

МЕТАБОЛИЧЕСКИЙ СИНДРОМ У БОЛЬНЫХ СО СВИЩАМИ ПРЯМОЙ КИШКИ

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Цель исследования. Изучить частоту встречаемости компонентов метаболического синдрома у пациентов со свищами прямой кишки, проанализировать структуру сочетания различных компонентов метаболического синдрома и типов параректальных свищей. **Материалы и методы.** Проведено клиническое обследование с целью выявления компонентов метаболического синдрома 508 больных (85,2% – мужчины; 21,5% пациентов – в возрасте 20-39 лет, 43,9% – 40-59 лет, 34,6% – ≥ 60 лет) со свищами прямой кишки (из них трансфинктерные – 48,0%, экстрасфинктерные – 29,3%), которые находились на лечении в отделении колопроктологии городской клинической больницы №5 г. Душанбе в 2010-2015 гг. **Результаты.** У 282 человек (55,5% от общего количества пациентов со свищами прямой кишки, из них 90,8% – мужчины) выявлены компоненты метаболического синдрома, в том числе: ожирение – у 229 человек (45,1% от общего количества наблюдаемых пациентов со свищами прямой кишки), артериальная гипертензия – у 115 человек (22,6%), сахарный диабет 2 типа – у 58 человек (11,4%), ИБС – у 8 человек (1,6%). При наличии компонентов метаболического синдрома рецидивные формы свищей регистрировались в 16,3% случаев (без таковых – в 12,8%), а сложные – экстрасфинктерные – формы (29,3%) преобладали над интрасфинктерными (22,7%); в контрольной группе частота указанных форм составила 24,8% и 29,2% соответственно. Трансфинктерные формы по частоте занимали первое место в обеих группах (48,0% и 46,0%). **Выводы.** Более чем у половины пациентов (55,5%) со свищами прямой кишки выявлены компоненты МС в различных сочетаниях (ожирение – 45,1%, артериальная гипертензия – 22,6%, сахарный диабет 2 типа -11,4%, ИБС – 1,6%). Зарегистрирована тенденция к более частому рецидивированию свищей прямой кишки в группе пациентов с наличием компонентов МС и более высокой доле сложных форм – трансфинктерных и экстрасфинктерных – свищей прямой кишки в этой группе.

Ключевые слова: метаболический синдром, свищи прямой кишки, рецидив.



METABOLIC SYNDROME IN PATIENTS WITH ANAL FISTULAE

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Aim of work: to study the incidence of components of metabolic syndrome in patients with anal fistulae, to analyze combinations of different components of metabolic syndrome and types of pararectal fistulae. **Materials and Methods.** A clinical examination of 508 patients (85.2% – men; 21.5% at the age of 20-39 years, 43.9% – 40-59 years, 34.6% – ≥ 60 years) with anal fistulae (of them 48.0% were transsphincteric and 29.3% – extrasphincteric fistulae) who underwent treatment in the department of coloproctology of municipal clinical hospital №5 of Dushanbe in the period from 2010 to 2015, was conducted with the aim of identification of components of metabolic syndrome. **Results.** In 282 patients (55.5% of the total number of patients with anal fistulae, 90.8% of them being men) components of metabolic syndrome were identified: obesity – in 229 patients (45.1% of the total patients with anal fistulae), arterial hypertension – in 115 patients (22.6%), type 2 diabetes mellitus – in 58 patients (11.4%), IHD – in 8 patients (1.6%). In the presence of components of metabolic syndrome the recurrent forms of fistulae were recorded in 16.3% of cases (in the absence – in 12.8% of cases), and complicated forms – extrasphincteric (29.3%) predominated over intrasphincteric forms (22.7%); in control group the proportion of the mentioned forms was 24.8% and 29.2%, respectively. Transsphincteric forms were most common in both groups (48.0% and 46.0%). **Conclusions.** Components of metabolic syndrome in different combinations were identified in more than half (55.5%) the patients with anal fistulae (obesity – 45.1%, arterial hypertension – 22.6%, 2 type diabetes mellitus – 11.4%, IHD – 1.6%). A tendency was recorded to a more common recurrence of anal fistulae and to a more complicated forms of anal fistulae in patients with components of metabolic syndrome.

Keywords: *metabolic syndrome, anal fistula, recurrence.*

Surgical treatment of anal fistulae is an important problem of coloproctology. The incidence of anal fistulae, according to the authors' data is 12%, recurrence occurs in 8-15%, and anal incompetence develops in 4.7-33.0% of cases [1,2].

Postoperative complications in patients with anal fistulae are associated with the volume of preoperative preparation, surgical approach and with peculiarities of postoperative management of patients [3]. It is also known that a risk factor of postoperative complica-

tions and of high intraoperative risk is the presence of a metabolic syndrome (MS) in a patient. According to the literature, different components of MS occur in 2.8-40.0% of cases of cholecystitis [4-7]. The incidence of this comorbid pathology in patients with anal fistulae is not well studied.

Criteria of MS may differ among different authors and medical professional organizations. In the present work the following criteria were used: the main one – obesity (abdominal obesity: waist circumference >94 cm in men and >80 cm in women, the degree of obesity determined by body mass index: 30-34.9 kg/m² – the 1st degree, 35-39.9 kg/m² – 2nd degree, ≥40 кг/м² – 3^d degree; additional criteria: 1) high density lipoprotein cholesterol <0.9 mmol/l in men and <1.1 mmol/l in women; 2) increase in the level of AP: systolic ≥130 mm Hg and/or diastolic ≥85 mm Hg, or the fact of receiving antihypertensive treatment; 3) fasting blood glucose level >5.6 mmol/l. MS is diagnosed in case of obligatory presence of one main and minimum two additional criteria.

The aim of work was to study the incidence of MS components in patients with anal fistulae, to analyze combinations of different components of metabolic syndrome and types of anal fistulae.

Materials and Methods

Examination of 508 patients was conducted with the aim to identify MS components ((85.2% – men); 109 patients (21.5%) at the age of 20-39 years, 223 (43.9%) – 40-59 years, 176 (34.6%) – ≥60 years)) with anal fistulae who underwent treatment in the department of coloproctology of municipal

clinical hospital №5 of Dushanbe from 2010 to 2015. The prescription of anal fistulae was from 3 months to 15 years.

Diagnosis of anal fistulae was conducted using digital examination of anal canal, anoscopy, rectoramanoecopy, test with vital dye, probing of the fistula passage, transrectal ultrasound examination of sphincter and tissues of pararectal zone, and fistulography. We used classification of fistulae developed by A.N. Ryzhikh State Scientific Center of Coloproctology of Ministry of Health of Russian Federation: intrasphincteric anal fistulae (ISAF), transsphincteric anal fistulae (TSAF) and extrasphincteric anal fistulae (ESAF).

MS components were diagnosed on the basis of anthropometric data, arterial pressure, biochemical blood tests, electrocardiography.

The main group included patients with the presence of some components of MS, and the control group – those with absence of any components. Subanalysis was conducted by four components of MS – obesity, type 2 diabetes mellitus (DM 2), arterial hypertension (AH), IHD.

Results and Discussion

Components of MS in different combinations were identified in 55.5% (n=282) of patients with anal fistulae (the main research group). Control group included 44.5% (n=226) of patients with anal fistulae with no components of MS.

Age and gender of patients are given in Table 1. The majority of patients in both groups were men (90.8% – in the main group and 94.2% – in control group). The age of most patients was 40-59 years (40.1% and 48.7%, respectively).

Table 1

Age and Gender Composition of Patients Included into Study
(n=508)

	Main group (with detected components of MS)	Control group (without components of MS)
n	282	226
Men:		
20-39 years, individuals (% of n ₁)	68 (26.6%)	36 (16.9%)
40-59 years, indiv. (% of n ₁)	99 (38.7%)	102 (47.9%)
≥60 years, indiv. (% of n ₁)	89 (34.7%)	75 (35.2%)
Total (n ₁), indiv. (% of n)	256 (90.8%)	213 (94.2%)
Women:		
20-39 years, indiv. (% of n ₂)	3 (11.5%)	2 (15.4%)
40-59 years, indiv. (% of n ₂)	14 (53.8%)	8 (61.5%)
≥60 years, indiv. (% of n ₂)	9 (34.7%)	3 (23.1%)
Total (n ₂), indiv. (% of n)	26 (9.2%)	13 (5.8%)

The predominating anal fistulae were TSAF irrespective of the presence or absence of MS components (48.0% in the main group and 46.0% in the control group, Tab. 2). However, in the main group complicated forms – ESAF (29.3%) were predominating over ISAF (22.7%), while in the control group an opposite tendency was observed: ESAF made 24.8%, and ISAF – 29.2%. Besides, the total quantity of complex forms of fistulae (TSAF and ESAF) in the main group was 77.3% against 70.8% in control group which, in the opinion of the authors, reflects dependence of severity of the main disease

(anal fistula) on the presence of the accompanying pathology – MS.

In 75 cases (14.8% of the total observations) recurrent forms of anal fistulae were recorded – in 29 patients of control group (12.8%) and in 46 patients (16.3%) of the main group (Tab. 3).

The obtained results show a tendency to a higher incidence of recurrence of anal fistulae in a group of patients with a comorbid pathology – MS components, and to a higher share of ESAF in this group (63.1% in the structure of recurrent fistulae against 55.2%, respectively).

Table 2

Incidence of Types of Anal Fistulae in Studied Groups

Types of Anal Fistulae	Main Group			Control Group		
	men	women	total, n (%)	men	women	total, n (%)
ISAF	59	5	64 (22.7%)	62	4	66 (29.2%)
TSAF	121	14	135 (48.0%)	98	6	104 (46.0%)
ESAF	76	7	83 (29.3%)	53	3	56 (24.8%)
Total	256	26	282 (100.0%)	213	13	226 (100.0%)

In analysis of separate components of MS, obesity was recorded in 229 patients (45.1% of all observed cases and 81.2% of individuals with some components of MS, that is, of the main group), AH – in 115 patients

(22.6% and 40.8%, respectively), DM2 – in 58 (11.4% and 20.6%, respectively), IHD – in 8 patients (1.6% and 2.8%). In Tab. 4 the rate of anal fistulae is given depending on the structure and combination of components of MS.

Table 3

Incidence of Recurrent Anal Fistulae in Studied Groups

	Main Group	Control Group	Total
Number of recurrent anal fistulae, n	46	29	75
% of total number of patients in group	16.3%	12.8%	14.7%
including:			
ISAF, n ₁ (% of n)	2 (4.3%)	2 (6.9%)	4 (5.3%)
TSAF, n ₂ (% of n)	15 (32.6%)	11 (37.9%)	26 (34.7%)
ESAF, n ₃ (% of n)	29 (63.1%)	16 (55.2%)	45 (60.0%)

Table 4

*Form of Anal Fistulae and Structure of Components of MS
(n=282)*

Types of Anal Fistula		DM2	Obesity	AH	IHD	DM2+ obesity	AH+obesity	DM2+ AH	DM2, AH+ obesity	Total
ISAF	n	1	33	4	-	11	10	4	1	64
	%	0.3	11.7	1.4	0	3.9	3.6	1.4	0.3	22.7
TSAF	n	4	49	15	3	17	41	6	-	135
	%	1.4	17.4	5.3	1.1	6.0	14.5	2.1	0	47.9
ESAF	n	-	35	7	5	9	22	4	1	83
	%	0	12.4	2.5	1.8	3.2	7.8	1.4	0.3	29.4
Total	n	5	117	26	8	37	73	14	2	282
	%	1.7	41.5	9.3	2.9	13.2	25.9	4.9	0.6	100

In should be noted that the most common MS component was obesity (in isolated form or in combination with other components) – 81.2% in the main group. Here, the 1st degree of obesity was recorded in 137 cases (59.8% of all cases of obesity), 2nd degree – in 60 cases (26.2%), and 3^d degree – in 32 cases (14.0%). In patients with obesity, ISAF was diagnosed in 55 cases (24.0%), TSAF – in 107 cases (46.7%) and ESAF – in 67 cases (29.2%).

58 Patients (20.6% of the main group) with anal fistulae suffered DM2. ISAF were diagnosed in 17 cases (29.3%), TSAF – in 27 cases (46.5%) and ESAF – in 14 cases (24.1%).

In literature concerning anal fistulae, information of incidence of MS and its components in the patients of the given category is absent. This question is usually analyzed from the point of view of incidence of diseases of rectum among categories of patients with separate components of MS. Thus, monographs of E.V. Kuleshov [3] and I.I. Dedov [4] give general data about incidence of diseases of rectum among patients with DM, an article of M.Sh. Abdullaev [1] is dedicated to peculiarities of the course and treatment of acute paraproctitis in patients with DM. Ther results of our analysis demonstrate a high incidence of components of MS (55.5%) among patients with anal fistulae.

A sufficient amount of works on coloproctology were published concerning the rate of development of different forms of anal fistulae, however, these data have never been analyzed from the point of view of their combination with comorbid pathology – MS. Here, according to literature data, incidence of TSAF is from 32.4 to 53.1% of cases, the second most common defect is ISAF (26.7 – 38.2%) [7]. The data obtained by us demonstrate similar distribution of the types of anal fistulae among patients without MS components (TSAF – 46.0%, ISAF – 29.2%). However, in the group of patients with components of metabolic syndrome the leading defect was TSAF (48.0%), the second most common defect was not ISAF, but ESAF (29.2%). Here, the complicated forms of fistulae (TSAF and ISAF) make the majority of cases among individuals both with obesity and with DM2. The obtained data about the rate and structure of recurrent forms of anal fistulae (12.8% – in control group, 16.3% – in the main group) coincide with the data obtained by other authors [8,9].

Thus, the detected regularities are considered by authors as clinically significant and require further investigation with the aim to increase statistical validity of observation.

Conclusions

1. In more than half the patients (55.5%) with anal fistulae components of metabolic syndrome were found (obesity, arterial hypertension, type 2 diabetes mellitus, ischemic heart disease) in different combinations.

2. In patients with anal fistulae the most common component of metabolic syndrome was obesity (45.1%), the second most common component was arterial hypertension (22.6%), and the third was type 2 diabetes mellitus (11.4%).

3. The obtained data evidence a tendency to a more frequent recurrence of anal fistulae in a group of patients with comorbid pathology – components of metabolic syndrome (16.3% against 12.8%) and to a higher share of a complex forms of anal fistulae (transsphincteric and extrasphincteric) in this group.

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