ASSESSMENT OF ULCERATIVE COLITIS ENDOSCOPIC ACTIVITY WITH A NOVEL ROBOTIC COLONOSCOPE: THE ENDOTICS SYSTEM.
VALUTAZIONE DELL’ATTIVITÀ ENDOSCOPICA DI MALATTIA IN COLITE ULCEROSA TRAMITE UN NUOVO ENDOSCOPIO ROBOTICO: IL SISTEMA ENDOTICS

BACKGROUND & AIM OF THE STUDY: Patients with inflammatory bowel diseases undergo multiple colonoscopies during their lifetime. Standard colonoscopy (SC) is usually performed under conscious sedation but also under anesthesist-assisted deep sedation, because of little tolerability, and sedation has costs and possible complications. Moreover, even in expert hands, SC is not a 100% safe exam: some perforations may occur. Aim of our study was to compare the diagnostic performance and tolerability of the Endotics Endoscopy System (EES), a soft, self-propelled, disposable colonoscope, with that of standard colonoscopy (SC) for the staging of ulcerative colitis.

METHODS: Patients with mildly to moderately active ulcerative colitis seen at one of our 2 endoscopy departments (Milan and Pisa) for follow-up colonoscopies were studied first with EES and then with SC. We assessed the endoscopic activity according to Baron criteria, and we recorded time to reach the caecum, sedation, patient’s pain/discomfort and operator’s difficulty.

RESULTS: We studied 12 patients (7M/5F), mean age 41 yrs and disease duration 5.33 yrs. 53 colonic segments (caecum, ascending, transverse, descending and sigmoid colon and rectum in each patient) out of the 54 evaluated had the same assessment of disease activity (absent - 0 points, mild - 1 pt, moderate - 2 pts and severe - 3 pts) with EES and SC. Mean activity score with EES was 0.35 pts (SD 0.60) and 0.33 pts (SD 0.60) with SC, without significant difference. The caecum was reached in 11/12 cases by SC in an average of 29.42 min (SD 28.94), and in 10/12 cases by EES, in an average of 46.67 min (SD 24.98 min), with a mean difference of 17.23 min., not statistically significant. Incomplete colon explorations with EES clustered in Milan, probably because of our smaller experience. An average of 1.45 (SD 0.79) mg of midazolam were used during SC while 0.41 (SD 0.38) mg during EES. Mean pain/discomfort on a 0-10 scale was 2.08 (SD 1.67) for EES and 4.17 (SD 1.74) for SC, with a statistically significant difference (p = 0.066) favouring EES. Mean perceived operator’s difficulty on a 0-10 scale was 4.44 (SD 1.78) for EES, and 4.08 (SD 1.44) for SC, with a mean difference of 0.42 pts favoring SC, not statistically significant.

CONCLUSION: EES appears to be a promising method for disease staging in patients with ulcerative colitis of long duration, because of reduction in pain and discomfort. The capability of obtaining biopsies is still needed before EES can be proposed as a tool for the long term follow-up and screening for dysplasia in patients with disease of long duration.

EES ergonomic hand-held controller and the operating self-standing station.