

## EDITORIAL

### Issue pending: minimizing anxiety before colonoscopy

The extent of preoperative anxiety and its impact on physiological parameters during surgery and postoperative pain have been widely studied. Moreover, publications may be found that cover in detail various surgery types (1-3). The conclusions reached thus far have allowed to implement a number of procedures, not all of them based on drugs, with the goal of reducing anxiety and improving patient wellbeing (4,5). Since colonoscopy is an invasive procedure that entails some discomfort, even pain, there is good reason to believe that it may have an impact on patient mood. Some literature reports have addressed this issue. However, sociocultural differences, expectations about the health care system, and even individually held beliefs may condition different emotional responses, hence it becomes relevant that data be collected within our setting. In the present issue of *The Spanish Journal of Digestive Diseases (Revista Española de Enfermedades Digestivas)*, Grilo et al. (6) report the results of a study where patient anxiety is assessed before colonoscopy in our setting. This is a prospective study performed in a community hospital; over three hundred consecutive patients were included, who underwent outpatient colonoscopy. The authors analyze the frequency and extent of anxiety development prior to colonoscopy, and establish which factors are involved. The influence of anxiety on procedure tolerability was also assessed.

Anxiety was assessed using a visual analogue scale (VAS), and the authors subsequently classified anxiety as mild, moderate or severe according to said scale. Once the study consent form was signed, patients with prior colonoscopies had to quantitatively score tolerability according to their memories (0-100 mm VAS), and qualitatively describe the procedure as “good” or “poor” according to their perceived pain. Importantly, all patients were informed of their receiving sedation for the upcoming procedure, which might be escalated according to patient requirements. Anxiety extent was self-assessed by patients before colonoscopy on the procedure day during an interview with a nurse. This information was not relayed to the doctor performing the endoscopic procedure. Upon colonoscopy completion, the endoscopist recorded the procedure’s technical aspects, including duration, cecal intubation status, difficulties encountered, drugs used for sedation and their dosage, etc. The doctor also scored on a VAS his perception of the pain experienced by the patient during the procedure.

Participation was high, above 95% of all those invited to take part, and exclusions resulted from survey-related technical issues. Therefore, the population may be thought of as highly motivated for the study. The most common indication for colonoscopy was familial colorectal cancer screening and polyp surveillance (52.6%). While other indications are not detailed, there is good reason to presume that most were related to benign or scarcely relevant conditions, as shown in the table listing colonoscopy results. In the study by Grilo et al., the frequency of familial CRC screening and polyp surveillance was similar to that reported by other hospitals in our setting (7). *A priori*, patients undergoing colonoscopy for either indication may also be considered to be highly motivated - they are either aware of a disease and attempt to prevent it (family screening) or proactive individuals trying to minimize their risk for disease (polyp monitoring).

The vast majority of patients included in the study (around 95%) reported anxiety to some extent. As previously mentioned, the authors classified anxiety severity as mild, moderate or severe based on VAS scores of 1-29, 30-79, or 80-100, respectively. Despite the above remark on the motivation of patients included in the study, over half of them reported moderate to severe anxiety. Patient characteristics associated with higher anxiety included female gender, which was inversely correlated with age. There was also a tendency towards higher anxiety among colonoscopy-naïve patients, but differences were not statistically significant. The analysis performed on the subset having undergone prior colonoscopies revealed higher anxiety among those who had reported “poor” tolerability and more pain. In the analysis of pain extent as associated with colonoscopy technical aspects no correlation was found between pain and need for deeper sedation, cecal intubation status, or medication dosage.

Results show that, in our environment, colonoscopy induces significant anxiety in patients despite high motivation and awareness that sedation is available on demand. Negative experiences during prior examinations, primarily procedure-related pain, result in higher anxiety levels. Although speculative, it is highly likely that patients having experienced adverse effects during colonoscopy will convey such experience to their relatives, thus contributing to spread the notoriety of this basic procedure, necessary for the diagnosis of many digestive conditions. Therefore, efforts should be made to provide patients with maximum comfort during colonoscopy by using all currently available measures beyond adequate sedation, including improved endoscopic technique, use of CO<sub>2</sub> for colon distension, water instillation, etc.

A last reflection to conclude: On noting the frequency and level of anxiety reported before colonoscopy among patients in this study by Grilo et al., the question arises of how many patients reject this exploration when indicated because of pre-colonoscopy fear and anxiety. This week I saw at least one such case. With rectorrhagia and loss of 10 kg of body weight for the last eight months, he finally decided to seek medical help. He will have to undergo rectal radiation before surgery.

Maite Herráiz Bayod

*High Risk Gastrointestinal Cancer Clinic. Endoscopy Unit. Department of Digestive Diseases.  
Clínica Universidad de Navarra. Pamplona, Navarra. Spain*

## REFERENCES

1. Guerrier G, Rondet S, Hallal D, et al. Risk factors for intraoperative hypertension in patients undergoing cataract surgery under topical anaesthesia. *Anaesth Crit Care Pain Med* 2016;35(5):343-6. DOI: 10.1016/j.accpm.2016.01.005.
2. Rullander AC, Lundström M, Lindkvist M, et al. Stress symptoms among adolescents before and after scoliosis surgery: correlations with postoperative pain. *J Clin Nurs* 2016;25(7-8):1086-94. DOI: 10.1111/jocn.13137.
3. Lee JS, Park YM, Ha KY, et al. Preoperative anxiety about spinal surgery under general anesthesia. *Eur Spine J* 2016;25(3):698-707. DOI: 10.1007/s00586-015-3788-2.
4. Kassai B, Rabilloud M, Dantony E, et al. Introduction of a paediatric anaesthesia comic information leaflet reduced preoperative anxiety in children. *Br J Anaesth* 2016;117(1):95-102. DOI: 10.1093/bja/aew154.
5. Yang JY, Lee H, Zhang Y, et al. The Effects of Tonsillectomy education using smartphone text message for mothers and children undergoing tonsillectomy: A randomized controlled trial. *Telemed J E Health* 2016;22(11):921-8.
6. Grilo Bensusan I, Herrera Martín P, Aguado Álvarez V. Estudio prospectivo de la ansiedad del paciente previa a la realización de una colonoscopia ambulatoria. *Rev Esp Enferm Dig* 2016;108(12):765-9. DOI: 10.17235/reed.2016.4104/2015.
7. Argüello L, Pertejo V, Ponce M, et al. The appropriateness of colonoscopies at a teaching hospital: magnitude, associated factors, and comparison of EPAGE and EPAGE-II criteria. *Gastrointest Endosc* 2012;75(1):138-45. DOI: 10.1016/j.gie.2011.08.039.