

Диагностическая и лечебно–хирургическая тактика при опущении слизистой оболочки прямой кишки с недостаточностью анального сфинктера

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Diagnostic and the surgical treatment tactics in the rectal mucosa prolapse with the anal sphincter insufficiency

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Реферат

Цель. Улучшение результатов диагностики и хирургического лечения больных с опущением слизистой оболочки прямой кишки, осложненным недостаточностью анального сфинктера.

Материалы и методы. Проведен анализ результатов диагностики и хирургического лечения опущения слизистой оболочки прямой кишки с недостаточностью анального сфинктера у 23 больных в возрасте от 31 года до 65 лет, медиана возраста ($41,5 \pm 1,8$) года, женщин было 17.

Результаты. Выявлено, что чаще всего и в наиболее прогрессивных формах опущение слизистой оболочки прямой кишки с недостаточностью анального сфинктера встречается у женщин после 36 лет.

Выводы. Среди хирургических методов преимущественно использованы миниинвазивные трансанальные операции, субмукозные инъекционные процедуры и сфинктеропластика конец в конец, отличавшиеся меньшим количеством послеоперационных осложнений (26,1%), благоприятными отдаленными функциональными результатами – снижением частоты рецидивов (4,3%), степени фекальной инконтиненции (78,6%) и улучшением качества жизни больных.

Ключевые слова: опущение слизистой оболочки прямой кишки; недостаточность анального сфинктера; циркулярная резекция слизистой оболочки; степплерная резекция слизистой оболочки; трансанальная ректопексия.

Abstract

Objective. To improve the results of diagnosis and surgical treatment of rectal mucosa prolapse, complicated by the anal sphincter insufficiency.

Materials and methods. Analysis of the diagnosis and surgical treatment results in the rectal mucosa prolapse with the anal sphincter insufficiency was done in 23 patients, ageing 31 – 65 yrs old and the age median (41.5 ± 1.8) yrs old, of them 17 women-patients.

Results. There was revealed, that most frequently and in mostly progressive forms the rectal mucosa prolapse with the anal sphincter insufficiency occurs in women, aged more than 36 yrs old.

Conclusion. Miniinvasive transanal operations, submucosal injection procedures and sphincteroplasty “end-to-end” were used predominantly, owing less morbidity potency (26.1%), favorable remote functional results – the recurrence rate lowering (4.3%), the fecal incontinence degree lowering (78.6%), and the patients' quality of life improvement.

Keywords: prolapse of rectal mucosa; insufficiency of anal sphincter; circular mucosal resection; stapler mucosal resection; trasanal rectopexy.

Introduction

Anal sphincter insufficiency (ANF) occurs in 0.5–28% of cases in the general population [1, 2], accounts for 5–7% of coloproctological diseases [3], and is 6–8 times more common in women than in men [4]. In the postmenopausal period, the prevalence of this severe pathology is in the range of 60–80% [5]. Among patients with sagging of the mucous membrane of the rectum (DB) and other layers, ASC is more common, expressed in figures of 25–80% and higher, depending on the severity of sagging, the size of the sagging body and the duration of sagging [6, 7]. In recent years, the scope of application of minimally invasive methods in the surgical treatment of sagging of the mucous membrane of the rectum is expand-

ing [8, 9]. These include circular resection of the sagging mucosa, intrarectal stapler resection of the mucous membrane, sclerotherapy with chemicals, infrared or laser photocoagulation, ligation of the mucous membrane with and without hemorrhoidal nodules, etc. aiddir [10, 11]. Minimally invasive surgical procedures are less traumatic, less bleeding and surgical aggression, most techniques are simple, easy to master and apply, even in an outpatient setting, the possibility of application under local anesthesia, the postoperative period is smooth, no disability or rapid recovery, low quality of life changes and return to the previous regime in a short period of time [12]. Most authors consider the use of these methods in the early stages of pathology, I–II [13].

The study was conducted to improve the results of diagnosis and surgical treatment in patients with complications of anal sphincter insufficiency of the rectal mucosa.

Materials and methods

The research was conducted in 2010–2021 on the basis of the I–Department of Surgical Diseases of the Azerbaijan Medical University (I and II surgeries of the 1st Clinical Hospital of the Main Health Department of Baku, transplant departments of the Teaching Surgery Clinic of the Azerbaijan Medical University) on 23 patients. 17 patients were women (73.9%), 6 were men (26.1%), and the age range varied from 31 to 65 (average age – 41.5 ± 1.8 years). Isolated sagging of the mucous membrane of the rectum was observed most often (37.5%) at the age of 36–45 years. The prevalence of pathology before the age of 35 was 23.4%, at the age of 46–49 it was 16.9%, and over the age of 50 it was 22.2%.

After collection and analysis of anamnestic data, anoscopy, rectoromanoscopy, digital and mirror examinations, anoscopy after routine instrumental–laboratory examinations (ECG, echocardiography, X–ray examinations, etc.) to confirm or rule out co–morbidities, as well as to assess the risk of surgery. Rectoromanoscopy (RRS), colonoscopy (CS), X–ray defecography, endorectal ESG, pelvic MRI, contact sphincterometry to determine the physical parameters of the anal sphincter muscles (strength in silence or in strain, volitional and instinctive tonus), anal manometry to measure intra–anal pressure examinations were performed.

In order not to distort the results, patients with hemorrhoids, anal fissures and other diseases of the anal canal (polyps, anorectal fistulas, congenital condyloma, solitary ulcers, etc.) were excluded from the study.

Statistical analysis. All figures obtained during the study were analyzed using the SPSS statistical program (SPSS version 16.0). A non–parametric method was used to determine the difference between the quantitative indicators in the groups – the Wilcoxon (Mann–Whitney) criterion (U) and the Student t–test. The degree of fecal and anal incontinence was assessed on the Wexner scale (1993) [14, 15].

Patients complained of tenesmus, defecation disorders, bleeding, pain, fecal incontinence, foreign body sensation, and fecal and urinary retention in the interstitial area (*Table*

Table 1. Frequency of clinical symptoms in patients with sagging mucous membraness

Clinical signs	Frequency	
	n	%
Tenesms	21	91.3
Defecation disorders	20	86.95
Pains	19	82.6
Bleeding	16	69.6
Fecal incontinence	14	60.9
Fecal leakage	11	47.8
Feeling of incomplete discharge	4	17.4
Urinary incontinence	3	13.0
Sensation of a foreign body	2	8.6

1). The main physical parameters of patients during the preoperative period are presented in *Table 2*. During this period, a waste–free diet was prescribed, complaints 1 day before surgery and on the day of surgery the large intestine was washed with the system "Hydrocolon" until clear fluid was obtained, intravenous antibiotics (Ceftriaxone – 1.0 and Metronidazole 500 mg – 100 ml) were injected on the day of surgery. Patients at risk, obese and sedentary lifestyles underwent anticoagulant therapy in the preoperative period under strict control of coagulogram.

Upon completion of the diagnostic process, an individual "road map" was developed for each patient to select treatment tactics.

All surgeries were performed by the same coloproctology team under episacral or spinal anesthesia, with patients lying on the operating table in a "gynecological position." Transanal circular excision was performed in 11 patients (47.8%) with WB mucosal sagging, circular incision was made 1–1.5 cm proximal to the sagging mucosa, the distal mucosa was removed and hemostatic sutures were placed. Sclerotherapy (injection of sclerosing drug into the main sublingual area) was performed in 7 patients (30.4%) with mild symptoms: after cleaning the mucous membrane with aseptic solutions, injection of sclerosing drug into the submucosal region from 7–8 points (sclerosing in 3, 7 and 11 directions of the dial) an anesthetic solution (5% phenol solution) was injected. Stapler resection of the sagging mucosa by Longo method in 3 patients (13.0%), and transanal rectopexy in 2 (8.7%) – after

Table 2. The main physical indicators of patients

Indicators	Abcol.
Gender	17 women/6 men
Average age	41.5±1.8 (31 – 65)
Menopause	14/3
Previous surgery for mucosal sagging	5
Patient status according to ASA scale:	
ASA I	6
ASA II	11
SA III	5
ASA IV	1
Preoperative average on the Wexner incontinence scale	14.2 (10 –20)
Preoperative average on the Wexner constipation scale	19.1 (14 –26)

Table 3. In patients with mucosal sagging of the rectum performed surgical methods

Surgical methods	n	%
Transanal excision	11	47.8
Submucosal sclerotherapy	7	30.4
Stapler resection by Longo method	3	13.0
Transanal rectopexy	2	8.7
Silicone gel injection	9	39.1
Sphincteroplasty (edge to edge)	5	21.7
Total ...	23	–

Table 4. Results of surgical treatment

Operational indicators	n
The mean amount of intraoperative bleeding, ml	117.5±5.0 (55 – 140)
The average duration of the operation min	115.7±7.3 (75 – 180)
Intraoperative complications:	
– don't bleed	1
– damage to a neighboring organ	1
Postoperative complications:	
– sewing inconsistency	3
– purulence of the wound	2
– early	4
– late (relapse)	1
Postoperative average on Wexner incontinence scale	6.0 (3 – 8)
Postoperative average on Wexner constipation scale	6.3 (4 – 8)
Average bed –days	5.3±1.5 (2 – 11)

cleansing the anal area with antiseptic solution, the mucosa was approximately 2 cm long to the comb line. / 0 Rectopexy operation was performed with vicryl thread (Table 3).

On the basis of sphincterometry, in the preoperative period, 10 patients were diagnosed with grade I, 8 patients with grade II, and 5 with grade III hypertension. In 9 of these patients (39.1%), a medical silicone-based gel was injected into the sublingual base in the projection of the sphincter muscles or in the areas between the internal and external muscles under endorectal USM control at 3–4 points. The gel injection caused scar-like inflammation in those areas, resulting in a significant reduction in ACE symptoms and a manageable level. In 5 patients (21.7%) the scar area was sharply renewed and end-to-end sphincteroplasty was performed. Favorable results were obtained in other patients by conducting 10–15 sessions of biological feedback (bifidi-back) therapy in an outpatient setting [16].

During the first 2 hours after surgery, all patients received intravenous metronidazole and third-generation cephalosporin group treatment, treatment lasted 3–4 days. Oral feeding was started 6 hours after the operation. The diet consisted of fibrous foods that did not form slag.

The inpatient treatment period lasted from 3 to 7 days (average – 5.1 ± 0.6). Early complications (bleeding, surgical wound abscess, suture inconsistency) were referred.

Results

The duration of the disease was from 1 to 7 years (average 2.4 ± 0.7 years). Five patients had previously undergone 1 or 2 surgeries for mucosal sagging.

In general, wound purulence – 3 (13.0%), suture inconsistency – 2 (8.7%), bleeding – 1 (4.3%), damage to the neighboring organ was found in 1 patient (4.3%). Recurrence occurred in 1 patient (4.3%) and repeated submucosal sclerotherapy (2 sessions). Symptoms of mild ACE remained in 4 pa-

tients. These patients were re-injected with gel after 3, 6 and 12 months and satisfactory results were obtained. Bleeding was stopped early with secondary sutures or with a stiff tampon, and local conservative treatment was given for abscesses and suture inconsistencies. There were no general complications or lethal outcomes (Table 4).

Discussion

Against the background of WB mucosal sagging, patients are seriously concerned about the bulging, painful clinical symptoms of ACE (incontinence, diarrhea, rectal bleeding, mucus secretion and swelling (foreign body sensation), itching and massage in the interstitial area), decreased ability to work and quality of life and provides a solid basis for surgical treatment. The goal of surgical treatment is to correct functional disorders by correcting prolapse and ACE. Despite the introduction of laparoscopic technologies in surgical coloproctology and prolapse surgery in recent years [6, 7], the importance of perineal access has not diminished. Because the use of these operations in patients with high risk and high BMI, the possibility of nerve damage and recurrence of abdominal surgery is considered very appropriate [17, 18]. However, many studies have not been able to determine the convincing advantages of this or that surgical method [19].

According to the literature, the results of intermediate operations are more favorable. Azinvasive interstitial surgery is safe and can be performed successfully under local (regional) anesthesia, including in elderly patients with concomitant diseases.

Conclusions

1. Transanal circular resection, stepler resection, transanal rectopexy, gel injection of the same moment submucosa or intersynflateral medical silicone injection injection in the same way as the instructions for favorable results in patients with complication of rectal mucosal sagging with anal sphincter insufficiency is more expedient. The frequency of minor complications that occur early and are easily eliminated after these operations is 26.1%, and the frequency of relapses is 4.3%.

2. The results of injection of medical silicone-based gel filler from at least 3–4 points into the intersfinkter area under USM control or under USM control are favorable in stages I–II of the disease of the rectal mucosa aggravated by anal sphincter insufficiency. As a result of this treatment, 78.6% of patients later recover from a painful condition such as fecal incontinence due to conservative treatment.

Funding. No source of funding has been received for this work.

Competing interests. The authors have no conflict of interest.

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Надійшла 20.03.2021