new cases/100.000 men and 2.74 new cases/100.000 women¹. The treatment for esophageal cancer is lengthy, decreases the quality of life, and is fatal in a significant number of cases. Single or combination therapies are used that can involve chemotherapy, radiation therapy and supportive care. Chemotherapy is administered to control systemic disease whereas radiation therapy is used to shrink tumors locally. Pain control, emotional and nutritional support are the main focus of palliative care². A clinical trial is one of the final steps in cancer research that can result in medical advances for patients, such as a new drug, or a new approach to surgery or radiation therapy. Sometimes the only way to increase quality of life and lengthen life for some time is through new therapies³. The clinical trial process is the only way to achieve this goal. The research nurse is one of the staff members who is in touch with such patients and family as they go through their research experience.

Objectives: Describe the role of the nurse in assisting patients with esophageal cancer belonging to a clinical research program.

Methodology: The needs, fears, expectations, physical conditions and adverse events of 4 EC patients and their families as well as the RN care will be described while these patients received infusion treatment in a clinical research setting.

Results: 4 patients (3 male and 1 female) received chemotherapy and radiotherapy treatment during Dec 2009 to Jan 2011. The emotional feelings observed or expressed were: hope of being cured, insecurity about feeding tubes, anger with family. The physical changes recorded were: weight loss, dehydration, swallowing difficulties, chest pain, odonophagia and back pain, salivation, vomiting, use of naso-enteral tube or jejunostomy and halitosis. Adverse events observed during infusion were: diarrhea, nausea, vomiting and pain. The nursing care program included the following:

- Managing the area and preparing the nurses to admit the patient.
- Receiving the patient and family, explanation of and showing the infusion area.
- Allowing one family member to stay with the patient during the infusion.
- Making the patient as comfortable as possible.
- Knowledge about the trial infusion protocol and its adverse reactions and possible adverse events.
- Teaching the family members how to take care of the central catheter, feeding tubes, pain medications, anti-emetics and liquid intake.

- Educate patient and family about the importance of rest, smoking avoidance, and coping with doubt.
- Nutrition consultation
- Reinforce the possibility of chemotherapy and radiation therapy side effects.
- Reinforce the importance of numerous tests and medical appointments scheduled ensuring adherence to protocol.

Conclusions: The research nurse coordinates various support services, patient and family education, clinical assessment, nutritional management, knowledge of side effects and adverse events, in addition to palliative care. Knowledge about the patient and family expectations helps the nurse to provide patients and their families with a better understanding of their disease and help keep patients comfortable. Moreover it allows for greater adherence to the protocol and improves the efficacy of the treatment.

Learning points:

1. Esophageal Cancer patients in a clinical research setting are debilitated and hopeful becoming sensitive.
2. The research nurse is one staff member responsible for the patient's adherence to the protocol.

References:

1. Guerra MR, Gallo CVM, Azevedo G, Mendonça S. The risk of cancer in Brazil: tendencies and recent epidemiologic studies. *Revista Brasileira de Cancerologia* 2005; 51(3): 227-234.
2. W H Allum, S M Griffin, A Watson, D Colin-Jones. Guidelines for the management of oesophageal and gastric cancer. *Gut* 2002;50(Suppl V):v1-v23.
3. Herbella FAM, Harris EJ. Esophageal Cancer Clinical Presentation 2011 Oncology Program http://www.umgcc.org/thoracic_program/esoph_therapy.htm T horacic.

L-11

Preliminary results from a prospective study on clostridium difficile toxin type and antibiotic sensitivity in inflammatory bowel disease

Matteo Martinato¹, Alessia Rosaria Grillo¹, Renata D'Inca¹, Marco Scarpa², Roberta Caccaro¹, Giacomo Carlo Sturniolo¹, Ignazio Castagliuolo¹; ¹Università degli Studi di Padova, ²Istituto Oncologico Veneto, Padova, Italy.

Introduction: *Clostridium difficile* (CD) is an opportunistic pathogen causing about 20% of all cases of antibiotic-associated diarrhoea. The importance of CD infection (CDI) in Inflammatory Bowel Disease (IBD) patients is increasingly being recognized and stool testing in relapsing patients is nowadays recommended by international guidelines. European nurses, especially clinical nurse specialists like IBD nurses, are widely involved in providing telephone help line services and in assessing IBD patients in relapse but not always recommend stool testing for CD in case of relapse because CDI is mainly considered an hospital acquired infection.

Aims & Methods: The aim of the study was to describe the frequency of CDI in IBD according to clinical activity and to characterize CD strains isolated from IBD patients as regard to antibiotic sensitivity and toxin type. Stool samples were collected from 103 IBD patients and 40 age- and sex-matched healthy controls. IBD patients have been enrolled during a follow-up visit or at hospital admission. On each faecal sample we performed an anaerobic culture on solid

media after 70% ethanol shock followed by specific 16SRNA polymerase chain reaction (PCR) to identify CD colonies. Positive colonies were characterized by multiplex PCR to identify microbe toxin-type. E-test was performed for ciprofloxacin, metronidazole and vancomycin sensitivity. Clinical data were collected in order to correlate CDI to antibiotics use, disease activity, disease extent and location, type of therapy and hospitalization.

Results: In healthy controls CDI frequency was 10%, however all the strains were non toxigenic. In IBD patients in remission, CD was identified in 16,3% but only 15,4% of the strains were toxigenic whereas in patients with active disease it was identified in 13% with 33% of the strains being toxigenic. All toxigenic CD strains isolated from IBD patients with active disease were toxin A and toxin B positive (A+; B+), whereas among patients in remission 50% were A+B+ and 50% A-B+. CD strains isolated from IBD patients with active disease were resistant to Ciprofloxacin (MIC>32 mg/L), but susceptible to Metronidazole (MIC<0.19-0.75 mg/L) and Vancomycin (MIC<0.5 mg/L). Multivariate analysis identified patients with ileal Crohn's disease and patients treated with biologics being at higher risk of CDI.

Conclusion: IBD patients are at higher risk of CDI with respect to controls. CDI is more frequent in ileal Crohn's disease and in patients hospitalized or treated with biologics. Immunoassays, routinely used in clinical practice, should test both toxin A and toxin B.

References

- Ananthakrishnan et al. Impact of *Clostridium difficile* on inflammatory bowel disease. *Expert Rev Gastroenterol Hepatol.* 2010 Oct;4(5):589-600.
- Musa et al. *Clostridium difficile* infection and inflammatory bowel disease. *Scand J Gastroenterol.* 2010 Mar;45(3):261-72.

Learning Outcomes

Delegates can learn about CDI frequency and risk factors in IBD patients and the appropriate tests to be performed.

L-12

Quality control on efficacy of reprocessing in a digestive endoscopy service

Mirella Scacchi, Suzanne Judet, Matteo Martinato. Azienda Ospedaliera – Università di Padova, Padova, Italy.

Introduction : Microbiological surveillance is important in order to assess outcomes of reprocessing procedures and is a useful tool for quality control in gastrointestinal endoscopy. It is useful also for detecting weaknesses and mistakes in the reprocessing procedure in order to prevent the transmission of infectious agents through endoscopy.

Aim and objectives: Aim of the study is the assessment of efficacy of reprocessing in order to provide the best safety environment to both patients and healthcare personnel applying the ESGE-ESGENA guidelines.

Methods: Microbiological tests have been performed in three different periods on a sample of sixteen endoscopes (one third of all), on all eight washer/disinfectors and on all four endoscope drying/storage cabinets in one of the digestive endoscopy department of Padova University Hospital.

Both nurses and nurse assistants have been instructed on how to perform microbiological tests according to ESGE-ESGENA guidelines.

Using aseptic techniques, all endoscopic channels and the outer surface of endoscopes, the inner surface and the end of every washing pipe of every washer/disinfector, and the internal surface of every endoscope drying/storage cabinet have been tested.

Results: In the first period, 6 out of 64 tests performed on endoscopes were positive for nosocomial infections, 2 out of 16 tests performed on washer/disinfectors were positive and all tests performed on endoscope drying/storage cabinet were negative. Corrective actions have then been implemented: from then on, endoscopes have been washed immediately at the end of any endoscopic procedure using the air/water washing system; every day the suction pipe has been replaced and the water bottle has been sterilized; every washing kit used to wash each instrument have been washed and disinfected; the tap water main filter have been replaced and an yearly replacing plan have been implemented; an internal course was performed to all healthcare personnel involved in the reprocessing process. After the implementation of these corrective actions, in the second and in the third periods all tests were negative.

Conclusions: To provide a really safe environment to both patients and healthcare personnel, it is fundamental to systematically reassess the efficacy of internal procedures and in case of sub optimal results it is necessary to investigate and identify the possible source of the problem and to provide corrective actions in order to improve the process.

References

- Beilenhoff U, Neumann CS, Rey JF, et al.; ESGE Guidelines Committee. ESGE-ESGENA guideline for quality assurance in reprocessing: microbiological surveillance testing in endoscopy. *Endoscopy*. 2007 Feb;39(2):175-81.
- Beilenhoff U, Neumann CS, Biering H, et al.; ESGE; ESGENA. ESGE/ESGENA guideline for process validation and routine testing for reprocessing endoscopes in washer-disinfectors, according to the European Standard prEN ISO 15883 parts 1, 4 and 5. *Endoscopy*. 2007 Jan;39(1):85-94.

Learning outcomes

Efficacy assessment is a relevant part of the quality control system in digestive endoscopy.

Corrective actions can improve efficacy of endoscope reprocessing.

L-13

Reprocessing process of endoscopes and accessories: should we audit it?

Joaquim Andrade; Rosa Ferreira (Infection Control Committee) Institution: Centro Hospitalar do Alto Ave; Unidade de Endoscopia Digestiva; 4835-044 Guimarães, Portugal

Introduction: Reprocessing endoscopes and accessories is a critical activity in assuring the safety of the patients submitted to endoscopic procedures. Minimizing risks of infection should be the main aim of the reprocessing action.

Aim: Describe procedures of a management tool for evaluating quality of actions in general that represent a constructive process to prevent infection risk in endoscopy and to provide excellent clinical outcomes and indicators of patient safety. These procedures/rules are submitted to an external Audit, to credibly its implementation in the Good Practice Quality Manual.

Method: We developed a management tool specifically to satisfy the needs identified by our Unit, built in partnership with the Infection Control Committee of our Institution and so, currently applied in all services using flexible endoscopy. We created an interactive system comprehending a list of standard procedures, a verification form, a collecting data tool and tables quantifying infection risk. All these items are under the principles and law advocated by national and international institutions on these issues. This interactive system allows the elaboration of an objective daily practice report. All this process was submitted and will be frequently monitored by an Audit, performed by qualified employees of our Institution, but external to our Unit of Endoscopy.

1. Standard Procedures (flexible endoscopes decontamination): In order to standardize decontamination procedures practices across the whole institution.
2. Verification Form (endoscopes and accessories reprocessing audit): Decontamination process; quality assurance; specific training and management. Each standard procedure is itself subdivided into criteria of specificity.
3. Risk Management Matrix: Elaborated in accordance with the IFIC (International Federation of Infection Control).
4. Final report: Conducts to a dynamic and interactive process that involves specialized departments in various areas.

Results: The overall evaluation of the reprocessing process related to flexible endoscopy in our institution allowed to verify that there was a disparity in procedures among Units using this diagnostic and therapeutic technology. In our Unit, we detected deviations in some specific criteria of standard procedures. This allowed identifying the focal points for future investment, taking always in account the cost/benefit balance.

Conclusion: This kind of management tool and its auditing revealed fundamental to help monitoring the reprocessing process of endoscopes and accessories. It was possible to identify and correct deviations caused by daily practice routine, inadequate conditions, standard procedures and criteria implemented inadequately. Involvement of various institutional departments contributed for the easier detection of deficiencies and provided a qualitative change in our effective daily practice.

Summary: We report the development of a consistent method for auditing infection prevention, control policies and practices implementation, concerning reprocessing of endoscopes and accessories.

References:

- Healthcare Commission. Flexible endoscopy audit tool. [Online]. 2006 [cited 2009 Oct 26]. Available from: URL: <http://www.grs.scot.nhs.uk>
- ESGE-ESGENA guideline: Cleaning and disinfection in gastrointestinal endoscopy - Update 2008: <http://www.esge.com>

Learning outcomes: Audits can help improve quality, infection prevention practices, and patient safety. A well-constructed audit tool is a guarantee of quality

and provides information for consistent and permanent improvement in the considered process.

Session 4: Management

L-14

The Gastronet – a tool for quality improvement in gastrointestinal endoscopy

Siv Furholm RN, The Cancer Registry of Norway, Oslo, Norway, Magnus Løberg MD, Lars Aabakken MD prof, Tom Glomsaker MD, Michael Bretthauer MD, Geir Hoff MD prof

Introduction: Gastronet is an international quality assurance (QA) program in gastrointestinal endoscopy. It started in 2003 in two Norwegian hospitals, and is now the national Norwegian QA registry for GI endoscopy. The background for establishing the program was to ensure good quality of endoscopists to facilitate a future Norwegian colorectal cancer screening program. The main objectives of the program are to improve both the quality of the endoscopy services, as well as facilitating research activity (1-3). This paper describes the set-up, infrastructure and extension of the Gastronet program.

Methods: Endoscopy personnel fill in a form of QA variables after each examination. The day after the examination, the patient fills in a questionnaire regarding pain, discomfort and overall satisfaction. Data are collected at the Gastronet secretariat and made available to the participating centers for quality improvement purposes (1, 4). Each endoscopist and nurse remains anonymous, but gets a personal code to investigate their own results and compare them to overall accumulated data. Recruiting new centers and raising the enthusiasm for quality improvement are enhanced via site visits and regular information in national endoscopic journals. Gastronet is financed by the Health Trust of South-East Norway.

Results: In Norway, 28 hospitals participate in Gastronet, reporting about 1/3 of the total amount of colonoscopies and ERCPs performed in Norway. This number has been stable during the last four years. The recent growth in participating centers has come from abroad; today, centers in Poland, Latvia and Sweden participate in Gastronet. Improving the quality of the endoscopic services at the participating centers has proved difficult, possibly due to lack of involvement in using the data locally.

Conclusions: If utilized intentionally, Gastronet can be an important tool to raise the skills of the endoscopic personnel, the patient's satisfaction and the working conditions in the endoscopy centers. Currently, six PhD candidates are writing their thesis using Gastronet data, and several articles have been published. The Gastronet program offers great possibilities for academic progress for nurses as well.

References

1. www.kreftregisteret.no/gastronet
2. The Norwegian Gastronet project: Continuous quality improvement of colonoscopy in 14 Norwegian centers. Hoff G, Bretthauer M, Huppertz-Hauss G, et al. *Scand J Gastroenterol* 2006;41:481-7
3. Continuous evaluation of patient satisfaction in endoscopy centers. Larsen IK, Grotmol T, Bretthauer M, et al. *Scand J Gastroenterol* 2002;37:850-5

4. Sustaining the vitality of colonoscopy quality improvement programmes over time. Experience from the Norwegian Gastronet programme. Seip B, Bretthauer M, Dahler S, et al. *Scand J Gastroenterol* 2010;45:362-9

To take home: A quality register is a powerful tool for all types of improvement in the gastroenterology department.

Within the data collected lie huge possibilities for academic progress for nurses and endoscopy personnel, all for the best patient satisfaction, treatment and security.

L-15

How to give bad news – tools for difficult communication

Dagmar Schmid, University Hospital. Basle, Switzerland

Physicians who are good at discussing bad news with their patients usually report that breaking bad news is a skill that they have worked hard to learn. Furthermore, studies of physician education demonstrate that communication skills can be learned, and have effects that persist long after the training is finished (Barth & Lannen; *Ann Oncol*; 2010).

Basically BBN can be viewed as a combination of two distinct communication skills: Providing information and responding to emotion.

A well known paradigm in the area of information giving in general is the Provide-elicite-provide sequence (e.g. in motivational interviewing). The same holds for BBN, where the acronym BAD signifies exactly this procedure: Break bad news, acknowledge reaction, develop plan for the future. Depending on the patient's reaction after having received bad news, two tasks emerge for the provider: either continuing giving information, if the patient responds with a request for e.g. therapeutic options („...And is there anything we could do right now?"; or responding to the patient's emotion, if s/he reacts with shock, sadness, anxiety, etc. Then one of the typical set of techniques might be helpful (e.g. NURSE model by Back et al.; *Arch Intern Med*, 167; 2007).

A typical mistake doctors make is the provision of too much information in the first consultation. In doing so they follow patients' desire for 'full information' (Cox et al; *Europ J Oncol Nursing*, 10; 2006), even though no patient will ever be fully informed about the nature of his or her disease and all the therapeutic options that exist – the expert knows more than the patient and exactly therefore, the expert is consulted. Almost all patients have a reduced capacity to receiving new information immediately after having been told bad news: Therefore information should be given in segments that do not overwhelm the patient's capacity.

L-16

How to organize mass screening for colo rectal cancer

Chris Mulder, Amsterdam, NL

Abstract not submitted

Session 5: Complication Management

L-17

Complication management – the airline way

Dominic Cardozo, Bremen, Germany

Abstract not submitted

L-18

Patient Safety and Error Management in Endoscopy

Michael K. Ortmann, Division of Gastroenterology, Hepatology and Pneumology, University Hospital Basle

Introduction: Long before different health care areas started to worry about avoiding errors and applying safety concepts, questions concerning „Man and the Increasing Complexity of the Working Environment“ have been dealt with in areas as diverse as aviation, nuclear industry and petro chemistry. Given that every endoscopic examination carries an inherent risk of complications and that the personnel do evolve in an increasingly complex working environment, it seems crucial to address patient safety issues and to develop adequate concepts. All examinations carried out under sedation or anaesthesia not only involves certain risks depending on the medication used and its side effects, but also the complications inherent in the actual examination, such as possible bleedings or perforations. In addition, a chain of unfortunate events can lead to treatment errors, damages, near misses, or critical events.

Background: In addition to that, the medical and technical progress leads to ever more complicated and higher risk examinations requiring the use of a vast variety of equipment. The amount of people in charge of a person during her hospitalization has increased; patient care thus becomes less personal. No single person can know everything. The patients' expectations are growing. More and more lawyers deal with the area of medical law and in some magazines they literally incite people to sue.

Aims & Method: The aim of is to address questions on patient safety and error management in endoscopy...

- What caused the upsurge in interest in this topic and how did it enter the focus of public attention?
- Which legal foundations lead to the examination of the matter?
- Are there any theoretical models on patient safety and error management in the literature?
- How can mistakes and safety shortcomings in endoscopy be analyzed?
- Which counter measures exist?

The Method and important steps was, where to introduce the order to systematically analyze the errors and security breaches in endoscopy I use the MTO analysis.

Because Man – Technology and Organization, are the main factors or influences which can possibly lead to adverse events.

Conclusion: In the international literature the scientific debate on the identification and the avoidance of errors in healthcare is being held reluctantly – as can be measured by scientific studies. This is all the more astonishing as the lay press has been widely covering this problem for years. A report by the Institute of Medicine under the title “To Err is Human” and the follow-up analysis and comments, particularly in the special focus issue “Reducing Error – Improving Safety” have sensitised the experts in this domain. With the recent amendment of the health insurance the climate in Switzerland is now favourable to the development and the implementation of measures to avoid errors in medicine.

L-19

Post-complication communication with staff, patient and relatives

Peter N. Meier, Hannover, Germany

An endoscopy team should be prepared for complications – they should anticipate and recognize them. In general, preparedness includes having emergency plans in place, obtaining informed consent, having sufficient material and appropriate equipment available, using trained staff, and monitoring and surveillance of the patient.

After a complication has occurred, at first appropriate interventional action should be taken to minimize, reverse or avoid further deterioration. Then, respective complications have to be documented, communicated, analyzed, and reviewed. A clear, detailed, and honest report has to be written.

When a complication is recognized it should be communicated immediately by the involved staff via direct communication. There is evidence that a fast reaction results in a better outcome, as demonstrated in the surgical treatment of esophageal perforations. What should be communicated is the truth, including the nature and course of the complication, the strategy for management, the physicians involved, and the expected outcome.

To whom a complication should be communicated at first depends on the situation – e.g. the patient, the family, the referring physician, or the surgeon. The key points in giving bad news are: to provide an appropriate setting, assess baseline knowledge, discern level of information, present information in clear language, repeat key points, allow time for questions, allow patient or family time to respond and acknowledge their responses. In addition to the patient and his family, complications should also be communicated to the referring physicians and colleagues, the administration, and the lawyers.

Communication of complications is always a painful procedure but the better prepared and more experienced physicians are, the less difficult it will be. One should always aim at decisions on scientific evidence and seek multidisciplinary advice.

Any complication should be discussed within the team or a so-called “complication/mortality round,” in order to learn from it. The best preparation for a complication is a good and solid indication!

L-20

Complications of Bariatric Surgery for the Gastroenterologist

Marcel J.M. Groenen, Arnhem, NL

The different forms of Bariatric surgery can be divided into three different groups. First, the restrictive surgery where the volume of the stomach or gastric access is reduced and therefore food intake is limited. This group includes the Vertical Gastroplasty with band, Sleeve Gastrectomy and the laparoscopic adjustable gastric band. The second group is the malabsorptive surgery where the ingested food is not directly in contact with digestive enzymes and thus less nutrients are absorbed. These include the jejunoileal bypass, the biliopancreatic diversion and diversion with biliopancreatic duodenal switch. This group has recently become less frequently performed. The third group is a combination of both as restrictive and malabsorptive surgery. This includes the Roux-en-Y gastric bypass. This is currently most frequently performed operation for morbid obesity in the Netherlands. The different types of surgery have their various complications. The part where the doctor MNCs get involved especially the laparoscopic gastric banding and Roux-en-Y gastric bypass is presented. Part of the complications are also possible in other forms of surgery, but are not described separately.

The laparoscopic gastric band

The first complication is the acute obstruction that occurs in approximately 6% of patients. Immediately after surgery, this is often caused by edema. For this a oesofago-gastro-duodenoscopy is performed to assess the grade of obstruction and if necessary any tube placement. Persistent obstruction requires surgery. In about 7% of the patients erosion of the gastric band is experienced. This complication occurs on average 22 months after placement, with a clinical picture of infection, nausea and vomiting and possibly bleeding. At the moment the whole gastric band erodes through the stomach wall and it is visible in the stomach, it can be removed endoscopically. Other reasons for endoscopy are reflux symptoms, complaints of passage of food, which may include migration or prolapse of the gastric band or a pseudo-achalasia for which the band has to be drained or surgically removed.

Roux-en-Y Gastric Bypass

The most seen complication for the gastroenterologist are leaks and fistulae of the anastomoses. This occurs in 0 to 5.1% of patients. This complication is also applicable to other malabsorptive surgery. Most of these leaks or fistulae are at the place of the pouch and gastroenterostomy. Surgical repair operations are difficult in this area were previously is operated. Endoscopic options for closing these leaks and fistulas are:

- Closing defect with various endoscopic clips
- The use of tissue glue to close the defect
- Bridging and sealing defect with stents

Another complication were endoscopic treatment is desired is bleeding, usually at the site of the anastomosis, but also in later stages of peptic ulcer bleeding.

As a result of ischemia, but also stress on the seam, stenosis can occur at the anastomosis. This can be

treated by dilation with balloons or Savarry, often in multiple sessions.

After bariatric surgery, cholelithiasis formation occurs in 38 % of the patients. Describing prophylactic ursodeoxycholic acid the number of patients with cholelithiasis would reduce to 2%. A small percentage of patients will develop symptomatic choledocholithiasis. There are two possible approaches to the endoscopic treatment;

- Balloon Assisted Enteroscopy retrograde into the duodenum
- Surgical gastrotomy combined with conventional ERCP

Session 6: GE Diseases

L-21

Irritable Bowel Syndrome (IBS) from a person centred perspective

Gisela Ringström, RN, PhD., Sahlgrenska University Hospital, Gastroenterology and Hepatology, Gothenburg, Sweden

Person-centred care is a policy that focuses on the person with an illness instead of focusing on the disease in the person. In person-centred care the person's own experience of symptoms is just as important as medical data/observations. Behaviours and symptoms are understood from the perspective of the person and the patient is involved as an active, collaborative partner (1).

Irritable bowel syndrome (IBS) is a functional gastrointestinal disorder. The prevalence is estimated to 15 % in the western population. The disorder is from a medical point of view not serious, but many patients are suffering from disabling symptoms and also have feelings of not being taken seriously in the health care system (2, 3). Pathophysiological mechanisms are only partly understood, treatment options are limited and focusing on patients' concerns and explaining symptoms are put forward as important in the management of the patients (4).

The presentation highlights some issues with the point of departure in a person-centred care approach in patients with IBS. It deals with some of the problems in diagnosing the disorder and how to explain the disorder to the patients. The presentation also contains several examples of the patients' experiences of living with IBS, and their experiences from their meetings in the health care system.

References:

1. <http://www.gpcc.gu.se>
2. Meadows LM, Lackner S, Belic M. Irritable bowel syndrome. An exploration of the patient perspective. Clin Nurs Res. 1997 May;6(2):156-70.
3. Hakanson C, Sahlberg-Blom E, Ternstedt BM. Being in the patient position: experiences of health care among people with irritable bowel syndrome. Qual Health Res. 2010 Aug;20(8):1116-27.
4. Spiller R, Aziz Q, Creed F, Emmanuel A, Houghton L, Hungin P, et al. Guidelines on the irritable bowel syndrome: mechanisms and practical management. Gut. 2007;Dec;56(12):1770-98.

L-22

Unexplained self-reported food hypersensitivity: Lifestyle and psychological factors

Ragna Lind, RN, PhD, Institute of Medicine,
Section of Gastroenterology, University of Bergen,
Norway

Objective: In Western societies 20-30% of the general population report adverse reactions to food, but only 1-3% have medically verified food allergy (1). Psychological factors are supposed to be a major cause of the prevalent non-allergic reactions (2). The overall objective of the thesis was to investigate whether psychological factors predict symptom severity in patients with self-reported food hypersensitivity.

Methods: Patients (n=168: mean age 39 years, 80% women), referred to a university hospital because of gastrointestinal complaints self-attributed to food hypersensitivity, and age- and sex matched controls filled in questionnaires with focus on quality of life, subjective health complaints and modern health worries, lifestyle, and psychological factors like job stress and coping strategies, anxiety and depression.

Results: In most patients the abdominal symptoms complied with the irritable bowel syndrome. In addition, the patients often had systemic complaints, especially chronic fatigue and joint pain. Indications of IgE-mediated food allergy were rare. The patients reported impaired quality of life and significantly more anxiety and depression than the controls. Lifestyle differed little between patients and controls. Job stress and coping strategies were unrelated to the patients' health complaints and psychological factors explained together only 10% of the variance in the patients' symptom severity.

Conclusion:

Anxiety and depression are prevalent, but do not predict symptom severity, in patients with unexplained self-reported food hypersensitivity.

Implication for practice: Subjective health complaints (somatic complaints) in patients with unexplained self-reported food hypersensitivity may be more biological and less psychological than often assumed.

References:

- (1) Rona RJ, Keil T, Summers C, Gislason D, Zuidmeer L, Sodergren E et al. The prevalence of food allergy: A meta-analysis. *J Allergy Clin Immunol* 2007; 120:638-646.
- (2) Hausteiner C, Bornschein S, Bubel E, Groben S, Lahmann C, Grosber M et al. Psychobehavioral Predictors of Somatoform Disorders in Patients with Suspected Allergies. *Psychosom Med* 2009; 71:1004-1011.

L-23

Special Needs of the Elderly Patient in Gastroenterology

Gerlinde Weilguny, Department of Internal Medicine III,
Endoscopy, University of Vienna, Austria

Introduction: In well developed countries we see a demographic trend to ageing of the population. Therefore we have to treat and take care of a rising number of older patients in our GI units, too. In comparison to young patients old people in hospitals have decreased physiologic reserves and more

associated diseases; complications can be more severe. Therefore indications for diagnosis and treatment have to be well considered.

Educational Objectives:

Disabilities: As old patients often don't hear well and are slowly in understanding what is spoken, we have to provide information in a well understanding form, individually adapted to the cognitive and audiovisual capabilities. Discrimination because of older age and disabilities has to be avoided.

Malnutrition: Elderly people are prone to malnutrition and have problems to keep themselves in a balanced hydration state. Nurses and doctors should increase their awareness of pre-existent malnutrition and dehydration as well as deteriorations due to numerous investigations during the diagnostic process.

Abdominal pain: When elderly suffer from abdominal pain the consequences may differ from younger patients. Pain and severity of the disease often do not correspond. The most frequent reasons for abdominal pain in elderly are diseases of the bile tract. The typical location of pain in the right upper quadrant, temperature and vomiting are missing frequently.

What makes sense in endoscopy?

Elderly with GI-bleeding and suspected cancer will draw a benefit from gastroscopy. Diagnostic and follow-up gastroscopy in dyspepsia may be essential for a tailored treatment. Benefits of colonoscopy in elderly patients are proven in rectal bleeding, positive focal occult blood testing and iron deficiency anaemia. According to the US Preventive Task Force colorectal cancer screening is not recommended above the age of 75. Age is a predictor of perforation from colonoscopy – 1% more with every year of age. Several studies state that colonoscopy is more challenging in older patients. The cecal intubation rate mainly depends on the quality of the preparation. Older individuals more often have an incomplete preparation because of more constipation, reduced mobility and difficulties to complete the preparation. Therefore they, in particular, prefer low volume preparations. Old people have a higher prevalence of bile duct stones and biliopancreatic cancer. ERCP reduces morbidity and mortality, extends life or avoids surgery. Interestingly ERCP complications are equal or even less severe and frequent compared to younger patients in most studies.

Sedation: An ASA score evaluation should be done before endoscopy (as in all patients) and a permanent oxygen supplementation should be given. Usually elderly need a smaller amount of sedatives but some patients are regular consumers of and therefore used to hypnotics. Elderly people in endoscopy need well educated and certified staff for intravenous sedation and recovery care. Propofol sedation is safe in elderly people if dosage is adjusted to age and co morbidities.

Conclusion: With increasing age and frailty considerations to reduce the efforts of high-tec medicine and abundant life prolongation become more and more important, for the patient, the nurse and the physician.

References:

- Clarke GA et al.: The Indications, Utilization and Safety of Gastrointestinal Endoscopy in an Extremely Elderly Patient Cohort. *Endoscopy* 2001; 33(7): 580-4
- Cohen LB, Tennyson C.: Bowel preparation for Colonoscopy: Maximizing Efficacy, Minimizing Risk. *Gastroenterology@Endoscopy News Special Edition* 2007; 23-31
- MoenkemueLLer K et al.: Gastrointestinal endoscopy in the elderly: Current issues.

Best Practice & Research Clinical Gastroenterology 2009; 23(6): 821-7
Syed-Mohammed Jafri et al.: Endoscopy in the Elderly. A Review of the Efficacy and Safety of Colonoscopy, Esophagogastroduodenoscopy, and Endoscopic Retrograde Cholangiopancreatography. J Clin Gastroenterol 2010; 44(3): 161-6
Practice guidance - principles, standards and indicators: a resource tool - Caring for older people: a nursing priority 2001, Department of Health, Nursing and Midwifery Advisory Committee
http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4082138.pdf Aug. 30. 2011

L- 24

Management of epidemic diarrhea

Jadranka Brljak, Marija Urek, Vesna Tripković, Davorka Lukas, Zagreb, Croatia

Introduction: Program of infection control is pivotal for quality, and reflects general standard of health care provided by a healthcare institution, with accompanying impact on morbidity and mortality. The basic task of the program of the control of hospital infections is preparation of recommendations on the manner of carrying out procedures during the care and treatment of a patient.

Aim of the study: To demonstrate practical application in the control and treatment of epidemics caused by infection - treatment of diarrhea as a consequence of bacteria and viruses and of the Crohn disease (CD) and ulcerative colitis (UC) in immunocompromised patients, according to the principles of risk management: identification, analysis, control.

Contents: Gastrointestinal infections (GI) have high frequency and diarrhea is their pronounced symptom so that we speak in such cases of infectious diarrhea (ID). GI is characteristically spread in countries with low economic and hygienical standards where diarrhea is the most frequent cause of death in children until their 5th year of life. Pathological substrate in ID is the infection of intestinal mucosa with various agents (bacteria, viruses, parasites). Causative agents of ID are most often transmitted by faeces or orally (anal-oral route) but the major spreading routes are contact, water, food. Depending on the possibilities of clinical and microbiological diagnostics, the etiology of ID is nowadays confirmed in 30-50% of cases, while the remaining percent of cases are confirmed by using clinical data and epidemiological findings regardless of the fact that stool finding may be "microbiologically negative". Reasons for the negative finding may be the fact that the causative agent is not known, or that routine examination does not include testing for all agents (enterotoxins *E. coli*, *C. difficile*, vibrios, rotaviruses), or laboratory methods for detection of agents are insufficiently sensitive, or a patient has been previously administered antimicrobial medications.

Diarrhea is the most prominent symptom, and it refers to two or more stools that may be liquid or mushy, watery, and mixed with mucus and blood. Stool quantity is also important as it helps determine the degree of dehydration. Vomiting may be a pronounced symptom and, if a patient vomits two or three times, gastroenteritis or gastroenterocolitis may be

established. If only initial or no vomiting occurs, then enteritis may be suspected. Painful and sensitive abdomen is a frequent symptom of ID; it may involve short-term seizures or acute pain, or pain in the form of tenesmus, which depends on the causative agent of ID. Occasionally, general symptoms are also present: enervation, muscular and articular pain, headaches, somnolence. Dehydration is practically of the utmost significance in ID. Acute dehydration recognized too late may lead to hypovolemic shock, renal insufficiency, severe ion disorders, and fatal outcome. Clinical assessment should be focused on the need for rehydration and establishment of the cause of ID. Dehydration may be particularly hazardous for the elderly and children. Therapy consists of three segments: rehydration, dietetic treatment, and antimicrobial and antiparasitic medication therapy. The basic purpose of the hospital infection control program is the drawing up of recommendations on how to perform procedures during care and treatment of a patient. Algorithms may be divided into three basic recommendation groups: recommendations on disinfections and sterilization, recommendations on isolation, and recommendations about disposal of infectious waste. Education of patients involves explanation of the importance of fluid intake and of strict adherence to hygienic and dietetic measures. All healthcare workers with symptoms of gastroenteritis should remain at home until their clinical picture has improved.

References

1. Demani NN. Manual of infection control procedures. 2nd edition. GMM: London, San Francisco, USA 2003.
2. Edmond MB, Wenzel RP. Organization for infection Control. In: Mandell GL, Bennet JE, Dolin R. Principles and Practice of Infectious Diseases. 5th ed. Philadelphia: Churchill Livingstone; 2000, str 2988-2995.
3. Begovac J, Božinović D, Lisić M, Baršić B, Schonwald S. Infektologija. In: Baršić B, Andrašević Tambić A, editor. Organizacija kontrole bolničkih infekcije. Zagreb, 2006;734.

Session 7: Education

L-25

Therapeutic endoscopy training for endoscopy nurse assistants. A prospective survey from the UK

R.Saravanan¹, A.Bond¹, T.Patani¹, A.Beale²
¹Gastroenterology, Macclesfield District General Hospital, ² Gastroenterology, University Hospitals Bristol NHS Foundation Trust, Bristol,

Introduction: There are currently no mandatory formalised training courses for endoscopy nurse assistants despite the longstanding recognized need for such courses (1). The recent UK comparative audit of upper gastrointestinal bleeding emphasized the need for the appropriate skill mix for emergency therapeutic endoscopy (2). In addition, the high therapeutic burden associated with the introduction of bowel cancer screening has increased the need for highly skilled nurses.

Aims & Methods: Prospective survey of endoscopy nurse assistants who attended 7 TECNA courses between 2007-2011. Pre and post course

questionnaires were provided to 420 endoscopy nurse assistants who attended the TECNA course.

Results:

- 301/420 (71%) delegates completed the questionnaires.
- Median endoscopic experience was 3 years (range 0 to 35 years).
- 166/ 301 (55%) had previously attended some form of endoscopy training.
- 204/301(68%) were funded by their own institution to attend the TECNA course
- After the course, 70% considered their therapeutic knowledge to have improved/some improvement.
- 69% of the delegates felt that their practical skills had been improved by the course.
- Confidence in assisting the endoscopist with therapeutic procedures increased in 65 % of attendees after the course.
- 93% (280/301) of the attendees agreed that all endoscopy nurse assistants should undergo a mandatory training course within the first year of their post on joining an endoscopy unit.

Conclusion: Just under half (45%) of the endoscopy nursing staff attending had **no** formal training in endoscopy procedures, despite a median time working in an endoscopy unit of 3 years. The TECNA training course improved their confidence, therapeutic endoscopy knowledge and ability. Formal training for all endoscopy nurse assistants in therapeutic skills is desirable and ideally should be undertaken within the first year of joining an endoscopy unit. Funding of such courses remains the major barrier to wider uptake of such courses. Central funding for such courses should be considered. Further surveys on long term outcomes should be considered in future surveys to assess the impact of such training courses.

References:

- 1.Provision of gastrointestinal endoscopy and related services for a district general hospital. Working Party of the Clinical Services Committee of the British Society of Gastroenterology. Gut 1991. 32(1): 95-105
2. UK Comparative Audit of Upper Gastrointestinal Bleeding and the use of blood. British Society of Gastroenterology (www.bsg.org.uk)

L-26

"Driving Licence" for technical equipment in the Endoscopy unit.

Robert Lind RN and Gunilla Strand RN, Nurse endoscopist.Endoscopy unit, Ersta Hospital, Stockholm, Sweden.

Introduction. Endoscopic examination is equipment intense and even more equipment is required for therapeutic endoscopy. The equipment is frequently updated by new machinery or new tools. To maintain safe management and a high level of functionality across all the endoscopy rooms all nursing staff must acquire competence to manage the equipment. We describe a method to obtain and maintain this competence.

Method. A written inventory of all relevant equipment was composed. From the inventory, a questionnaire was extracted and all nursing staff supplied replies about their personal acquaintance and management competence with each piece of equipment. The self-reported replies were full competence, partial

competence or insufficient. The next step identified "instructors" who undertook the responsibility to train other staff. It was the responsibility of each nurse to team up with an instructor who issued a written "driving licence" on completion of a satisfactory competence with the equipment. The competence was individually documented. New staff must acquire this level of competence as well as the process is repeated when new equipment is introduced. The driving licenses are updated yearly for all staff.

Results. In the first round, 67 % of the responses to the questionnaire claimed full competence with an item while further training was requested in 33 %. In those claiming full competence, further study revealed uncertain familiarity with one or more aspect of the equipment in 42 %. Workshops comprising learning by doing followed by observed structured practical examination effectively broadened staff competence and utility.

Conclusion. Competence with the management of all equipment is intended to increase staff responsibility and satisfaction, improve quality of work and ascertain patient safety. When formally studied per item, partial competence was more common than anticipated in this busy endoscopy unit. The structure of this educational programme substantially improved the situation and we expect that the yearly re-evaluations of the individual driving licences will maintain a high degree of competence.

Learning outcomes. Full competence for all equipment was not satisfactory. A formal education and evaluation system documenting the competence of each nurse is effective.

L-27

Specialist Education of Endoscopy nurses in 2011

Ulrike Beilenhoff, Ulm, Germany;

Introduction: Since the eighties specialist education courses for endoscopy nurses have been established in many European countries, but with varying length, content and educational level. The 2002 developed ENNO Framework recommends that post basic nurse education should cover a minimum of 1 year and 720 education hours (1) to facilitate equivalence of training across Europe. In compliance with the ENNO Framework and based the ESGENA job profile (2), a modular European Core Curriculum for Endoscopy Nurses was published in 2008 (3).

Aim: The aim of the survey was

1. to update the existing data on endoscopy nurse education
2. to compare differences and similarities, and
3. to audit compliance with the ENNO framework.

Method: A first data collection by questionnaire sent to national endoscopy nurses' societies of 33 European countries was carried out in 1998. Using the same methodology a second data collection was carried out in February 2005 and a third In May 2011. Data collected between 1998 and 2011 were used and results were compared. The same 3 groupings were used in all 3 surveys: countries with

1. No specialist training,
2. Short courses of 1-6 weeks,
3. Longer courses of 5 months to 2 years

Data was collected and compared on existence and length of specialist courses, format of courses and compliance with the ENNO Framework

Results:

1- The 2011 Data received from 31 countries showed that:

No specialist training: 9 of 31 countries (Bosnia-Herzegovina, Greece, Luxemburg, Iceland, Jordan, Luxembourg, Malta, Serbia, Turkey) currently offer no specialised courses for Endoscopy nurses. However, they offer a large variety of continuing education courses and/or use specialist courses in neighbouring countries.

Short courses of 1-6 weeks have been established in 6 countries (Belgium, Denmark, Poland, Romania, Slovenia, Spain). These courses are mainly focused on GI endoscopy and have more the character of continuing education.

Longer courses of 5 months to 2 years have been established in 16 countries (Austria, Croatia, Czech Republic, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Norway, Portugal, Sweden, Switzerland, UK, Netherlands). These courses follow an official core curriculum, offer theoretical and practical training and lead to a recognised qualification. Courses based at university have been established in Croatia, Italy, Switzerland, Sweden and the UK.

2- between 1998 and 2011 of the 31 countries - 15 countries changed the format of their courses by

- increasing the length of the courses, the number of theoretical and practical hours (12 countries)
- increasing the academic level (e.g. masters degree) (4 countries)
- receiving official recognition (3 countries)

3- 70% of the longer courses comply with the ENNO recommendations

Summary: In 2011 Specialist education for endoscopy nurses were established in 16 countries with ESGENA Group Membership . Courses vary in length, content, academic level and official recognition. 70% of the longer courses comply with the ENNO recommendations.

Conclusion: The ESGENA Core Curriculum has facilitated the assimilation and improvement (length, academic level) of national courses in several countries.

References:

1. European Network of Nursing Organisations (ENNO): Framework for post basic nurse education, 11/2000 Available from:

http://www.esgena.org/index.php/publ_guide/publications/

2. ESGENA: Beilenhoff U, Neumann CS, Campbell D: European Job Profile for Endoscopy Nurses, Endoscopy 2004; 36 (11): 1025-1030

3. ESGENA European Core Curriculum for Endoscopy Nursing. Available from:

http://www.esgena.org/index.php/publ_guide/publications/

The conference participants should:

1. be aware of European regulations relevant for Endoscopy nurses education
2. understand the differences in education of Endoscopy nurses within Europe

Session 8: Diagnosis & Therapy

L-28

Non-Medical Prescribing with in the Gastroenterology and Endoscopy setting

Irene Dunkley, Huntington, UK

The Nurses and Midwifery Council (NMC) in the United Kingdom (UK) is responsible for listing all registered nurses and midwives working in the UK. Within this register there is a separate section with the names of qualified and nurse prescribers. There are a number of ways nurses can prescribe within the UK:

- Via a patient group directive.
- Via supplementary prescribing
- Via independent prescribing

Nurses working at a higher level of practice are able to prescribe treatment for patients independently of their medical colleagues once they have gained their qualification and are on the NMC prescribers register. The term non-medical prescriber is used in the UK as other allied health professionals such as e.g. physiotherapists or radiographers can also undertake this role.

Within this presentation I will outline:

1. What the Nursing and Midwifery Register requirements are for nurses practicing as non-medical prescribers.
2. The educational requirements for non-medical prescribers.
3. The different ways nurses can utilise their prescribing skills.
4. Examples of non –medical prescribing within the Gastroenterology & Endoscopy setting.
5. What happens when things go wrong....

References:

Nursing and Midwifery Council. The code: Standards of conduct, performance and ethics for nurses and midwives (2008)

Nursing and Midwifery Council. Standards for medicines management (2007)

Nursing and Midwifery Council. Standards of proficiency for nurse and midwife prescribers (2006).

Nursing and Midwifery Council. Standards for specialist education and practice (2001).

L- 29

Pain Assessment and Management during Medication-free colonoscopy

Eeva-Riitta Ylinen, PhD, Senior Lecturer in Nursing Savonia University of Applied Sciences, School of Health Care, Kuopio, Finland

Sedatives and pain medication are routinely administered by physicians, nurses or patients themselves in most European countries and in the United States. Medication-free colonoscopy, upon which attention is focused in many countries, is common practice in Finland although medication is available if necessary i.e. if the patient is very anxious before the procedure or when pain emerges regardless of loop reduction, reducing bowel air or medication-free interventions.

Pain is culturally connected and assessed by human behaviour, so a person's cultural background influences their expression and meaning of pain. It is a physiologic response to tissue damage but it also includes emotional and behavioural responses based on individuals' past experiences and perceptions of pain. Colonoscopy pain is considered visceral, resulting from the activation of sensory afferent nerves that innervate intestines. The mechanisms and the perception and psychological processing of visceral pain differ from somatic pain. It is often unformed, diffused, difficult to localise, frequently referred to other intact tissues, where the sensation is localised to an area completely unrelated to the site of injury. Autonomous and motor components, e.g. pallor, excessive sweating, bradycardia, dizziness, hypotension, nausea and fainting are features of it. The perception of pain seems to be the same between various racial and ethnic groups; however pain thresholds and/or tolerance may differ. The Finns belong to the Northern European stoic expressing population who experience pain in a manner that is quietly enduring i.e. the culture of pain tends to honor the person who deals with pain without verbal expressions. In general the need to alleviate their pain seem to be lesser than e.g. among North American patients.

Women seem to be more anxious before medication-free colonoscopy and experience more pain and discomfort than men. The high state anxiety level may decrease patients' ability to tolerate colonoscopy. Patients' nervousness is a risk factor for experiencing pain during medication free colonoscopy. It seems that both nurses and endoscopists can slightly underestimate the intensity of patients' pain. The CBNPS (Colorado Behavioral Numerical Pain Scale) seems to be an adequate and simple to use scale when assessing patients' pain. It is also a proper tool for improving nursing documentation.

Nurses' role in pain management is important and they require cognitive, psychomotor, social, moral and personal skills. Nurses can use versatile non-drug interventions of managing pain helping both anxious and non-anxious patients to ease the pain. It is known that, for instance, promotion of psychological comfort (keeping the patient warm and dry and in a relaxed position) and distraction relaxation (distract the patient's thoughts away from the pain) has a positive effect on pain outcomes without any adverse effects. Nurses can explain the reason for the pain and the meaning of the patients' symptoms to the patient, educate their patients individually and how the patients could deal with the pain themselves. They can forewarn of upcoming pain during the examination. It is pertinent to notice the patient's hyperventilation and to ask the patient to breathe into a paper bag to calm down the situation. They can advise the patient to give off gas, so that the bowel would not be stretched and prop up or press down the abdomen.

Awareness and understanding of the effects of previous pain experiences and anxiety levels in patients, particularly for females, should be taken into account. Before the procedure nurses must devote time to discover patients that are at risk of having a painful colonoscopy in order to present them for medication. Colonoscopy patients' clinical education and counseling should be developed towards more individual manner. Furthermore nurses should use the non-drug interventions as an essential element of pain management for colonoscopy patients.

Dissertation available
at:http://epublications.uef.fi/pub/urn_isbn_978-952-61-0013-5/urn_isbn_978-952-61-0013-5.pdf

L-30

Chromo Endoscopy – more than only colour

Stijn van Weyenburg, Amsterdam, NL

Abstract not submitted

Session 9: News Techniques and Developments in Endoscopy

L-31

Transgastric pancreatic necrosectomy

Andreas Püspök, MD (Univ. Prof. Dr.) Departement for Internal Medicine III, General Hospital Vienna/University Hospital, Vienna, Austria

Background and indication: Necrotizing pancreatitis is the most severe form of acute pancreatitis and affects about 20% of patients with acute pancreatitis. Necrosis usually develops during the first 72 hours after onset of pain and can best be diagnosed with contrast enhanced computed tomography after this time frame. Necrotizing pancreatitis is associated with a mortality of up to 30%, especially if the necrotic area becomes infected. According to the point of time in the course of the disease and whether infection is present or not, several forms of fluid collections are differentiated: Acute fluid collections occur within 48 hours, are rich in pancreatic enzymes and do not exhibit a wall. They can spread along the anatomic structures in retroperitoneum into the region of the kidneys and along the Psoas muscle down to the pelvis. Per definition they are not infected. After about 4 weeks they become encapsulated by fibrotic tissue and are then termed as acute pseudocyst. In case of infection which results in liquid pus they fulfil the criteria of an abscess. Only fluid collections with solid debris in it are called necrosis. Like in acute fluid collections after several weeks they are surrounded by fibrotic tissue and are hence termed as walled of pancreatic necrosis (WOPN), which may become infected as well. Only abscesses and infected necrosis are indications for surgical or nowadays endoscopic or radiologic interventions. The type of intervention is mainly determined by the localisation of the fluid collection. For transgastric endoscopic interventions at least part of the collection needs to be in close proximity/contact with the stomach or duodenum, which is the case in the majority of patients.

Technique of transgastric necrosectomy: The fluid collection is punctured preferably under EUS guidance. In cases with bulging collections "blind" puncture may be performed. The puncture site is dilated using a cystotome and thereafter a balloon with a diameter of up to 15mm. Thereafter a regular gastroscope is introduced into the collection to flush and suck the liquid parts. Solid parts are removed with snares, dormia baskets and nets and deposited in the stomach. After the procedure the access is kept open

with several stents with or without a nasocystic tube to flush the collection. The procedure is repeated in the following days until all necrotic material has been removed. The entry site closes within a few days after removal of the stents. The procedure can be done under sedoanalgesia, however the use of CO2 insufflation is strongly recommended to avoid air embolism.

Results: In several large series about 70-90% of patients were successfully treated with this method. Complications include bleeding, air embolism and multiorgan failure resulting in a mortality of 8-10%.

Summary: Transluminal endoscopic necrosectomy is a very promising minimal invasive technique in the treatment of acute necrotizing pancreatitis. As with all complex diseases a close collaboration among endoscopists, surgeons and interventional radiologists is mandatory to choose the optimal approach for the individual patient as well as for the management of potential complications.

L-32

Quality assurance in endoscopy nursing

U. Beilenhoff ⁽¹⁾, C. Neumann Ulm ⁽²⁾, (1) Ulm, Germany, (2) Birmingham, UK

Endoscopy has significantly changed over the last 20 years. Technological developments have established a huge variety of diagnostic and therapeutic options. The increasing numbers of invasive procedures require a substantial infrastructure, and specialised, well-trained staff. Moreover, the profile of patients undergoing endoscopy has also significantly changed in recent years: The number of elderly patients and patients with complex medical problems has significantly increased in Endoscopy, requiring more complex care during endoscopic procedures. Endoscopy units can be established in hospitals, primary care or ambulatory endoscopy centres.

Nursing perspective of quality assurance

Since the 1960s quality assurance has become an integral part of medicine and nursing. The aims of quality assurance include patient and staff safety and satisfaction, economical factors and the implementation of health care policy.

Quality indicators for endoscopy nursing

Endoscopy staff is responsible for individualised, comprehensive patient care, technical assistance including reprocessing, documentation and management of endoscopy units. Quality criteria for endoscopy nursing cover pre, intra and post procedure care (see table)

Outcome quality

- For patients: safety, comfort, satisfaction, high quality of treatment, dignity & privacy
- For staff: safety, comfort, satisfaction, personnel development,

Conclusion

Endoscopy requires similar standards and facilities as comparable disciplines such as Day Surgery. However, a complete separation between clinical medical and nursing outcome criteria is often difficult in

Endoscopy, as the clinical interventions are a combination of both medical and nursing actions. It is the combined effort of all staff with the support from the health care provider that leads to a high quality of patient care in Endoscopy.

Quality dimension	Focus	Quality indicators
Structure quality	Space and facilities of endoscopy units	Adequate number of rooms Adequate equipment, good infrastructure and organisation
	Staff	Adequate number of staff with relevant qualifications Assessment of competencies
Process quality	Patient care, monitoring and sedation	Informed consent, Identity checks Completed nursing care plan with risk assessment and checklists for patient recovery and discharge. Timed documentation and record of adverse events Implemented action plans following patient surveys and audits of adverse events
	Technical assistance	Audit of adverse events and implementation of action plan Completed maintenance and service schedules
	Hygiene & infection control	Implementation of health and safety policies Validated reprocessing cycles Regular microbiological surveillance Absence of infections and health problems Regular Maintenance, validation and microbiological surveillance and traceability audits

Reference:

Beilenhoff U, Neumann C. Quality assurance in endoscopy nursing. Best Practice & Research Clinical Gastroenterology 25 (2011) 371–385

Poster Presentations On 23 October 2011

Poster Session I

P-1

Assessment study on previous colonoscopy preparation

Iolanda Caballero, Raquel Mena, Isabel Mayer, Núria Lasheras, Sònia Ibáñez, Amalia López, Rosa Colom, M. José Calero, Imma Díaz, Unitat d' Endoscòpia digestiva del Consorci Sanitari de Terrassa Barcelona, Spain

Introduction: At the present time, a colonoscopy is the most efficient method used to explore the colon. A correct intestinal cleaning previous to the exploration will facilitate lesion detection, such as, colorectal cancer. There are other determining factors that can condition the preparation and the completion of a colonoscopy (fasting, having maintained a low waste diet previous to the exploration and the cessation of antiplatelet or iron treatments).

Objective: Knowledge of the cause, and reasons of an inadequate preparation previous to a colonoscopy.

Methodology: A transverse descriptive study practiced in the Digestive Endoscopy Unit at Consorci Sanitari de Terrassa, Barcelona, Spain, in 2010. In a population of 413 patients with the following characteristics: patients over 18 years of age (hospitalized or outpatients) cleansing of the colon with polyethylene glycol or sodium phosphate, complete colonoscopy and willingness to participate in the study. An "ad hoc" questionnaire created for data collection. Nursing assessment of the quality of cleanliness of the colon according to: "Jayanthi Scale." Data analysed by SPSS.

Results: A total of 34% of the patients showed a poor or inadequate preparation of the colon according to the Jayanthi Scale. The patients who were best prepared were those outpatients who had undergone a previous low waste diet and in the 18 to 64 age group. A total of 46.7% of the patients who presented more side effects, were those who had previous colon preparation with sodium phosphate in respect to those who had taken Polyethylene glycol, which were a total of 24.5%. Vomiting and nausea were the most frequent side effects. A total of 54.5% of the patients did not cease iron intake, and 46.7% did not cease antiplatelet treatment long enough. Colonoscopy performed within the first 14 hours after finalizing the intestinal preparation was influenced in an important way by the quality of colon cleansing procedures used.

Conclusions: The information received by a patient either hospitalized or outpatient by a nurse, previous to a colonoscopy is critical for its success, thus avoiding repetitive explorations and facilitating the early detection of colorectal cancer. It is very important to promote communication and feedback between professionals in a hospital or primary setting, through periodic sessions, in order to be successful in the adequate information given to patients and that a correct cleansing of the colon is also accomplished.

Learning outcomes : Communicative ability and experience of the nurse who explains the proper preparation prior to colonoscopy, save unnecessary costs and facilitates the early detection of colorectal cancer.

Bibliography:

Madhusudhan R. Sanaka, Nirav Shah, Kevin D. Mullen, D.R.Ferguson, Charles Thomas, Arthur J. McCullough. Afternoon colonoscopies Have Higher Failure Rates Morning Colonoscopies. American Journal of Gastroenterology. 2006; 101:2726-2730.
Reid M. Ness, M.D., M.P.H., Raj Manam, B.S., Helena Hoen, M.S., Naga Chalasani, M.D. Predictors of Inadequate Bowel Preparation for Colonoscopy. American Journal of Gastroenterology. 2006, Vol. 96, No. 6.

P-2

What is the best bowel-cleansing method for colonoscopy?

Anne-Kristin Gustafsson, reg nurse, Jeanette Fagrell, reg nurse and Nils Nyhlin, MD, PhD. Endoscopy Unit, Dept of Medicine, Örebro University Hospital, Örebro, Sweden

Background: Colonoscopy requires prior bowel-cleansing, but tolerability and compliance can be a problem and lead to cancelled or suboptimal investigations.

Aim/objective: The aim of the present study was to compare efficiency and tolerability of three different solutions for bowel cleansing; Laxabon (Lx) and Globance Lavage (GL) which is two large volume PEG based solutions and Picoprep (PP), a small volume solution containing sodium picosulphate + magnesium citrate.

Method: Single blind prospective study of patients scheduled for colonoscopy. The patients received one of the three laxatives and were asked to complete a questionnaire on the acceptability of the preparation when arriving at our department. The colonoscopist did a blinded assessment of cleansing after the examination.

Questions (10=best possible)	Lx n=21 (median, range)	GL n=19 (median, range)	PP n=15 (median, range)	p-value
Patient instruction	8,5 (3,4-10)	8,5 (2,6-10)	9,0 (3,7-9,8)	n.s.
Preparation experience	7,3 (0,9-10)	8,2 (1,9-9,8)	9,1 (5,3-9,9)	n.s. (p=0.096)
Taste experience	2,0 (0-5,0)	3,4 (0,4-9,3)	8,4 (1,8-9,9)	p<0.001
Bowel cleansing	8,4 (0,4-10)	8,3 (0,2-9,8)	8,4 (4,2-9,7)	n.s.

Results: 55 patients, 12 men, 43 women, median age 48, range 20-83, accepted to answer the questionnaire. Main results are summarized in the table.

For taste experience, there were significant differences between all three preparations when comparing them head-to-head.

Bowel residues were seen in 10 patients from the Lx group, 11 from the GL group and four from the PP group. Residual faeces did not in any case lead to incomplete investigation. 19/21 (91%) of the Lx patients and 13/19 (68%) of GL drank at least three litres of the laxative. In the PP group 13/15 (87%) drank all 300 ml and 10/15 (66%) reported that they drank at least three litres fluids in total.

Three patients in the Lx group and one in the GL group drank less than 2 litres solution during preparation and these patients were described as the most unclear. Three of the patients in both the Lx and GL groups complained that they felt sick by the laxative, one who drank Lx vomited. No changes in color were associated to the laxative.

Summary & Conclusion: Low volume laxative as a bowel preparation before colonoscopy seems to be better-tolerated by the patients but gives equal bowel cleansing compared to laxatives based on large volume PEG products.

References:

1) [Lawrance IC, Willert RP](#) et al Bowel cleansing for colonoscopy: prospective randomized assessment of efficacy and of induced mucosal abnormality with three preparation agents. [Endoscopy](#). 2011 May; 43(5): 412-8.

2) [Worthington J, Thyssen M](#), et al. A randomised controlled trial of a new 2 litre polyethylene glycol solution versus sodium picosulphate + magnesium citrate solution for bowel cleansing prior to colonoscopy. [Curr Med Res Opin](#). 2008 Feb; 24(2): 481-8.

Learning outcomes: Taste and total ingested volume differs between bowel-cleansing products and can affect patient acceptance when preparing for colonoscopy.

P-3

Nurses performing colonoscopies: Education program and retrospective data

[Helle Roy Tillgaard](#), Endoscopy unit, Department of Surgery, Sygehus Sønderjylland (SHS), Aabenraa, Region of Southern Denmark, Denmark

Introduction: In the Region of Southern Denmark an education program is developed and offered for endoscopy nurses being educated to perform colonoscopy. Previously nurses were trained with different programs, and there were no official requirements. In the region nurses have performed colonoscopies since 2003, and the curriculum is based on these experiences. The presenting author has performed more than 750 endoscopies and is the first nurse in Denmark to be officially educated and certified.

Aim/objective: Nurses with 5 years of practical experience including at least one year as assisting nurse at an endoscopy department in a hospital are qualified to attend the education program which must be completed within 1 year. The quality and quantity of nurses performing colonoscopy are analysed at the

endoscopy unit at SHS and related to the education program.

Method: The education has a theoretical part consisting of 18 lessons followed by an examination, and a practical part containing simulator training, practicing colonoscopy and a practical test. A total of 477 patients were examined by endoscopy nurses at SHS from April 2010 to April 2011. The prevalence of sedatives, completed colonoscopies, treatment procedures and need of back-up assistance from a head physician is analysed.

Results: In one year two endoscopy nurses have performed 20 % of all the colonoscopies performed at the Endoscopy Unit at SHS. A total of 477 patients. 64% of these patients were under sedation and 36% patients managed without sedation. 95 % of the colonoscopies were completed. 5 % of the examinations were not completed because of stenosis, diverticulosis or extreme pain. 55 % had polypectomy, 15 % had biopsies taken, 2,5 % had spot marking because of suspicion of cancer. In 14 % of the cases back-up assistance was needed because of cancer/cancer suspicion or other difficulties outside the endoscopy nurses competences.

Summary/conclusions: The benefits of the education program related to the results of the analysis at SHS gives reason to continue the program especially in preparation to educate nurses in sufficient quantities to implement screening programs.

References:

1. Education program for gastrointestinal endoscopy nurses by Region of Southern Denmark.

2. J Williams et al. What are the clinical outcome and cost-effectiveness of endoscopy undertaken by nurses when compared with doctors? A multi-institution Nurse endoscopy trial (MINuET). *Health Technology Assessment* 2006; vol.10: No 4.

3. SGNA Guideline: Performance of flexible sigmoidoscopy by registered nurses for the purpose of colorectal cancer screening. *Gastroenterology Nursing* 2003; 26(6):261-263.

Learning outcomes: A presentation of the education program for nurses performing colonoscopy and an analysis of the quality and quantity of nurses performing colonoscopy at SHS.

P-4

Soft tissue massage as pain relieving method for colonoscopy

[Kerstin Langlet](#), Marguerite Strandell, Åsa Jonsson, Ersta hospital Stockholm Sweden.

Introduction: Patients often connect colonoscopy with discomfort, pain and anxiety. It is therefore important that the endoscopy team meets the patient in a way which improves the self-confidence and the comfort for the patient. By use of drugs, we can further improve the relaxation and decrease the pain. Another complementary method that may work as pain relieve during colonoscopy is soft tissue massage. It is a type of massage that is used in various parts of medical care. There is support in the medical literature for the relaxing and comforting effect of soft tissue massage. It may also reduce musculoskeletal pain. Currently, there is no knowledge for the effect of soft tissue massage as a pain relieving method during colonoscopy.

Aim: To investigate if soft tissue massage is a complementary pain relieving method during colonoscopy.

Method: The aim was to give massage to patients until 15 patients, who did not need pain relieving drugs during colonoscopy, were accumulated. By that reason 24 patients were included in the study. In the control group 28 patients were included to reach 15 without need for pain relieving drugs.

All patients filled in a questionnaire before the colonoscopy. After the examination those who did not receive pain relieving drugs were given further questions. All colonoscopies were done by our two nurse endoscopists. The massage was performed on back, arms, hands and stomach in the examination room before the colonoscopy. The patient was covered with towels, soft music was played and the lights were softened.

Result: In the massage group 37.5% of the patients received pain relieving drugs, compared with 46.5% in the control group. The difference is 9% in advantage to the massage group. No difference in discomfort caused by bloating or pain during colonoscopy was registered among the patients who had not received pain relieving drugs, 15 in each group. The massage group estimated anxiety for the colonoscopy lower compared with the control group. On the question how they had experienced the massage 50% replied that they were less worried and 50% that they were more relaxed. All would consider receiving massage at a possible future colonoscopy.

Discussion: According to this small study, soft tissue massage can probably not be considered to have any explicit effect on pain during colonoscopy. Further studies are needed. However, our opinion is that soft tissue massage is a useful method before colonoscopy, as it improves the wellbeing of the patients by giving a relaxing effect. One of the patients had both a colonoscopy and a gastroscopy at the same time. She stated that she after the massage did not feel any anxiety at all for the gastroscopy which she had been anxious about. Since earlier, soft tissue massage has been used after colonoscopy if the patient felt uncomfortable from remaining air in the bowels. After this project was completed, suggestions have been made to offer the method to anxious patients before both colonoscopy and gastroscopy. This method could also be offered to patients with known increased bowel sensitivity, as in example IBS.

References:

Ardeby Siv (2005) Arbete med beröring och bemötande. Ambusantus AB
Seiger Cronfalk Berit (2008) Being in safe hands. Karolinska institutet

program is, however, lacking. We have created a structured training program for nurse-endoscopist in our unit.

Aim: To compare the first and the second series of 50 colonoscopies performed by a beginning nurse-endoscopist for cecal intubation rate, cecal intubation time, and rate of physician-endoscopist intervention for intubation.

Method: A total of 100 patients scheduled to undergo elective colonoscopy were included, this is for adults over 18 years with IBD or intestinal problems such as anemia, abdominal pain ect. Patients scheduled for sigmoidoscopy and patients after a colonic surgery were excluded. Colonoscopy findings were recorded in detail on a special questionnaire and prospective entered into a dedicated database for later analysis.

Results: Of the 100 patients were enrolled, 46 were men and 54 women. 17% of patients came for an inspection after a previous colonoscopy with polypectomy, 11% of the patients in response to IBD and 72% of the patients came with symptoms such as altered bowel habits(20.8%), abdominal pain (19.4%) , rectal bleeding (22.2%), anemia (23.6%) or something else (14%).

Intubation rate: 91 out of 100 colonoscopies were successful: 44/50 (88%) in the first 50 procedures and 47/50 in the second series (p=NS).

Intubation time: The mean intubation time for all 100 colonoscopies was 28 minutes, (range 8-70). For the first 50 colonoscopies the mean intubation time was 28 minutes, for the second 50 this was 26 minutes (p=NS).

Intervention by physician-endoscopist: In total, a physician-endoscopist intervened during the intubation in 60 procedures, 40 of which occurred in the first 50 colonoscopies (80%), and 20 in the second 50 (40%); p<0.001 (Chi-square with Yates' correction)

Summary: These data suggest that with increasing experience nurse-endoscopist require less intervention by an experienced endoscopist yet that the learning curve is more than 100 colonoscopies.

References

Koornstra JJ, Corporaal S, Giezen-Beintema WM, de Vries SE, van Dullemen HM. Colonoscopy training for nurse endoscopists: a feasibility study. *Gastrointest Endosc.* 2009 Mar;69(3 Pt 2):688-95.

Results of the United Kingdoms first pilot study for nonmedical endoscopy practitioners. *Gardiner AB. Colorectal Dis.* 2009 Feb;11(2):208-14. Epub 2008 May 3.

Learning outcomes

A structured colonoscopy training program with direct supervision by an physician-endoscopist is required for more than 100 procedures. This set-up shows a significant improvement in the number of unassisted colonoscopies between the first and the second series of 50 colonoscopies.

P-5

Is there a significant difference in learning colonoscopies by a nurse between the first 50 and second 50 colonoscopies?

Elisabeth Mathus-Vliegen, Karin van der Vliet, Paul Fockens, Jacques Bergman, Monique van den Bergh. Department of Gastroenterology, Academic Medical Centre, Amsterdam, the Netherlands

Introduction: In many countries there is a gradual increase in the number of colonoscopies performed by nurse endoscopists. A formal, structured, training

P- 6

Factors affecting the patient's discomfort during the colonoscopy

¹Bedriye Demirci, ¹Ibrahim Hatemi, ¹Billur Canbakan, ¹Murat Tuncer, ²Hakan Şentürk, ¹Kadir Bal, ¹Ahmet Dobrucalı, ¹Hülya Uzunismail, ³Mustafa Şükrü Şenocak.

¹Istanbul University Cerrahpasa Medical Faculty department of Gastroenterology, Istanbul, Turkey.

²Bezmialem Vakıf University School of Medicine department of Gastroenterology, Istanbul, Turkey.

³Istanbul University Cerrahpasa Medical Faculty department of Biostatistics, Istanbul, Turkey.

Background and Aim: Colonoscopy is an invasive procedure which can be recognized as a painful process by the patients caused by overdistension of the colon. Colonoscopy is usually performed under light sedation with an analgesic often added as the procedure may cause some pain due to insufflation of air and stretching of bowel loops and mesentery. Conditions such as previous pelvic surgery, stricturing, previous radiations, insufficient sedation, competence of the endoscopist in performing colonoscopy are the most common causes of pain. Therefore, we conducted the present study to examine the underlying cause of discomfort of the patients during colonoscopy.

Methodology: Ninetyeight patients (M/F: 42:56) who underwent the colonoscopy at the endoscopy unit of our institut were included into the study. The demographical characteristics, economical income, educational status, medical anamnesis, and the status of preparation for colonic cleansing were obtained from the patients. After 1 hour of the procedure each patient described the discomfort of the colonoscopy on a scale subdivided in 4 main groups (Group1: light discomfort, group 2: mild -, 3=moderate-, 4= severe discomfort). The endoscopist and the gastrointestinal assistant maintained also the status of colonic cleansing and the sedation of the patient during the procedure. We analyzed the data between the groups using the unpaired Student's t test. Categorical variables were compared by the χ^2 test. All data were analyzed using SPSS statistical software (Ver.10.0).

Results: Ninetyeight patients (M/F: 42:56, mean age \pm SD: 49.2 \pm 16.7) were examined. The mean score on the pain scale was 4.3 \pm 3.3. The mean application dose of midazolam for the sedation was 0.04 \pm 0.01 mg/kg., and the mean meperidine dose was 0.46 \pm 0.19 mg/kg for the analgesia. There were no statistically significant correlations between the declared discomfort during the colonoscopy and the educational and social-economical status of the patients and the colonic cleansing. There were statistically significant correlations between the declared discomfort of the colonoscopy and the severity ($p=0.001$) and the duration ($p=0.003$) of the procedure.

Conclusion: Among the conditions such as the educational and social-economical status of the patients and the degree of the colonic cleansing, the most important causes of the discomfort of the colonoscopy are the severity and the duration of colonoscopy

References

1-Dere K, Sucullu I, Budak ET, Yeyen S, Filiz AI, Ozkan S, Dagli G. A comparison of dexmedetomidine versus midazolam for sedation, pain and hemodynamic control,

during colonoscopy under conscious sedation. Eur J Anaesthesiol. 2010 Jul;27(7):648-52.

2-Gavaruzzi T, Carnaghi A, Lotto L, Rumiati R, Meggiato T, Polato F, De Lazzari F. Recalling pain experienced during a colonoscopy: pain expectation and variability. Br J Health Psychol. 2010 May;15(Pt 2):253-64

P-7

Evolution of minimal invasive endoscopic techniques through a patient history – from piecemeal Polypectomy to Endoscopic Submucosal Dissection (ESD)

Krisztina Tari RN¹, Péter Lukovich MD¹, Gábor Váradi MD², Péter Kupcsulik MD¹, László Harsányi MD¹, (1) Endoscopy, 1st Department of Surgery, Semmelweis University, Budapest, Hungary; (2) Department of Surgery, Ódön Jávorszky Hospital, Vác, Hungary.

Introduction: In the history of flexible endoscopy the first invasive intervention was the polypectomy, which became a routine procedure in everyday practice, hereby underplaying surgical polyp resection. Removal of polyps larger than 3-4 cm is possible only in more pieces, this technique called piecemeal polypectomy. As a development of this technique a new method called endoscopic mucosal resection (EMR) came up, which used in treatment for less than 2 cm malignant lesions, not exceeding the submucosal layer (flat, sessile adenomas, dysplasia and early cancer). However, EMR in tumour therapy has not met the requirements, because neither the lateral, nor the depth resection surfaces were safe enough. The latest therapeutic procedure for intraluminal malformations is endoscopic submucosal dissection (ESD). By ESD larger than 2 cm, flat mucosal lesions can be removed radically in one piece, reducing the chance of recurrent cancer.

Case report: A 64-year-old female patient's 3,5 cm large, flat, sessile rectal polyp had been removed by piecemeal polypectomy in 2004. The histological investigation proved tubular adenoma with high grade dysplasia. One year later a recurrent polyp was removed by mucosectomy. By control colonoscopy in 2007 a recurrent lesion was detected again; this time endoscopic submucosal dissection was applied to remove it radically.

Method: The ESD procedure took 55 minutes, no complication occurred. To elevate the lesion methylene blue-epinephrine-saline solution (1:1:20) was injected into the submucosal layer. To the removal of the polyp needle knife, and later IT-knife was used to prevent perforation and to perform circumferential mucosal incision.

Results: There was no complication under and after the procedure, the patient left next day. The histological investigation proved tubular adenoma, the resection surface was tumour-free. At control colonoscopy one month and one year later there were no recurrent lesions. The last control colonoscopy performed in spring of 2011, 4 years after the ESD procedure.

Conclusions: Endoscopic submucosal dissection is a suitable solution for removal of large sessile lesions. It could be applied for high risk patients with malignant diseases as a new alternative minimal invasive treatment. Because of application of new accessories for endoscopic submucosal dissection and the difficult

technique - compared to polypectomy, more preparation and practice required from the endoscopic assistants in the everyday practice.

References:

Sano, Y., Machida, H., Fu, K. I. *és mtsai*: Endoscopic mucosal resection and submucosal dissection method for large colorectal tumors. *Dig. Endoscopy*, 2004, 16 (Suppl) , S88–S91.

Fujishiro, M., Yahagi, N., Kakushima, N. *és mtsai*: Successful endoscopic en bloc resection of a large laterally spreading tumor in the rectosigmoid junction by endoscopic submucosal dissection. *Gastrointest. Endosc.*, 2006, 63 , 178–183.

P-8

Evaluation of pain after the accomplishment of a Colonoscopy

Raquel Mena, Yolanda Caballero, M^aJosé Calero, Rosa García, Rosa Colom and Amalia López. Digestive Endoscopy Unit "Consorti Sanitari de Terrassa", Barcelona, Spain

Introduction: The air instilled in the colon for a correct visualization during a colonoscopy causes a sensation of pressure and colic-like abdominal pain in the patient. In order to reduce or relieve this discomfort we can use different sedatives. The administered dosage will depend on several aspects of the patient such as: age, associated pathologies, medication taken habitually, and previous abdominal interventions. We considered to perform this study because we were concerned that our patients were suffering pain during the procedure in spite of the administered medication.

Objective: To evaluate the degree of pain in patients undergoing a colonoscopy.

Methods: Transversal descriptive study. 194 consecutive patients were included between June and August 2008. Inclusion criteria were: age older than 18 and signature of the consent form. We developed an "ad hoc" questionnaire collecting all the information about the factors that could modify the degree of pain. We assessed the pain by a visual analogical scale (numerically rated from 0, absence of pain, to 10, maximum possible pain) once they were ready to leave. We considered non acceptable a pain level ≥ 3 .

Results: In our study 62,6% of patients valued the pain in ≥ 3 , whereas only 37,3% valued it between 0-2. Patients that had more pain were: those in the group age between 41-60, those who were taking psychiatric medication, those who had undergone a non-neoplastic abdominal cavity intervention, the group of patients who received midazolam/pethidine combination, those who didn't have a certain degree of amnesia, and those who had an incomplete colonoscopy due to fixation or intolerance.

Conclusions: According to these results we infer that the medication was administering for colonoscopy in our service was insufficient and, consequently, our patients had excessive pain. Due to these results and the current scientific evidence from different studies, we are no longer administering the midazolam/pethidine combination in our unit. We now use Propofol, which has provided very good results and, above all, is relieving our patients of pain.

References:

1- Jung HK, Yoon SJ, Lee JS, Kwon JH, Yoo Ma. Comparison of midazolam vs meperidine during colonoscopy. *Korean J Gastroenterol*. 2004 Feb;43(2):96-103. Korean.

2- Radaelli F, Mencchi G, Terruzzi V, Spinzi G, Imperiali G,

Strocchi E. Single bolus of midazolam vs bolus midazolam plus meperidine for colonoscopy. *Gastrointest Endosc*. 2003 Mar;57(3):329-35.

3- Chokhavatias S, Nguyen L, William R, Kao J, Heavner JE. Sedation and analgesia for gastrointestinal endoscopy. *Am J Gastroenterol*. 1995 Mar; 88 (3): 393-6

P-9

Colorectal Cancer Screening in Slovenia (SVIT)

Irena Debeljak, RN¹, Marklena Fojs¹, Tatjana Gjergjek, RN², Stanka Popovic, RN² National Program of Screening and Early Detection of Precancerous Lesions and Cancers of the Colon and Rectum¹. University Medical Centre Ljubljana²

Introduction: The incidence of colorectal cancer (CRC) is increasing in Slovenia. Most CRC is detected in higher stages, which reduce the possibility of treatment and decrease the possibility of five year survival [1].

Material and Methodology: Slovenian National CRC Screening Programme Svit (eng. Dawn) was established in 2009, running under protection of Institute of Public Health and Ministry of Health Care (www.program-svit.si). The program Svit included citizens from 50 to 70 years of age in order to screen the elder population having higher risk for CRC. Fecal immune test (FIT) is used as a primary screening method, followed by colonoscopy in case of positive result. 25 endoscopy units are accredited for performing screening colonoscopy in the Svit programme

Implementation: Nurses role in Svit program in Slovenia is that there are involved in all segments of process and for this they all attended special education courses.

Results: In the year 2009 171454 citizens were invited to participate in the Svit programme and 36.03% responded. Those that responded received two FIT tests and 5,94% of them were positive. Until the end of 2009 1622 colonoscopies were performed and 118 CRC was founded [2]. In 2010 we sent 310404 invitations and response rate rose up to 56.94%, 6,27% of FIT test were positive. 7488 colonoscopies were performed.

Discussion: From all patients undergoing FIT were average positive in 6%. The response rate in the Svit programme is important to show the success of program. The goal of Svit programme is to include 70% of the invited citizens. As we see in the results the response of invited increased in the second year, but not as we expected. Within the multidisciplinary team of the Svit programme nurses have an educative role in the Svit call centres. They direct and motivate patients to participate in the Svit programme, teach them to fulfil all the formulars correctly, take fecal samples correctly. In the case of FOBT positive they motivate patients for colonoscopy and give them all the informations for a correct preparation for colonoscopy. To achieve the goal of 70% responses the communication in 2011 is planned in all health and public areas and special in all medias to highlight the problem of CRC in our country.

Summary and conclusion: We are very satisfied that the CRC screening program was started. The number of participants in the Svit programme has been increased. Nurses working in that field are optimistic and do their best to promote and support the program.

References:

1. Kronborg, O., Fenger, C., Olsen, J., Jorgensen, O.D., Sondergaard O. Randomized study of screening for colorectal cancer with faecal –occult blood test Lancet 1996; 30 ; 348: 1467-71.
2. Tepeš, B., Stefanovič, M., Bračko, M., Frkovič Grazio, S., Maučec Zakotnik, J., Mlakar Novak, D., Štabuc, B. Slovenian colorectal cancer screening programme SVIT – results of pilot phase. Zdrav vestn 2010; 79: 403-11

Learning outcomes:

Conference participants will

- See how a national CRC screening programme can be established
- Be aware of the nurses role in CRC screening programmes

P-10

The nurse's role in the surveillance program of postoperative curative resection of colorectal cancer

Isabel, Pampulha; Nuno, Pereira; Vânia, Santos. Portuguese Institute of Oncology of Lisbon, Portugal

Colorectal cancer (CRC) is the leading cause of cancer death in Portugal (World Health Organization, 2008). An intensive surveillance program of postoperative curative resection of CRC allows the detection in asymptomatic phase the recurrences of the disease (Jacobson, Moy & Farraye, 2010), which makes this program beneficial for the success of re-treatment after relapse. After treatment completion with curative intent, the major concern focuses on the early detection of recurrences at a stage where it's still possible a new surgery with or without combination with other cyto-reductive strategies. To this end, was implemented a surveillance program that develops over a five-year period, including periodic clinical evaluation, tumor markers analysis, colonoscopies and computed tomography (CT), according to the established protocol. Patients fulfilling the inclusion criteria are admitted to the program after a consultation with a multidisciplinary group of CRC. The nurse's role in this program is essential, because he/she is a case manager who evaluates all the laboratory analysis and imaging changes, contacting the assistant doctor. Therefore, it's essential to describe the patients admitted in this program to establish adequate monitoring of care and evaluate program's effectiveness in terms of recurrences. This study is the first step towards the development of a nursing consultation for patients admitted in the surveillance program.

Objectives: To describe the surveillance program after curative resection of CRC implemented at the Portuguese Institute of Oncology of Lisbon, the importance of nurse's role, the patients admitted in the surveillance program between 03/2008 – 03/2011, and evaluate the program's effectiveness concerning recurrences.

Methodology: We conducted a descriptive, prospective and retrospective study, with a quantitative approach, by analyzing the processes of the patients, imaging studies and blood analysis made during the surveillance program, using the TNM scale (National Comprehensive Cancer Network, 2010) for classifying the staging of CRC.

Results: The total sample was 170 patients, with an average age of 64.6 years. The location of the primary tumor was 48.8% in the rectum, 30.6% in the distal colon and 19.4% in the proximal colon. The predominant stages were the IIA (51.8%) and the IIIB (37.5%). Until the present time occurred 11.2% of recurrences, 52.6% in the 1st year, 36.8% in the 2nd year and 10.5% in the 3rd year of surveillance, detected by carcinoembryonic antigen (CEA) 42.1%, CEA plus carbohydrate antigen 19-9 (CA19-9) 26.3%, CT 21.1% and CA19-9 only 10.5%. Of those 19 patients, 3 (15.8%) re-entered into the program after new surgery.

Summary and Conclusions: This study describes the surveillance program after curative resection of CRC, the importance of the nurse's role, the characteristics of the patients in this program and evaluates its effectiveness. Of the 170 patients only 11.2% had recurrences, of which 15.8% re-entered into the program after new surgery, which shows high effectiveness and benefits of the surveillance program.

References:

- Jacobson, B., Moy, B., & Farraye, F. (2010). Surveillance after colorectal cancer resection. Retrieved from <http://www.uptodate.com/contents/surveillance-after-colorectal-cancer-resection#subs cribemess age>
- National Comprehensive Cancer Network (NCCN, 2010). *Practice Guidelines in Oncology: Colon Cancer*. Version 3.
- World Health Organization (WHO, 2008). *International Agency for Research on Cancer: Globoscan, 2008*. Retrieved from <http://globocan.iarc.fr/factsheets/populations/factsheet.asp?un o=620>

Learning outcomes for audience:

The new role of nurse's in a surveillance program of postoperative curative resection of CRC and the characteristics of the established program protocol.

P-11

Worries about sexual intimacy adversely influence changes in subjective health for patients with inflammatory bowel diseases: A latent growth analysis

Fredrik Saboonchi ^{1 2 3}, Susanna Jäghult ². ¹Sophiahemmet University College, ²Karolinska Institutet, Department of Clinical Sciences, Danderyds Hospital, ³Stockholm University. Stockholm, Sweden

Objective: In addition to the symptom related burden, the chronicity and the unpredictable course of Inflammatory Bowel Diseases (IBD) subject the patient to a considerable amount of distress. The worries and concerns of patients with IBD have thus been suggested to comprise an important factor in health related quality of life (HRQL) for this patient population [1-3]. As HRQL is largely affected by the subjective health, it is important to identify the potential negative influences on changes in the subjective experience of health, and consequently, the patient's adjustment to the disease.

Method: A latent growth curve analysis was conducted on self-reported data generated by a sample of IBD patients (n=197) on three occasions. The questionnaires included in the analysis were The Rating Form of Inflammatory Bowel Disease Patient Concerns (RFIPC) and the Health Index (HI). The

assessments were conducted on baseline, after 1 month, and after 6 months. The recently validated factor structure of the RFIPC was utilized in the analysis.

Results: The standardized slope of the change in HI was Beta = 0.08 after one month, and Beta = 0.47 after 6 months. The main adverse influence on the slope of the change was the Worries about sexual intimacy (Beta = -0.60, p < 001). Furthermore, Worries about the impact of the disease displayed a negative impact on the baseline HI (Beta = -0.84, p < 001) but did not significantly affect the changes over the assessment period. The modeling of the change in HI displayed excellent fit to the data (CFI = 0.98)

Conclusions: Although worries about the impact of the disease influence the subjective health, it is the worries about the sexual intimacy that may prospectively impede a successful adjustment to the disease in short term (< 6months).

Learning outcome:

The results of the present study indicate a need to address this potentially sensitive issue in both clinical and research settings.

References:

- Bernklev, T., et al., Health-related quality of life in patients with inflammatory bowel disease five years after the initial diagnosis. *Scand J Gastroenterol*, 2004. 39(4): p. 365-73.
- Bernklev, T., et al., Health-related quality of life in patients with inflammatory bowel disease measured with the short form-36: psychometric assessments and a comparison with general population norms. *Inflamm Bowel Dis*, 2005. 11(10): p. 909-18.
- Pizzi, L.T., et al., Impact of chronic conditions on quality of life in patients with inflammatory bowel disease. *Inflamm Bowel Dis*, 2006. 12(1): p. 47-52.

P-12

Caring through a telephone wire - The needs of patients who perform videocolonoscopy

Alexandra, Rei; Ana, Francês; Angelina, Fontes; Carla, Pires; Maria, Manso; Maria, Mendes; Maria, Viegas; Matilde, Godinho; Nelson, Martins. Centro Hospitalar Lisboa Norte – Pólo Pulido Valente, Lisbon, Portugal

Introduction: The Nursing staff realized that often the patients who have done scheduled videocolonoscopy, showed a poor bowel preparation and also high levels of anxiety (most exams are performed without sedation), facts that contribute to a difficult examination and an inconclusive diagnosis. Not having implemented a nursing consultation and frequently receiving telephone calls from patients requesting clarification about the colonoscopy, led us to developed a new strategy by implementing a telephone guided interview, aiming to provide orientation and clarification of doubts to patients and relatives to overcome this reality.

Objectives: The main goal of this research is to contribute to the efficacy of the scheduled videocolonoscopy, the specific objectives are: implement a systematic practice of the nurse interview; evaluate the relevance and impact of nursing interview; monitoring and observing patients submitted

to scheduled videocolonoscopy for the indicators of preparedness, collaboration, and anxiety levels for the examination.

Method: In order to evaluate the impact and pertinence of this intervention, we studied two groups, with 100 patients each, Group A – patients underwent telephone interview (with closed questions, that include aspects like the knowledge about the exam, and about the preparation, followed by its explanation) and Group B – patients not interviewed, randomly chosen, using a quantitative approach with an exploratory and comparative study. During the course of the examination we used an observation grid in order to classify the bowel preparation, the emotional state of the patients and the degree of collaboration. The nurses scoring the patients didn't know which patient underwent telephone interview.

Results: Data are presented in the following table.

Parameters:		Respondents (%)	Not interviewed (%)
Emotional state	Calm	56	8
	Reduced Anxiety	23	25
	Moderate anxiety	13	33
	High Anxiety	5	13
	Very high anxiety	3	21
Degree of collaboration	Uncooperative	9	32
	Reasonable cooperation	19	48
	Very helpful	72	20
Preparedness	Excellent	25	4
	Good	46	26
	Sufficient	23	38
	Poor	4	25
	Very Poor	2	7

Summary or Results: From the analysis of the 200 observation grids filled in after the exam, the results let us conclude that patients submitted to nursing telephone interview showed:

- More effective bowel preparation
- Lower anxiety during the exam
- Better collaboration during the exam.

Conclusion/Learning Outcomes:

After the completion of this study, we concluded that the Nursing telephone interview has proved to be an essential tool (as we don't have a nursing consultation), since it involves the patient, becoming an active subject in his care process by generating new attitudes and behaviors. Through analysis of the data presented we can also conclude that there was a significant improvement in the quality of the examinations, decreasing the number of repeated examinations and waiting time, thus reducing the associated costs.

References:

- PHANEUF, M. – Comunicação, entrevista, relação de ajuda e validação. Loures: Lusociência, 2005. XXXIII, 633 p.. ISBN: 972-8383-84-3;
- QUINA, M. G. ; (et al) – *Gastrenterologia clínica*. Lisboa: Lidel – Edições Técnicas, 2000. 753 p.. ISBN: 972-757-108-5;
- YAMADA, T. – *Manual de Gastroenterologia*. Espanha: McGraw-Hill Interamericana Editores, 2000.

P-13

Patient's perception in the digestive endoscopy unit belonging to a hospital in Vigo City

Mar Rionda, Ana Alonso, Pilar Iglesias, Isabel Pérez, Milagros Fernández, Carmen Portasany, Inmaculada Pardo, David Rodríguez, Luisa de Castro, Hospital Meixoeiro, Vigo, Spain.

Introducción: Our desire to improve the real quality of our service took us to pay attention in how our patients see it.

Goal: To get to know the perception that our patients have about the service we offer in the endoscopy unit of the Meixoeiro Hospital.

Materials and Methodology: Cross descriptive study done during 2 months using the questionnaire: GHAA-9mc modified, which was filled in by the patients with the capability to do it by themselves (with the intention to keep it anonymous)

Results: During the research period 1.193 endoscopies took place, 517 surveys were distributed (43% of the trials) and 480 (93%) of the total counted, out of the patients who filled in the surveys, 58,96% were men, of which 63,60% were under 65. The waiting time, until the date when the trial was done and the same day when people were called, was very well marked, as in 38% of the tests. The discomfort during the trial was 27% of the patients, which I consider within the positive values, though it is the gastroscopy, the one with the most negative values. The best valued parameters are the ones to do with the personal caring of the professionals, specially the nursing caring, considered excellent in 56% of the cases. For the explanations of the trial and the global punctuation of the exploration, the highest percentages are around 35% in each of the positive answers. The 99,79% of the patients would come back to do the trial in the same place and with the same professionals.

Conclusions: The surveyed patients have shown a high grade of satisfaction and were very pleased with the service provided in our unit, as it is reflected in the highest percentages displayed in the survey. The information given, waiting time and caring of the whole staff have an important impact in the patient's level of satisfaction. The discomfort during the exploration is the most negative aspect. The fact that almost all the patients consider to come back to the same service and professional team in case of need, as well as that the best valued question in the survey is about the nursing care, give us an motivation to keep working and researching including our work in a cycle of continuous improvement.

References:

- Sánchez del Río A, Alarcón Fernández O, Baudet JS, Sainz Menéndez Z, Socas Méndez M, Piera Jaén G. Validación de un cuestionario breve sobre satisfacción del paciente en endoscopia digestiva. Rev Esp Enferm Dig 2005; 97(8):554-61.
- Pablo Leis AI, Sánchez Prudencio S, Carneros Martín J A, Gonzalo Domínguez E, Chorro Madrid V, Valer López-Fando P, Granados Martín M, Díaz Rodríguez D R. Valoración del grado de satisfacción del Paciente en endoscopia digestiva. Revista de la ACAD, Vol XXV nº1 (11-16), 2009

P-14

Endoscopic Medical Information System (EMIS) in Nursing Management of Endoscopy Department

Evgeniya Korovina*, Olga Migurskaya*, Evgeniya Spiridonova*, Alla Keranova*, Alexey Gvozdev*, Victor Kapranov**, Alexander Senin*, Sergey Kashin*, * Endoscopy Department, Yaroslavl Regional Cancer Hospital, Yaroslavl, Russia; ** 1st Department of the University Internet Centre, Yaroslavl State University named after P.G. Demidov, Yaroslavl, Russia

Introduction: Annually, around 9000 endoscopic procedures are performed at our unit. Complex and therapeutic procedures require comprehensive nursing assessment and intervention. As the time is limited between the patients and the nurse, nursing documentation can be a challenge. New EMIS was developed specifically to satisfy the needs identified by our Unit, in partnership with the Demidov's Yaroslavl State University.

The aim was to implement, an adapted informatics tool which allow managing objectively and rationally, the nursing cares and monitoring the available endoscopes.

Methods: Utilization of an informatics system that is already implemented since April, 2009. It was installed in the server and it is available and ready to be used in any working place computer. EMIS main menu consists of registers, reports and data base. Registers include procedures register; failures, repairs and bacteriological control. Reports include activity of each endoscope, reports of all procedures, failures of the endoscopes and bacteriological control reports. Data base consists of specifications of endoscopes, physicians and nurses information.

Results: Fast and easy endoscopic management system (EMIS) allows to collect information to the management of human resources and endoscopes in real time. The routine register after each procedure takes an average of 2 minutes. EMIS allowed making work plans so that the whole nursing staff remains with homogeneous skills. We managed to identify the endoscopes that were not being frequently used, and also the ones that had already suffered many failures or repairs and so should no longer be used. EMIS helps us to organize the endoscopes monitoring and improves the information to other units in the hospital.

Conclusions: The EMIS already gives information about the cleaning and decontamination procedures, historic of the endoscope and different information including pictures gathered during the examination for each specific patient. The EMIS ends up with a full medical journal using a structural terminology, which can be either printed or mailed electronic to the referring physician. Altogether this provides a full documentation for all parts of the endoscopic procedure. The documentation performed by the nurses including observation after the endoscopy in the recovery room complete all relevant documentations, thus giving a lift of quality and safety for the patient. The nursing documentation, as a computer based nursing care plan, is now a part of the medical record and has contributed to standardization of nursing communication.

Learning Outcomes: It's necessary to have a tool that enables us to monitor the development of a nursing staff's competences in order to provide continuous

quality health care. It is convenient to monitor the use of the endoscopes to maximize their profit and find out procedures and/or professionals that make them faulty and needing repair.

P-15

The nurse's role in a clinical research center

Suzana Muller, RN, MsC, PhD. Clinical Research Center of Hospital de Clínicas de Porto Alegre, Brazil

Introduction: Clinical research is any research that seeks to identify and verify the pharmacodynamic effects, pharmacology, clinical trials adverse events to an investigational product and its safety and/or efficacy¹. The Clinical Research Center (CRC) of Hospital de Clínicas de Porto Alegre (HCPA) was established in 2009 to centralize clinical research developed by the HCPA research teams in the pharmaceutical industry and academic projects². It provides the physical infrastructure, technical, logistical and operational support to conduct the research. In this context a registered nurse was hired to manage the area.

Objectives: To describe the current role of the registered nurse in the CRC based on the Brazilian National Curriculum Directions Education Policy. This policy includes the following: health care professional competencies, general abilities, attention to quality health care, decision-making, communication, leadership, management and level of continuing education.

Methodology: Data was collected of all the steps and actions the RN needed to complete to make this a successful operation.

Results: 1684 patients, from 29 research protocols attended the infusion area from October 2009 to December 2010. In order to operate the new CRC, it was necessary to develop a Standard Operating Procedure, routine and special protocols and order the necessary equipment and supplies. The CRC RN trained the research teams in Basic Life Support, Advanced Cardiologic Life Support, Anaphylactic Shock and Good Clinical Research Practices. An in-depth knowledge of each protocol was necessary for the CRC RN to promote security and the ethical rights of the research volunteers. Direct assistance to the volunteer with an adverse event was carried out since 2.9% of them presented adverse effects during the the research studies. Children were included with their parents and were offered entertainment while receiving medication and treatment. The RN is a member of the Ethics Committee allowing her to be part of the development of protocols. 32 research protocols were evaluated by her in this period. She is also responsible to evaluate all the protocols used the CPC area to identify the structure required for the success of the research trial. 91 protocols were evaluated with this purpose.

Conclusions: The actions and role of the research nurse are focused on the implementation and management of numerous protocols, ensuring they are consistent with the principles of Good Clinical Practices, while ensuring the comfort, safety and satisfaction of the research volunteers and family.

Learning points:

The RN of a clinical research center in which patients receive medications and treatment must have knowledge about Clinical Research, national and international laws and be up to date with the research protocols in the area.

Keywords: Nursing, Clinical Research

References:

1. (EMEA, 1997. Disponível em: <http://www.anvisa.gov.br/medicamentos/pesquisa/def.htm>. Consultado em: 13/04/2011.
2. Normas de Funcionamento do Centro de Pesquisa Clínica do HCPA.

P-16

Three centre study of theory to practice of cannulation in endoscopy

Jadranka Brljak RN. KBC- Zargreb- Referral Centre of Intervential Gastroenterology. Zargreb, Croatia. Sylvia Lahey RN Rijnstate Hospital, Arnhem, The Netherlands. Jayne Tillet RGN Emerson Green NHS Treatment Centre, Bristol United Kingdom

Introduction: The cannulation of patients in the endoscopy area is required to be undertaken by trained staff who are competent in the area of cannulation and have access to support and training to keep up to date with this practice. This three centre study was put together to look at different practice and education.

Aim: To discuss how three different centres provide training of theory to practice for cannulation to the team.

Method: An explanation of the study was given to the staff and asked if they were happy to take part. It was a tick the box and some explanation, all questionnaires were anonymous. A questionnaire was designed with open and closed questions for all grades of the endoscopy team involved with cannulation to complete. A series of 13 questions were designed to cover all areas of cannulation. To explore the different protocols, training and problems encountered. Ten questionnaires were given to each centre. The study composed of a total of 28 completed questionnaires.

Results: What type of training and competency is available? - Study day, practical manikin observation and assessment of practice of 4 procedures

- Regular up date training if not cannulate in 1 month, half day theory to practice
- Required skills through work experience practice during nurse education
- Set protocols for regular updates-
- Care of the cannula - site clean site
- The type of cannula used for first line treatment was a pink venflon 20 ga or green 18 ga or blue.
- In all areas an aseptic non-touch technique was used to cannulate.
- The protocol for the length of time a cannula is in situ seemed to be between 48-72 hours and then it was changed or removed depending on whether the patient was a day case or an inpatient.
- When placing the cannula it was shown that they tried placing it correctly 1-2 times and then they would ask a colleague.

Conclusion

The aim of this study was to bring together three centres and look at the training and competencies of cannulation of patients in the area of endoscopy. This study has identified that there are protocols in place and training available for the team in each of the centres. The types of complications that have been seen from cannulation are phlebitis, bruising, swelling due to friable vein or trauma, pain and inflammation. In endoscopy patients day care would have the cannula in situ for up to 8 hours. As qualified nurses we are accountable for best practise and keeping up to date with changes in protocols. Marking the dressing with the date and time of insertion of cannula ensures that other members of the team are aware of how long the cannula has been in place. Regular re-training is encouraged if there is a lapse in practise to ensure competency.

Learning outcome

Sharing knowledge and theory to practise in a three centre study.

Poster Session II

P-17

Manometry guided attachment of the Bravo capsule by nurses without endoscopic control

Margaretha Bouleau, R.N., Leena Reinilä, R.N., Ingrid Malm-Börjesson, R.N. and Bengt Håkanson*, M.D, Ph.D., Endoscopy Unit, dept. of Medicine and dept. of Surgery*, Ersta Hospital, Stockholm, Sweden.

Background: Ambulant 24 hour oesophageal pH-monitoring have been a clinical routine investigation since the beginning of the 1980's. Wireless oesophageal pH-monitoring was developed in the beginning of the 2000's to facilitate monitoring and to increase patient compliance with the investigation. In 2004 the first wireless monitoring was undertaken at Ersta Hospital. The Bravo pH capsule™ (Given Imaging, Copenhagen, Denmark) is designed to be attached to the oesophageal mucosa using endoscopic or manometric guidance. The device uses radio telemetry to transfer pH data to a portable receiver.

The attachment procedure is either endoscopically guided or manometrically guided. In the first case the endoscopist intubates the oesophagus and measures the distances to the oesophagogastric junction and z-line. The introduction device with the Bravo capsule is pushed down by the nurse alongside the endoscope to the desired level and a negative pressure is applied and the capsule is fastened to the oesophageal mucosa with a springloaded pin. The monitoring is ongoing for 48 h. The portable pager sized receiver can be placed in a pocket or be attached to waistband and the patient is told to live as normal as possible during the monitoring.

In order to rationalize and expand the number of investigations, three nurses were educated in 2005 by the team physician to perform manometry guided capsule introduction without endoscopic control.

Aim: To increase the number of investigations while reducing patient discomfort. Give more reliable results with a longer measurement period.

Method: The procedure is always performed by two nurses. The lower oesophageal sphincter (LES) is determined with manometry and the capsule is introduced to the desired oesophageal level accordingly (6 cm above the LES) without endoscopic guidance. Most patients receive local oral anaesthetics (Xylocain spray).

Results: No procedure related complications were recorded during more than 600 investigations by nurses since 2005.

Conclusion: Manometry guided attachment of the Bravo capsule by trained nurses is a safe procedure and a logical practice for wireless oesophageal pH-monitoring.

P-18

Involvement of nurses in capsule endoscopy practice and research

Céline Monfort, Véronique Faber, Linda Zourane, Jean-Francois Rey, Department of Hepato-Gastroenterology, Institut Arnault Tzanck, St Laurent du Var, France

Introduction: With the development of capsule endoscopy examinations, the importance of nurses' involvement has been growing during the last 10 years.

Aim: The aim of this paper is to underline the role of nurses in clinical practice and research.

Method: Since May 2004, we have performed 393 small bowel capsules endoscopy (267 Olympus, 121 Given Imaging and 5 MiroCam/Life Partners Europe). 125 examinations were carried out for the small bowel protocol trial (1). But we have also conducted a research activity in 85 patients with a magnetically guided capsule for stomach examinations (2) and 2 colonic capsule explorations. During this period of time, the involvement of nurses has been growing from usual nursing care to nurse practitioner or research activity.

Results: Concerning the routine small bowel examination, year after year, the role of nurses has moved from basic nursing (setting, arrays) to complete monitoring of the examinations including control of the duodenal passage, using if necessary prokinetics and stopping the recording when capsule reaches the cecum. It is a real nurse practitioner responsibility. The next step will be the involvement in the reading phase. Even more important, after limited responsibility in reporting data in the trial for the small bowel preparation, we have been markedly involved in the first human trial with a magnetically guided capsule endoscope for gastric examinations, monitoring the various steps of the protocol, caring patients and collecting data, it has been a real activity as research nurses.

Conclusion: For video capsule examinations, the involvement of nurses will be more important in the future. A nurse could carry out examinations with a guided capsule endoscope as technicians perform most of the radiologic examinations.

References:

1. Optimal preparation for small bowel examinations with video capsule endoscopy. JF. Rey, A. Repici, K. Kuznetsov. Dig Liver Dis 2009;41:486-493

2. Feasibility of stomach exploration with a guided capsule endoscope. JF. Rey, H. Ogata, N. Hosoe et al. Endoscopy 2010;42-541-545

P-19

Mysteries of Esophageal Achalasia: Why are some patients able to keep food down and some not?

Debbie den Boer BSN, CGRN, Su Jin Hong MD., Valmik Bhargava PhD., Ravinder Mittal MD. University of California, San Diego, San Diego, California, USA; V.A. Healthcare System, San Diego, CA. USA., Soonchunhyang University School of Medicine, South Korea.

Introduction: Esophageal Achalasia is characterized by loss of peristalsis and incomplete lower esophageal sphincter relaxation that results in poor esophageal emptying. Symptoms differ amongst patients; from severe vomiting to occasional dysphagia. Why does intermittent esophageal emptying take place?

Aim: To determine the mechanism of esophageal emptying in achalasia using simultaneous high resolution manometry (HRM), high frequency ultrasound imaging (HFUS) and multi-intraluminal impedance manometry (MII).

Methods: HRM, MII and HFUS procedures were performed simultaneously on known achalasia patients (n-14). The swallowing pattern, esophageal body contractions, lower esophageal sphincter relaxation (LES) and bolus transit was observed and data collected at different levels in the esophagus.

Results: Achalasia of the esophagus can be categorized in 3 types: Type 1(n-2) showed no esophageal emptying and vomiting occurred during the study. The longitudinal muscle contraction of the esophagus was markedly reduced. Type 2 (n-7) revealed emptying with majority of the swallows. The HRM pattern consists of upper esophageal sphincter contraction, simultaneous esophageal pressure waves (common cavity) and LES contraction following swallows. HFUS identified longitudinal muscle contraction that was stronger at 2cm as compared to 10 cm above the LES. MII revealed that esophageal emptying occurred intermittently (48% of swallows) during periods of esophageal pressure waves in Type 2. In Type 3 (n = 4) the swallowing pattern was disorganized.

Conclusion: Emptying in esophageal achalasia is the result of swallow-induced longitudinal muscle contraction of the distal esophagus that increases esophageal pressure and creates a favorable pressure gradient for emptying. Longitudinal muscle contraction patterns are different in the 3 achalasia subtypes.

References:

1. Pandolfino JE, Kwiatek MA, Nealis T, Bulsiewicz W, Post J, Kahrilas PJ. Achalasia: a new clinically relevant classification by high-resolution manometry. Gastroenterology 2008;135:1526-33.

2. Arash Babaei, Valmik Bhargava, Hari Prasad Korsapati, Wei Hao Zheng, Ravinder K. Mittal: A Unique Longitudinal Muscle Contraction Pattern Associated With Transient Lower Esophageal Sphincter Relaxation. Gastroenterology Volume 134, Issue 5, Pages 1322-1331, May 2008

Learning Outcome:

1. Swallow induced contraction of the longitudinal muscle of the esophagus is the major mechanism of esophageal emptying in achalasia of the esophagus. In some achalasia types esophageal emptying occurs intermittently.

2. Due to reduced longitudinal muscle contraction and pressure, emptying is delayed and vomiting occurs frequently.

P-20

Expression of anxiety in upper gastrointestinal endoscopy without sedation and nursing intervention

Rosa M^a García Sierra, Iolanda Caballero Sáez, Raquel Mena Sánchez. Consorci Sanitari de Terrassa, Spain

Introduction: A gastroscopy is a short procedure with low degree of complications, but associated with high level anxiety, that influences the patients negatively during the procedure and it also creates discomfort. Before the approach of a standardized care plan for the diagnosis NANDA 000146 "Anxiety" and NOC "decreasing the anxiety before a gastroscopy," we decided to perform a pilot study with the existing nursing intervention.

Objective: The principal objective is to describe the changes in the psychophysical parameters of anxiety before the procedure in patients scheduled for an ambulatory gastroscopy without sedation at Consorci Sanitari de Terrassa. The second objective is to measure how the patient tolerates the gastroscopy.

Method: **Inclusion Criteria:** ambulatory patients, gastroscopy without sedation and a signed informed consent. **Sample:** 63. **Process:** after signing the informed consent, the blood pressure was monitored (BP), as well as, heart rate (CR) [value 1]. At this point, the nurse intervenes as usual. When the endoscopist is ready to introduce the endoscope, a new reading of both blood pressure and heart rate is taken [value 2]. During the procedure, the nurse makes observations of the nausea, movements, pain gestures, as well as the attempts to extract the tube. When the procedure comes to an end, the nurse then registers the observations on a Likert 5 point scale. The sum of these results will indicate the tolerance. We then created a data base in Excel and used the statistical instruments of this program to analyze the data.

Results: 41 %: men, 59%: women. Average age: 50 years. (see table below)

	FIRST QUARTILE	Minimum	Medium	Maximum	THIRD QUARTILE	NEGATIVE SCORE
H. R. 1 - H.R.2	-12	-24	-4	12	3	40 (63 %)
B.P.S.1 -B.P.S.2.	-2	-47	7	49	18,5	19 (30%)
B.P.D.1 - B.P.D.2.	-5	-42	11	37	17,5	21 (33.33%)
TOLERANCE	0	0	1	7	3	

Conclusions: The psychophysical parameters of anxiety, BP and HR are elevated in a great number of the patients at the beginning of the gastroscopy due to the neurovegetative control system activated. However, part of the value samples, not only don't increase, but they also decrease. We think that the nurse's intervention is related to these differences, and this is why we propose that standardized nurse intervention, which promotes the interpersonal interaction of the patient with the nurse, and emphasizes the psychological needs of the patient, as well as the Hildegard Peplau School of interaction, could improve these results. On the other hand, even if the tolerance is good, we believe it could be better if we lower the anxiety at the pre-procedural level.

References:

1. Elizabeth Gillen MSc1 Francis Biley RN, PhD1 Davina Allen RGN, BA (Hons), PhD1. Effects of music listening on adult patients' pre-procedural state anxiety in hospitals *International Journal of Evidence-based Healthcare* 2008; 6(17):687-733. JBI Library of Systematic Reviews
2. Hoya Y, Matsumura I, Fujita T, Yanaga K. The use of non-pharmacological interventions to reduce anxiety in patients undergoing gastroscopy in a setting with an optimal soothing environment. *Gastroenterology Nursing*. 2008 Nov-Dec; 31(6):395-9.

Learning outcomes for Audience: Nursing intervention is shown to reduce anxiety previous a gastroscopy. The tolerance of a gastroscopy without sedation evaluated objectively by a nurse is a good.

P-21

The efficacy of paper handout compared with video media in reducing the level of anxiety in patients scheduled for upper GI endoscopy.

Sopa Boonviriyaya , Siriporn Ratanalert , Varaporn Senapitakkul. Affiliations: NKC institute of Gastroenterology and Hepatology, Thailand.

Introduction: Patients scheduled for endoscopy usually are anxious about the procedure. Pre-endoscopy education about the procedure may decrease the level of anxiety. The procedure of education can be done by paper handout or video media. Studies in the literature showed the efficacy of video media is better than paper handout in colonoscopic procedure. The data regarding this in patients undergoing upper gastrointestinal endoscopy is limited.

Aims: to compare the efficacy of paper handout to the video media in reducing the anxiety in patients undergoing EGD.

Materials and methods: A prospective study in patients undergoing EGD from February 2010 till February 2011 was done by randomizing patients to paper handout or video media before the scheduled EGD. All patients filled a validated questionnaire for assessing the anxiety level at base line and at the end of the procedure education. The level of anxiety before and after the education in the same group and between groups were analyzed.

Results: There were 75 patients recruited (male 22, female 53,), 43 were randomized to paper (group A) handout and 32 were randomized to video media (group B). The demographic data of the 2 groups were not difference. The mean score \pm SD of anxiety at base line of group A was 43.18 ± 7.38 and of group B was 43.25 ± 7.28 . ($p=0.97$). The mean \pm SD anxiety

score after education in group A was 44.97 ± 7.15 and group B was 41.91 ± 6.93 which was lower than in group A but failed to reach statistical significant. ($p=0.067$). The difference of anxiety score in group A at base line compared with after education were not significant. ($p=0.257$) The anxiety score in group B was lower after education compared with baseline but this was statistically not significant. ($p=0.453$)

Conclusion: Pre-procedure education of patient who underwent EGD between the paper hand out and video media did not reduce the anxiety significantly. The video media showed a trend in reducing the anxiety level after education but failed to reach statistical significance.

Reference

1. Bytzer P, Lindeberg B. Impact of information video before colonoscopy on patient satisfaction and anxiety- a randomized trial. *Endoscopy*.2007;39:710-714
2. Luck A, Pearson S, Maddern G et al. Effects of video information on precolonoscopy anxiety and knowledge: a randomized trial. *Lancet* 1999;354:2032-2035

P-22

Percutaneous Endoscopic Gastrostomy

J.J.M. van der Nolk van Gogh-van Rijn, Nurse Endoscopy, E.M.J. van Duin, Nurse specialist Leiden University Medical Centre, Leiden, The Netherlands

Introduction: The Percutaneous Endoscopic Gastrostomy-tube can be placed by using two different methods; a pull-method or a push-method. The treatment is performed in two different departments: the Endoscopy department and the Radiology department. Often patients are not adequately informed about the procedure. The after-care of both methods is different the first 4-6 weeks. Two departments, Endoscopy and Radiology, currently perform the procedure PEG-placement and each has their own method and flow of information. During the development of this poster it appeared that both departments share the need to improve the flow of information to the patient.

Objective: To improve the provision of information about pre-care and aftercare of both methods of PEG-placement for patients and their care takers.

Method: During the process of developing the poster the Endoscopy and Radiology units came to an agreement to develop one uniform guideline for patients and caretakers.

Results: The poster is a valuable addition as information source for pre-care and aftercare providers of patients needing PEG-placement by either the pull-and push method. Patients are informed by an endoscopic nurse during an outpatient consultation. Different flyers have been developed to support this communication. Our poster schematically shows the following points of this consultation:

- Indication
- Method of placement
- Aftercare short term
- Aftercare long term
- Replacement

Discussion: According to literature study, people only remember 10% of the verbal information they receive. This percentage increases up to 50% when written/graphical support is used, i.e., visual aid, like a

poster (1,2) Informing patients adequately (3) about PEG placement improves tolerance of the procedure.

Conclusion: Informing patients exclusively verbally is insufficient. In order to support patients remembering, all information should be supported by written information using leaflets and a poster. A single contact procedure has been developed for patients coming from two departments having been treated with the two different PEG methods. Patients are informed about the differences in care before and after the procedure. This leads to a greater degree of clarity for nurses, patients and carers and improve patient satisfaction.

Learning Outcomes:

The conference participants will:

- be able to see different options to increase patient information undergoing PEG treatment
- understand the importance of a combined way of patient information (oral and written)

References

1. <http://w3.nigz.nl/inc/pdf.cfm?filename=winkel/KW031315%20theo%20verkenning.pdf>
2. <http://www.dokterbouma.nl/Praktijkondersteuning/COPD%20protocol%20frames/Voorlichting%20in%20theorie.htm>
3. http://www.vumc.nl/afdelingen-themas/33760/101392/Voorlichting_op_maat.pdf

P-23

Multidisciplinary team care in enteral feeding

Linden, Ane. Hospital de Clinicas de Porto Alegre – Brazil

Enteral feeding is a therapeutic method in which nursing plays an ultimate role. Hospitalized patients or even ambulatory patients with chronic illnesses may have special nutrient requirements imposed by a combination of malnutrition and enhanced utilization of nutrients resulting from the disease process. In our Endoscopy Unit, many patients need upper endoscopy in order to put the enteral tube, due to esophageal stenosis or restriction, achalasia, carcinoma and other diseases. Although enteral feeding is an easily operationalized and highly efficient method, many ambulatory patients and their families have many doubts and difficulties with this therapy. Many times, after discharge, they have to return to the Endoscopy Unit, seeking for guidance, increasing the nutritional hazards and the related costs.

The **purpose of this study** was to observe multidisciplinary team care as well as to elaborate educational material from the results of the former objective.

Observation results identified failures in communication and several questions from the patient and family about nurses, physicians and clinical nutritionists approach.

As a result, we had established a tailored orientation based on circumstances of the individual patient and his needs. The patients and key family members were instructed by their physician, nurse and clinical nutritionist as soon as possible after the endoscopy procedure. They were informed about the principles of the treatment, in order to guarantee the patient safety and satisfaction. The educational approach from different professionals can provide comprehensive

skills and instructions that can enhance their compliance to the treatment.

Educational team work strategies are a requirement to improve caring as a whole, and can reduce the incidence of complications and also decrease costs.

References:

- Waitzberg, DL, Caiiffa WT, Correa MI. Hospital Malnutrition: the Brazilian national Survey: a study of 4000 patients. *Nutrition*, 2001.
- Senkal M, Dorman A et al. Survey on structure and performance of nutrition-support teams in Germany. *Clin. Nutr.* 2002;21(4).

Learning Outcomes:

The participation of the multidisciplinary team improved the pattern of enteral feeding support. Multidisciplinary team guidance can reduce the incidence of complications and also can reduce related costs.

P-24

Examining the burnout levels in care givers of the patients having percutaneous endoscopic gastrostomy tube

Nimet Tuzomay, Ozdal Ersoy, Burcu Acil, Serpil Turker, Senel Surucu, Gulay Gocmen, Hulya Hamzaoglu, Gulden Acehan, Eser Vardareli, Nurdan Tozun, Acibadem University Internal Medicine Department Istanbul-Turkey

Aim: Percutaneous endoscopic gastrostomy (PEG) tube has now become a preferred option for the long-term nutritional support device for patients with dysphagia of any etiology. However the feelings and attitudes of the caregivers towards gastrostomy feeding may be sometimes unfavourable. Burnout is a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with other people in some capacity. Our aim of the study was to assess the burnout levels of care givers dealing with patients having PEG tube, which will be the first study using burnout inventory in this field of health issue.

Material and methods: This study was participated by 15 patients with PEG tube -placed and their care givers and planning to reach up to 60 patients in advance. "Maslach Burnout Inventory (MBI)" and "Personal Information Form" have been used to identify the burnout levels. The MBI is designed to assess the three components of the burnout syndrome: emotional exhaustion, depersonalization, and reduced personal accomplishment. There are 22 items, which are divided into three subscales. Each respondent's test form is scored by using a scoring key that contains directions for scoring each subscale. The scores for each subscale are considered separately and are not combined into a single, total score, thus, three scores are computed for each respondent.

Results: Among the patients; the mean of their age was 61.06±26.82 years, female %/male% ratio was 60/40 (n:9/6 respectively), education status of the patients were 26.7% were only capable of reading and writing w/o any diploma, 26.7% were primary-secondary school graduates and 46.7% were high-school graduates and no university graduates. Care-givers of the patients were either the mother (n:3), daughter (n:5), daughter-in-law (n:2), wife (1), private

caregiver (3) and nurse(1). The means \pm SD of the subgroups of the burnout scores of the caregivers for emotional exhaustion, depersonalization and personal accomplishment were 29.73 ± 4.62 , 17.33 ± 2.12 and 21.46 ± 2.89 , respectively. No significant differences were found in terms of the gender and age and income status of the patient they care. But as the education status of the patient increases, burnout level is observed as decreased. PS: These are all preliminary results of the study. Study and the survey and patient submission is still going on (60 patient is targeted to be involved). Exact results with subgroup analysis will be given later if the abstract is accepted.

Discussion: The MBI is the most widely used measure in research on burnout and is generally regarded as the measure of choice for any self-reported assessment of this syndrome. However, it has not been used in this health problem before. This study takes an attention of burnout issue about PEG feeding carers. The awareness that a problem exists can be the first step in alleviating any form of caregiver burnout which will give an important role to medical staff (doctors and nurses) to solve the problem.

References :

- I) Sheehan JJ, Hill AD, Fanning NP, et al. Percutaneous endoscopic gastrostomy: 5 years of clinical experience on 238 patients. *Ir Med J* 2003;**96**:265-267.
- II) Verhoef MJ, Van Rosendaal GMA. Patients' outcomes related to percutaneous endoscopic gastrostomy placement. *J Clin Gastroenterol* 2001;**32**:49-53
- III) [K Liddle](#), [R Yuill](#). Making sense of percutaneous endoscopic gastrostomy. *Nursing times*. 91(18):32-3.

P-25

Endoscopic Retrograde Cholangiopancreatography: Experience in Henares Hospital, Madrid-Spain

Dania Rocío Díaz-Rodríguez; Juan Jesús Pérez-Poveda; Alberto Ibañez-Pinto; María Luz Prieto-Vasallo; María José Gómez-Guerra, Ana María García; María Jesús Pajares, María José Cañas. Endoscopy Digestive Unit. Hospital del Henares. Avda. Marie Curie s/n. Madrid, Spain.

Introduction: Endoscopic retrograde colangiopancreatography (ERCP) is an endoscopic and X-ray technique for the diagnosis and management of biliar and pancreatic diseases. The technique has been performed in Henares Hospital since November 2009. The hospital is a referral population of 170.000 habitants. The team is formed by 2 endoscopists, a nurse, a nurse-assistant and an X-ray technician. Patients are sedated in the Endoscopy Unit. Endoscopic nurses take part in the preparation, monitoring and sedation of the patient, collaborate with the endoscopist during the technique and take care of the patient after the intervention. The aim of the study is to describe our experience in performing ERCP, its diagnostic and therapeutic procedures and evaluate its indications, complications and global results.

Methods: Retrospective study of all the ERCP interventions performed between November 2009 and March 2011. All patients were monitored (arterial pressure, O2 saturation, heart rate) and sedated by a nurse and an endoscopist. Data (sex , age ,

indication, petitioner, therapeutic technique, diagnosis and complications) were collected from the digital databases Endobase® and Selene®.

Results: 129 consecutive ERCP's were included. Median age was 62.43 (range 30-96 years), 49.6% males. Petitioner service were gastroenterology (81%) , surgery (6%) and internal medicine (4.6%). Indications were: Common bile duct stones in 45 (34.8%), jaundice in 15 (11.6%), chronic pancreatitis in 14 (10.8%), cholangitis(8.5%), biliar strictures in 10 (7.7%), neoplasm in 7 (5.4%), bile leak in 3 (2.3%) and biliar tree dilatation in 4 (3.1%). Success was achieved in 106 patients (82.1%). Interventions were: sphincterotomy in 54 (57.3%), stone extraction in 56 (43%), precut sphincterotomy in 9 (6.9%), biliar stenting in 32 (24.8%), stent withdrawal in 14 (10.8%), pancreatic stenting in 5 (3.8%) and sphincteroplastia in 3 (2.3%). ERCP's diagnosis were: papillar diverticula in 14 (10.8%), tumor in 14(10.8%), bile stones in 46 (35.6%), biliar dilatation in 43 (33.3%), papilitis in 23 (17.8%), biliar stricture in 28 (21.7%), biliar leak in 7 (5.4%) and normal in 5 (3.8%). Complications: One patient developed respiratory depression during ERCP, with complete recovery. There were 8 pancreatitis (6.2%) and one duodenal perforation.

Conclusions: ERCP is a complex and challenging intervention that requires full coordination between endoscopists, nurses and X-ray technicians. The success rate in our experience is 82.1%.

Teamwork is essential, particularly during cannulation, sphincterotomy and other therapeutic maneuvers as well for the monitoring and sedation of the patient in order to prevent complications during and after the technique.

Bibliography:

- Vázquez-Iglesias JL. Endoscopia Digestiva: Diagnóstica y terapéutica. Madrid: Panamericana 2008. Cap. 13, p 149-173.
- Margaix Margaix, L Gómez García, F Rubio Valverde, A Ramos San Valero, A y Borrás, P. [Cuidados de enfermería en la C.P.R.E.](#) Enferm Integral. 2000. 53:XXIII-XXVI. Protocolo y pautas de actuación.

P-26

Role of nurses in advanced endoscopic technique – endoscopic resection of ampullary adenoma

Sousa C, Bré R, Andrade J, Gastroenterology Department, Centro Hospitalar do Alto Ave, Guimarães-Portugal

Introduction: Ampullary tumors are rare. The approach of these lesions is in most cases surgical, however in individual cases can be performed an endoscopic resection.

Aim: We present the case of a patient undergoing endoscopic ampullectomy in our Unit. We intend to describe nurse collaboration throughout the endoscopic technique, as well as nursing care provided to the patient before, during and after the procedure.

Method: 71 years woman presenting with dyspepsia was submitted to an upper endoscopy, during which a villous tumor of the ampulla of Vater was detected. Histological biopsies revealed a low-grade dysplasia tubulovillous adenoma. Endoscopic ultrasonography staged the lesion as uT1mN0, and endoscopic resection was suggested. Pre-Procedure Care: patient

with medical history of chronic obstructive pulmonary disease, acute myocardial infarction, hypertension, under medication with aspirin and ticlopidine. No history of allergies. Baseline vital signs were monitored and confirmed: fasting status, suspension of ticlopidine, blood sample results and the proper fulfillment of the informed consent. A patent venous access was ensured and we checked the existence/operation of all equipment, accessories and support supplies necessary for the procedure. **Peri-Procedure Care:** procedure was performed under anesthesia with propofol. Patient was positioned on left lateral side. Prescribed therapy was administered and vital signs were monitored during entire procedure. Endoscopic resection (ampullectomy) was performed with electrosurgical snare in a single fragment, followed by biliary sphincterotomy and placement of a prophylactic pancreatic stent. **Post-Procedure Care:** monitoring vital signs and level of consciousness. Administration of prescribed fluid therapy and analgesia. Monitoring signs/symptoms of possible procedure-related complications: abdominal pains/distention, chills, fever, vomiting and haemodynamic changes.

Results: Endoscopic ampullectomy was performed with technical and clinical success and no immediate or late complications occurred. Knowing the correct steps of the technique procedure by us nurses, and providing adequate nursing care during pre, peri and post procedure periods, were essential to obtain the overall success and to provide safety and quality care for the patient.

Conclusion: Endoscopic ampullectomy is a complex therapeutic technique, not very often performed, that demands of us, nurses an updated knowledge of the technique itself, its possible complications and a high performance status, in close collaboration with the endoscopist and the entire health team in order to achieve success.

Summary: Nurses working in a Digestive Endoscopy Unit have a main role in the performance of endoscopic therapeutic procedures. We describe the prerequisites and skills of the nurse staff that were fundamental for the contribution of the success in this endoscopic ampullectomy performed in our Unit.

References:

Nguyen; Binmoeller - Endoscopic Ampullectomy. In: Techniques in Gastrointestinal Endoscopy 2010; Vol 12, No. 1, Page: 54-57.

Tinto R. Rio et al. Ressecção endoscópica de volumoso adenoma da ampola de Vater: Relato de um caso com seguimento a longo prazo. In: GE-J 2005; Vol 12; Page: 210-214.

Learning Outcomes: We recognize the importance of permanent updating in knowledge and skills by us, nurses working in a field in constant evolution and development such as therapeutic endoscopy.

P-27

Patients' experience of developing, living with and being treated for gallstone disease

Marie-Louise Gustavsson¹, Kjell-Arne Ung¹, Åsa Nilsson¹, Eva Jakobsson². 1 Section of Gastroenterology, Department of Internal Medicine, Kärnsjukhuset, Skövde, Sweden, 2 Institute of Health and Care Sciences, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden

Introduction: Gallstone disease is common and is treated primarily by cholecystectomy (CCE). Previous studies have typically examined the effects of CCE on symptoms and quality of life using quantitative methods. However, patients' experience of living with gallstone disease and being treated surgically is less well known.

Aim: This paper is a report of a study of patients' experience of living with gallstone disease as well as their experience of being treated by CCE.

Methods: The study was conducted at a surgical clinic at a Swedish hospital during 2007. Twenty-seven patients who underwent CCE were interviewed. Data was analysed using qualitative content analysis.

Results: The patients described the progress of the disease, which they found difficult to understand, using varying interpretations of the pain before finally being diagnosed with gallstone disease. The post-diagnosis period and the time spent waiting for CCE was marked by instability in everyday life, with a feeling of worry, constraint and restrictions related to the risk of suffering a sudden gallstone attack. At the same time, the patients tried to deal with the attacks that did occur. The situation following surgery were marked by a process of normalisation with relief from pain and distress, return to normal eating habits and normal daily life despite residual symptoms.

Summary: The progress of the disease is difficult to understand and patients often use varying interpretations of their symptoms before finally being diagnosed. The time spent waiting for CCE is marked by instability in everyday life, with a feeling of worry, constraint and restrictions related to the risk of suffering a sudden gallstone attack.

Conclusions: Gallstone disease has a considerable impact on patients' lives: physical, psychological and social, which typically returns to normal after treatment. It is necessary to reduce the suffering of these patients' and provide support in various forms whilst waiting for CCE.

References:

1. Barthelsson, C., Lützén, K., Anderberg, B. & Nordström, G. (2003). Patients' experiences of laparoscopic CCE in day surgery. *Journal of Clinical Nursing* 12 (2), 253-259.

2. Hilkhuisen, G.L., Oudhoff, J.P., Rietberg, M., van der Wal, G., Timmermans, D.R. (2005). Waiting for elective surgery: a qualitative analysis and conceptual framework of the consequences of delay. *Public Health* 119 (4), 290-293. (e-publ 2004)

Learning outcomes: Developing gallstone disease, including being treated with CCE, can be a major event in a person's life despite the fact that it is regarded as a common disease and procedure. These patients' suffering should be reduced by ensuring that patients who are waiting for surgery have access to support for nutritional advice, the need to take sick leave and access to effective pain relief.

P-28

Nursing professions in researching the prevalence of viral hepatitis in the prison population in Croatia

Rade Novičić, Department of Internal Medicine, Prison Hospital, Zagreb, Croatia

Introduction: Hepatitis is a major public health problem in the modern world. According to WHO data, about 2,5 billion people infected with hepatitis B and C, about 5 million people annually are infected with hepatitis, about 2 million people a year in the world die from the consequences of infection with hepatitis. We're talking about a pandemic for which it is estimated that will culminate between 2015th and 2017th. The biggest risk group make intravenous addicts, followed by addicted to alcohol and promiscuous people. The highest concentration of risky behavior of people is in prisons. Nurses are health professionals who are most in contact with an infected population and health professionals with whom patients most interact in prison environment. On these facts underly the opportunities that nurses can and must take in prevention and suppression of viral hepatitis.

Aim: The aim is to introduce professional audience with the results of expert studies the prevalence of viral hepatitis, carried out in the prison system of Croatia and contribution and activities that it made nursing profession as part of a multidisciplinary team.

Method: We conducted a cross-sectional study aimed to determine the prevalence of viral hepatitis in the prison population. The study lasted almost three years and included 4800 subjects from all prison establishments in the Republic of Croatia.

Results: The prevalence of hepatitis B in the prison population is higher by 5.6 times compared to the general population, the prevalence of hepatitis C increased by 8.5 times. Of the total number of respondents between 25% - 30% belongs to the group of drug addicts. In drug users population infection with hepatitis B virus is about 30%, and hepatitis C about 50%.

Summary: The results of the study indicated that the prevalence of viral hepatitis is more times higher in the prison population in relation to the general population. The prison population is not an isolated group of people. It is very fluent populations. Between the imprisonment environment and the general population are constantly migrating thousands of people. This cause the spread of infection from a prison environment into the general population.

Conclusion: The results indicated the need to implement preventive and curative measures in the prison population. It was established Prison System Viral Hepatitis Counseling Center. The Center acts as an integral part of the Department of Internal Medicine of Prison Hospital. Counseling Center and the Department implemented a unique project of education, medical diagnostics, preventive vaccination against hepatitis B and treatment prisoners who suffering from viral hepatitis. In all parts of this project operates nurses as an unavoidable member of the multidisciplinary team.

References

1. Donna M. Zucker. "Peer education for Hepatitis C prevention" *Gastroenterology Nursing* 32.1 (2009): 42-48. Available at: http://works.bepress.com/donna_zucker/15

2. Donna M. Zucker and Catherine Rigali. "University and Sheriff's Office Create a Model Collaboration" . *Corrections Today* (2008): 18-20
3. Paul S Haber, Sandra J Parsons, Susan E Harper, Peter A White, William D Rawlinson and Andrew R Lloyd. Transmission of hepatitis C within Australian prisons. *MJA* 1999; 171 : 31 - 33
4. Tony G Butler, Kate A Dolan, Mark J Ferson, Linda M McGuinness, Phillip R Brown and Peter W Robertson. Hepatitis B and C in New South Wales prisons: prevalence and risk factors. *MJA* 1997; 166: 127

P-29

Effect of clinical pathways and antibiotic prophylaxis on the incidence of transjugular intrahepatic porto systemic shunt associated infections

Maria Luz Gálvez, Rita Godoy, Joaquin López Contreras. Infectious Diseases Unit. Internal Medicine Department. Hospital de la Santa Creu i Sant Pau. Barcelona, Spain

Introduction: The transjugular intrahepatic portosystemic shunt (TIPS) has become a routine procedure in the treatment of portal hypertension. TIPS infection is a nosocomial emerging prosthetic-related infection.

Aim: To determine the incidence of this infection, describe the nursing care, the clinical presentation and etiology, and also to measure the adherence to antibiotic prophylaxis (AP).

Material and methods: Retrospective observational study of 11 years in a tertiary hospital of 620 beds. We identified all patients, reviewed nursing records, discharge summaries, and microbiologic results. When checked the complete clinical record. Definitions: A. Periods were the date of introduction of the pre-procedural AP (September 2002). Period 1 (January 1998-August 2002). Period 2 (September 2002-December 2008). In both periods we checked: nursing care: Pre-procedural tasks: shower with antiseptic soap, hair removal, skin disinfection, hand/forearm antisepsis and AP. Intra-procedural tasks: room environment, attires and drapes, asepsis and type of technique. Post-procedural issues: care of the insertion point and wound dressing. B. Per-procedural bacteremia (PPB) was defined as: 1 positive blood cultures by the same bacteria (and 2 \geq for the skin gram positives) in the first 72 h after implantation and definitive endotipsitis was defined by DeSimone criteria C. Adequate AP when administered following the institutional protocol: drug, dose and interval. In 2002, a institutional clinical pathway describing the nursing care of patients who undergo TIPS insertion was written and in 2003 internally disseminated. The differences of incidence between periods was compared by chi-square test.

Results: 74 procedures were performed in 66 patients, 39 in period 1 and 35 in period 2. The incidence of PPB was 12.8% (period 1) and 2.5% (period 2) ($p < 0.001$). The most frequent manifestation was fever occasionally with chills. The most frequently identified bacteria in PPB were gram positive: *methicillin-resistant Staphylococcus aureus*, *Staphylococcus hominis*, *Streptococcus pneumoniae*, *Enterococcus* and only one case by a gram-negative bacillus (*Enterobacter cloacae*). Only one case of definitive endotipsitis was diagnosed and it occurred in

the pre-prophylaxis period. In the period 2, 35 TIPS were implanted and AP was administered in 22, adherence of 62%.

Conclusions: There is a statistically significant reduction in the incidence of PPB between period 1 and 2, in probably related with the AP introduction and also with the dissemination of a new clinical pathway.

References:

- *DeSimone JA, Beavis KG, Eschelmann DJ, Henning KJ.* Sustained bacteremia associated with transjugular intrahepatic portosystemic shunt (TIPS). *Clin Infect Dis.* 2000;30:384-6.
- *Bouza E, Muñoz P, Rodríguez C, Grill F, Rodríguez-Creixems M, Bañares R, et al.* Endotipsitis: an emerging prosthetic-related infection in patients with portal hypertension. *Diagn Microbiol Infect Dis.* 2004;49:77-82.
- *Lauren F. Fujihara Isozaki, Julie Fahndrick.* Clinical Pathways. A Perioperative Application. *AORN J* 67 (february 1998) 376-392

Learning outcomes: nursing care, nosocomial infection, prosthetic devices.

P-30

Appropriate cleaning and disinfection of flexible endoscopes and endoscopic equipment is one of the conditions for quality in endoscopy – a research on handling with water containers

Marija Petinec Primožič RN, University Clinic for Respiratory and Allergic Diseases, Slovenia

Introduction: Appropriate cleaning, disinfection and sterilization of flexible endoscopes and endoscopic equipment is one of the main requirements for quality in endoscopy. The purpose is to prevent transmission of infection to a patient or the staff. In University Clinic for Respiratory and Allergic Diseases in Golnik, all endoscopes are disinfected mechanically with washer-disinfectors. During endoscopy sterile endoscopic devices and single-use devices are used. Water container is filled with sterile distilled water before the endoscopy and is cleaned, disinfected and sterilized in an autoclave after the programme. After the endoscopy tube and metal tip of the water container is disconnected from the air and water supply connector on the endoscope, using a sterile cloth. The tube and the metal tip are wiped with an alcohol swab and inserted in a tip receptacle on the water container cover..

Aim: The general aim of the study was to confirm the sterility of water in the water container after working programme and if the metal tip of the container remains without any pathogenic organisms. We wanted to test our procedure of working with water container if appropriate and if provides patient care and staff care.

Methods: In January 2010 22 samples of water for bacteriological examination were taken from the container after a daily endoscopic programme; an average daily programme is compiled of 6 gastroscopies and 2 colonoscopies. For bacteriological examination a smear of the metal tip of the container was taken for four times.

Results and comment: All 22 water samples, taken from a water container, remained sterile. All four smears of the metal tip of the container remained without pathogenic organisms. Therefore we conclude that a water container can be replaced once a day,

cleaned, disinfected and sterilized in an autoclave. Between endoscopies a metal tip can be disconnected from the endoscope with a sterile cloth and wiped with an alcohol swab.

Conclusion: This research has proved that our work procedure is appropriate, because all samples remained sterile. However, water samples are regularly controlled for sterility and smears of a metal tip are also regularly taken for detection of pathogenic organisms. With careful and thorough cleaning and disinfection of flexible endoscopes and other endoscopic devices we can achieve a quality endoscopy. Possible transmission of infections to a patient or staff during endoscopy is reduced to a minimum.

Learning outcomes: All endoscopic sections must implement microbiological controls of endoscopes, endoscopic devices, auxiliary apparatus and work surfaces continuously, because this way procedures of their work are directly controlled.

References:

- Beilenhoff u. e tal. ESGE- ESGENA guideline: Cleaning and dezinfection in gastrointestinal endoscopy. *Endoscopy* 2008;40: 939-957.
- Petrinec Primožič M, Cleaning and dezinfection of flexible bronchoscopes. *Bronchoscopy course* 2007; Golnik, Bled 2007October 5-7; 83-6.

P-31

Endoscope Reprocessing: Italian Guideline - Update 2011

Cinzia Rivara Asl Torino 4, Giuseppe Caldana Ulss 22 Veneto, Davide Cordioli Ulss 22 Veneto, Ivan Salardi Arcispedale S. Maria Nuova Reggio Emilia, Laura Nembrini Clinica San Carlo Paderno Dugnano MI, Roberta Mattiola Asl Torino 2, Vincenzo Cirigliano Ospedale San Carlo Potenza, Laura Gabrielli Ospedale Sant'Andrea Roma, Monica Cimbro CBC Europe, Italy

Introduction: The Italian society of endoscopy nurses ANOTE-ANIGEA, after evaluating data coming from a national questionnaire about knowledge and compliance of the recommendations of the reprocessing guideline (1), undertook a process of revision of the document itself. The update was based on scientific evidences and experience consolidated by the practice of reprocessing in endoscopy (2).

Aim: To release an update of the current guideline.

Method: A small working group formed by endoscopy professional nurses coming from different Italian regions operated as per the following steps:

- review of the international scientific literature
- review of national and international current guidelines
- writing of the updated guideline for paper and website publication

The working group met every second month and carried out the plan in 12 months.

Results: The document was written as per the following outline inspired by the ESGE-ESGENA guideline (3):

- Glossary
- State of the art on endoscopy-related infections; principles of control

- Health and safety of the staff
- General requirements (equipment, personnel, environment)
- Process chemicals (detergents, disinfectants)
- Reprocessing of endoscopes and accessories step by step
- Quality control

Conclusions: The role of the nurses in the reprocessing is crucial, thus it is essential that they can benefit of means to improve and apply the best practice in the viewpoint of quality and safety. The publication of the updated ANOTE-ANIGEA guideline will be followed by the promotion of:

- a) educational travelling seminars for an extended spreading of scientific and technical knowledge
- b) research projects on aspects still to be improved or lacking of scientific evidences (drying and storage; microbiological surveillance; process traceability)
- c) regular and systematic review of the guideline itself. Such projects are compliant with the requirements for Continuing Medical Education of health professionals established by the Italian Ministry of Health.

References

1. Caldana P et al. Endoscope reprocessing: current situation in Italy. Poster at 14th ESGENA Conference, Barcelona 2010, Abstract Book p-24.
2. ANOTE-ANIGEA Linee Guida Pulizia e Disinfezione in Endoscopia - Update 2011. Available at www.anoteanigea.org
3. Beilenhoff U et al. ESGE-ESGENA guideline: cleaning and disinfection in gastrointestinal endoscopy. Update 2008. *Endoscopy* 2008;40:939-957

Learning outcomes

Only thanks to the application of the scientific method we are able to formulate recommendations aiming at quality and safety in our profession.

Inside their professional association all endoscopy nurses can find tools and pathways for continuing education.

P-32

Channel Cleaner® Ball Brush vs. disposable endoscope channel brushes: a cost/efficacy comparison

Puddu D, Mattioli R, Chiarioni L, Coppolino M, Lamanna L, Locoro S. Digestive Endoscopy Unit, Ospedale Maria Vittoria, Torino, Italy

Introduction Manual cleaning is the most important step in the reprocessing of endoscopes. Endoscopy nurses dedicate to this aspect a significant amount of their time without sparing efforts in uncomfortable and tiring operations. In recent years there have been attempts to find new tools that, assuring a high

standard of efficacy, may render the process more ergonomic and efficient with a negligible or moderate increase of the cost.

Aim To make an economical and qualitative comparison of two different systems for endoscope channel brushing, the first traditional with disposable brushes to be manually inserted into the channels, the latter using balls made of a special polymer sucked into the channels (Channel Cleaner® Ball Brush) (1).

Method A scientific committee established for a public tender and formed by members of five ASL (Local Health Authorities) of the Piedmont Region in Italy evaluated 6 different types of disposable brushes. A preliminary evaluation was based on three qualitative parameters (technical characteristics, handling and rigidity, smoothness) with a score to each parameter; the maximum and the minimum total scores were set at 50 points and 25 points respectively. Three items were excluded because they did not reach the minimum total score. The three remaining items were then compared with the Channel Cleaner® Ball Brush device for different parameters (unit cost, average time for brushing, ease of handling, nurse fatigue, procedure standardization).

Results The results of the evaluation are shown in the following table:

Average time calculated on 5 brushing procedures by 6 different nurses for a total of 30 brushing procedures (1 Little ease of handling; 5 High ease of handling) (1 Low nurse fatigue; 5 High nurse fatigue) (1 Low procedure standardization; 5 High procedure standardization)

Conclusions The Channel Cleaner® Ball Brush, against a higher unit cost compared to other devices, was given a better evaluation for each of the remaining parameters. Such parameters, besides being quality indicators, have an economical impact: the significant amount of time saved may be used to increase the number of procedures or to rationalize the nurses workload; the elimination of mechanical repetitive movements related to the use of standard brushes may favor a reduction of professional accidents and diseases; the method of application of the Ball Brush reduces the possibility of contact with potentially contaminated fluids thus decreasing biological risks for the staff. Finally while a conventional brush may undergo deterioration at each passage into the channel (3 passages in total), the Ball Brush offers a higher reproducibility by making each passage equal to the subsequent in terms of efficacy.

References

1. Mattioli R et al. Efficacy of manual cleaning of gastrointestinal with the Ball Brush method. Poster at GI Nurses 2009 ESGENA/SIGNEA Conference London, Abstract book N.13, p.57

	UNIT COST	AVERAGE TIME FOR BRUSHING (1)	EASE OF HANDLING (2)	NURSE FATIGUE (3)	PROCEDURE STANDARDIZATION (4)
Brush 1	€1.33	5'19"	2	1	2
Brush 2	€1.34	5'15"	2	1	2
Brush 3	€1.89	4'34"	4	3	2
CC® Ball Brush	€2.00	1'37"	5	5	4