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SURGICAL TREATMENT OF PATIENTS WITH CHRONIC CONSTIPATION - EXPERIENCE OF CLINIC OF COLOPROCTOLOGY - VARNA

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ABSTRACT

BACKGROUND: Patients with chronic constipation can be difficult to manage either medically or surgically. We used Roma classification as criteria for including patients in our study. There are many diseases which could lead to chronic constipation. If they are treated by a surgeon, there can be obtained a permanent therapeutic effect. The group of patients with idiopathic chronic constipation couldn't obtain satisfying effect by surgical treatment, which was presided by inaccurate and embarrassed selection. Our aim is to present the results of experience of Clinic of General and Operative Surgery, Varna, Bulgaria. MATERIAL: For a period of 10 years, we have been operated 52 patients with diagnosis as morbus Pair (15 patients), megacolon (31 patients), and idiopathic chronic constipation (6 patients). The main indication for undergoing surgical treatment was the retention of more then 20% of the applied barium enema after the 5th day from irrigography. There were applied the followed operative methods: colectomy, subtotal colectomy, hemicolectomy, resection of the colon sygmoideum, anterior resection of the rectum and mobilization of the lineal flexure. We did analysis of the results. The evaluation of curativeness to applied methods was done. We followed the quality of life of our patients from 11 months to 6.2 years (median 3.2 years). CONCLUSION: The presence of organic disease is associated with very good therapeutic effect from the surgical treatment of chronic constipation. The problem with idiopathic chronic constipation remains unsolved when colectomy with ileo-recto anastomosis was undergone. The right selection of patients is a crucial factor for the success of the surgical treatment.

Patients with chronic constipation can be difficult to manage either medically or surgically. Such disease is usually voiced to internists, gastroenterologists, and colon and rectal surgeons alike. Patient definitions of constipation are so variable that the term itself is meaningless and focused questioning regarding the patient's actual bowel habits is mandatory. To facilitate research into and treatment of constipation and other functional bowel disorders, a multinational panel of experts was convened in Rome, Italy. The Rome criteria for the diagnosis of constipation require two or more of the following for at least 3 months:

- Straining more than 25% of the time
- Hard stools more than 25% of the time
- Incomplete evacuation more than 25% of the time
- Two or fewer bowel movements per week

One in two women and one in three men over the age of 65 either had complaints of constipation or took laxatives. The magnitude of the problem requires the colon and rectal surgeon to understand the causation of constipation, be facile with the tests used in the evaluation of the constipated patient, and be able to recommend both medical and surgical therapies when appropriate (1,2).

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Evaluation

Detailed history is the milestone of the proper evaluation. We examine those components -stool size, frequency, consistency, ease and efficacy of evacuation. Sym ptoms, diet and exercise details, medical history, surgical history, and medication are also evaluated. Query into psychiatric illness and sexual and physical abuse must be performed, because they are associated with defecation difficulties.

Rectal examination should involve a clinical evaluation of resting tone and the ability to voluntarily contract and relax the anal sphincter. Evaluation for pelvic floor dysfunction such as perineal descent with straining, the presence of a rectocele or cystocele, and the volume and consistency of stool in the rectal vault should be noted. The evaluation of the patient with symptoms of constipation that do not respond to a trial of diet and medical therapy begins with the elimination of a structural bowel obstruction via colonoscopy or barium enema. Once obstruction has been eliminated as the cause of constipation symptoms, colonic transit time should then be assessed.

The managemnt of patients with intractable constipation who fail to respond to nonsurgical intervention continues to represent

a challenge for general and colorectal surgeons patients with mega colon are managed conservatively in the first instance. Indeed, it is claimed that the majority of patients can be successfully managed nonsurgically (3). However, medical treatment may fail to alleviate symptoms in 50% to 70% of patients (4,5), may be poorly tolerated (6), and must be continued lifelong to prevent recurrence of symptoms. (7). Furthermore, it fails to achieve a restoration of the colon caliber to normal, even followig several years of medical therapy (8). More recently, the role of behavioral retraining, incorporating biofeedback, has been explored (9), although only 6 patients were evaluated in the short term, and clinical and physiologic parameters were not rigorously compared before and after intervention. Consequently, many patients are forced to seek a surgical solution to their symptoms when conservative therapy is ineffective or poorly tolerated. In addition, certain patients require surgical intervention due to the development of complications of mega colon, such as recurrent sigmoid volvulus (10).

Subtotal colectomy was the most widely applied operation for mega colon that lead to chronic constipation. The rationale for this procedure is based on the finding that many patients have delayed colonic transit and that colonic resection allows the associated pelvic floor dysfunction to be overcome by promoting a more liquid stool, which is easier to pass. We think that subtotal colectomy is a simple procedure with low morbidity in patients with mega colon.

There is a mortality of up to 14% and high morbidity of approximately 25%; patients undergoing this procedure must be warned of the high risk of recurrent bowel obstruction.

Subtotal colectomy appears to be successful in approximately 70% of our patients with IMB, although such results were highly variable, ranging from 0% to 100%. Recurrence of constipation is a significant problem following subtotal colectomy, resulting in approximately 5% of patients requiring additional surgical intervention. Distension of the retained cecum in CRA and the sigmoid colon in ISA may predispose to the development of symptoms of abdominal distension, impaired evacuation, and recurrent constipation, and necessitate further, more aggressive resection. Consequently, colectomy and IRA has been recommended as the procedure of choice to prevent recurrence of constipation. However, retention of the cecum preserves its absorptive capacity and may reduce the likelihood of frequent, loose stools and episodes of incontinence. Furthermore, retention of the rectum itself in IRA may result in recurrence of symptoms due to dilatation. As most studies did not stratify results according to the type of anastomosis performed, firm statistical conclusions regarding the optimum choice cannot be made, although it is likely that IRA is associated with lower rates of recurrence of constipation.

MATERIAL

For a period of 10 years, we have been evaluated 132 patients which have diagnosis "constipation" accorditng to Roma classification. We operated 52 patients with diagnosis as morbus Pair (15 patients), megacolon (31 patients), and idiopathic chronic constipation (6 patients). The main indication for undergoing surgical treatment was the retention of more then 20% of the applied barium enema after the 5th day from irrigography.

Morbus Pair is a syndrome of high lienic flexure that leads to chronic constipation. We had 15 patients with that diagnose. All of them underwent a explorative laparotomy with division of the flexure. The symptoms of constipation faded away in the postoperative period and all the patients subscribe for relieving of constipation symptoms during the follow-up of 52 months (range 6-122).

Megacolon

The mean clinical follow-up was 64 months (range 5-132). One patient developed, one year after surgery, intestinal occlusion due to adhesions that required surgery; after two years and a half, the patient still complains of abdominal pain (with regular bowel movements). A month after surgery, the mean frequency of bowel movements was 3.7 per day (range 1-7). Nine patients reported normal bowel movements with semiliquid stool consistency, 8 patients reported diarrhoea with more than 4 bowel movements per day. 9 patients used antidiarrhoeal agents. Six months after surgery, 22 patients reported normal bowel movements with solid stool consistency, 3 reported diarrhoea and the need for antidiarrhoeal agents, and one reported constipation easily controlled with laxatives. The frequency of bowel movements in this period was an average of 2.7 per day (range 0-5). Eighteen patients had a follow-up of at least one year, and after one year the mean frequency of bowel movements was 1.5 (range 0-6): 15 patients reported normal bowel movements, 2 reported constipation controlled with laxatives and 1 reported diarrhoea with incontinence. At the last follow up visit before the analysis of the data of this study, 2 patients reported constipation controlled with laxatives and one still reported incontinence and diarrhoea. The two patients that used laxatives were the ones with outlet obstruction syndrome, and one of these reported rectal pain and tenesmus. Fifteen patients considered their quality of life as having improved compared with that before surgery (2 fairly good, 7 good, 7 very good); two patients considered their quality of life as being unsatisfactory, with no improvement from before surgery; two patients manifested serious psychiatric disturbances and were not able to give reliable answers.

For a period of 10 year, 6 patients with isolated chronic idiopathic slow transit constipation were operated upon using sub total colectomy with cecorectal anastomosis. All complained of severe, long lasting and disabling constipation that strongly impaired their quality of life. None of them was capable of having a bowel movement without the chronic use and/or association of laxatives, prokinetics and fibers. Preoperative investigations included full history and clinical expertise with inspection and digital examination, colonoscopy, barium enema, anorectal manometry, cinedefaecography, and colonic transit time (CTT) study to exclude an organic cause and confirm the diagnosis of colonic inertia. Patients with the irritable bowel syndrome, rectal outlet obstruction, organic or secondary constipation,

megacolon, megarectum, volvulus, prolapse, colonic pseudo-obstruction, tumors, and polyps were excluded. All patients had an anatomically normal colon on colonoscopy or barium enema. All patients were considered for a surgical treatment of constipation using STC-CRA procedure.

All patients were females with a mean age of 57.5 (range 24-72) years. Four patients (66.6%) had psychiatric disorders such as anxiety or depression, necessitating psychotropic drugs. No formal contraindication for surgery was found at psychiatric evaluation. One patient underwent psychotherapy for one year before being considered for surgery. Two patients had a non-insulindependent diabetes mellitus. Urinary symptoms were present in five patients (83.%), with urinary incontinence being the most frequent complaint. All the 6 patients report that the mean duration of symptoms was more than 10 yr. A precipitating factor was identified in 4 patients (66%). The mean frequency of bowel movements with the aid of laxatives, enemas or digitations was 1.2 ±0.6 per week (range 4-30 d). All patients' complained of abdominal pain and bloating. Digitations were used by 71.4% of patients. Four patients had a total of 12 abdominal operations. The most common operation was hysterectomy (40%); 2 patients had a left colectomy for "chronic constipation"; and two patients had a previous small bowel obstruction necessitating surgery. One patient had rectocele repair, and one had haemorrhoidectomy (Milligan and Morgan's procedure). Four patients (50%) needed pain killers. Three patients (50%) regularly used a high fibers rich dietary regimen. All patients reported their symptoms as having a major interference with their work or life activities. Transit study revealed diffuse marker delay in all patients. Anorectal manometry confi rmed the presence of a RAIR in all patients. Neither anorectal manometry nor CD revealed Hirshprung disease. One patient had a small anterior rectocele (4 cm) that emptied completely during evacuation. A diagnosis of isolated CI was done confi rmed in all patients. Postoperative complications Postoperative complication rate was 21.4%. One patient had a hemothorax following venous central line insertion, requiring drainage; one patient had an intrabdominal collection that was successfully treated with CT-guided percutaneous drainage.

Follow-up

All patients were alive in 2006 and invited to the clinic after they completed the 4-weeks daily symptom diary evaluating stool frequency and consistency. Patients were assessed at a mean of 10.5 (range 5-16) yr after surgery. As compared with preoperative bowel habit, the bowel frequency was significantly ($P < 0.05$) increased to a mean of 4.8± 7.5 per d (range 1-30). The stool consistency was soft in 11 patient (78.5%) and liquid in three (21.4%). Overall 11 patients (78.5%) reported perfect continence, two patients (14.2%) had less than one episode of soiling (incontinence) per week. One patient with preexisting psychiatric disorder developed disabling diarrhoea (30 bowel movements), accompanied with bloating and incontinence, and refused any further treatment. Seven patients (50%) had less than one episode per week of mild abdominal pain with bloating. Two patients (14.2%) used laxatives less than three times per month. One patient (7.1%) with a stenosis of the anal canal after surgery for hemorrhoids used enemas twice per week. None required digitation. Three patients (21.4%) reported new symptoms including difficult evacuation in two and rectal pain in one. Anti-diarrhea agents were utilized by three patients (21.4%) less than three times per month. None required the addition of fibers or other dietary changes. Self-reported satisfaction: Eleven patients (78.5%) would have chosen surgery again if necessary, whereas 3 patients (21.4%) were not satisfied with the results of surgery, considering their situation as unchanged (2 patients) or worse (1 patient).

The presence of organic disease is associated with very good therapeutic effect from the surgical treatment of chronic constipation. The problem with idiopathic chronic constipation remains unsolved when colectomy with ileorecto anastomosis was undergone. The right selection of patients is a crucial factor for the success of the surgical treatment.

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