



EPIDEMIOLOGICAL AND CLINICAL CHARACTERISTICS OF ACUTE SURGICAL DISEASES OF THE ABDOMINAL ORGANS IN THE POPULATION WITH POST-COVID SYNDROME

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Abstract

This article presents an opinion on the epidemiological and clinical characteristics of acute surgical diseases of the abdominal cavity among the population with post-Covid syndrome. Studying the epidemiology and clinical characteristics of acute surgical diseases of the abdominal cavity with post-COVID syndrome can be of great importance in predicting the development and consequences of these diseases, as well as in developing the basis for their treatment and prevention.

Keywords: Post-covid syndrome, acute abdominal diseases, epidemiology, prevention.

Introduction

Relevance and necessity of the topic.

Looking at the scientific literature on COVID-19 and acute abdominal diseases (AAD), it is noteworthy that the COVID-19 pandemic, in the form of post-covid syndrome, has become and remains a vital problem for the past five years. This situation has not been the case in the past or present generation. COVID-19, which was previously perceived and considered as a short and transient severe respiratory syndrome, is now considered a scientific and practical topic that causes or leaves the relevance of all internal organs, including gastroenterology problems, in particular AAD. The history of coronavirus infection is not over, and currently, the next problem under the name Long-COVID, or prolonged, protracted COVID, has entered and remains.

Studies have shown that many diseases are "transforming" against the backdrop of Long-COVID, new syndromes are emerging, or the problem is becoming more widespread [12].





Mechanical jaundice, severe cholestatic syndrome, acute protein-losing diarrhoea, severe diarrhoea (refractory to any treatment), diffuse sarcoidosis, and myocarditis are often associated with COVID-19 or post-COVID syndrome, with diseases that have a traditional course taking on an aberrant course and histochemical examination revealing coronavirus markers in the intestine.

Controversial topics, however, remain: 1) the number of anti-vaccinationists in the West is growing sharply; 2) there is a growing need for scientific schools or directions to develop and shape around the COVID-19 infection.

Researchers such as N.L.Dmakhaya, A.V.Sedova and O.Yu.Zolnikova (2021) stated the exact conclusions from the analysis of scientific research [1. b, 17-13; 9].

Ivashkin V.T. et al. (2024) prove, based on the analysis of the scientific data collected so far, that bacterial overgrowth syndrome (BOP) is confirmed as a risk factor with a negative effect on the course of almost all chronic non-infectious diseases (NCDs) [2, p. 14-28; 3; 4].

Eyremova I.et. Al (2023), Leite G. et. al (2020) and Tararura W. et. al (2020) based on a large systematic review show that OBOS is not only in the SUD (up to 90%), but also in PostCovid- Is also detected with a high prevalence (up to 93.3%) in 19 [5; 6; 7; 8; 10; 11].

The frequency of detection of various forms of acute respiratory infections among the population with “post-COVID syndrome” was as follows: (Table 4.1 and Figure 1 in the appendix): acute abdomen - 15.6%, 46.5% and 53.5% [$\chi^2=2.467$; $P>0.05$: $r=0.074$]; appendicitis - 65.8%, 39.0% and 61.0% [$\chi^2=0.264$; $P>0.05$: $r=0.024$]; acute cholecystitis and cholangitis - 30.5%, 38.1% and 61.9% [$\chi^2=0.004$; $P>0.05$: $r=0.0002$]; acute pancreatitis - 0.0%; gastroduodenal bleeding -19.3%, 37.5% and 62.5% [$\chi^2=0.020$; $R>0.05$: $r=-0.047$]; acute intestinal obstruction - from 32.0%, 39.7% and 60.3% [$\chi^2=0.224$; $R>0.05$: $r=0.022$]; complicated hernia – from 28.3%, 39.5% and 60.5% [$\chi^2=0.145$; $R>0.05$: $r=0.018$] and gastroduodenal perforating ulcer - 6.79%; From 71.0% and 29.0% [$\chi^2=1517$; $R<0.01$: $r=0.182$];



1. Table Prevalence of invasive surgical diseases of the abdominal cavity (ISU) in the population with "post-Covid syndrome"

No.	KBAOKHK	Men (n=174)		t criteri on	Women (n=174)		Proportion to Total Postcovid Syndrome Population (n = 456)		X ²	P	r	RR	95%CL
		n	%		n	%	n	%					
1.	Acute abdomen	33	46.5	>0.05	38	53.5	71	15.6	2,467	>0.05	0.074	1,407	0.919-2.156
2.	Appendicitis	117	39.0	>0.05	183	61.0	300	65.8	0.264	>0.05	0.024	1,036	0.906-1.186
3.	Acute cholecystitis and cholangitis	53	38.1	>0.05	86	61.9	139	30.5	0.004	>0.05	0.002	0.999	0.751-1.329
4.	Acute pancreatitis	-	-	-	-	-	-	-	-	-	-	-	-
5.	Gastroduodenal bleeding	33	37.5	>0.05	55	62.5	88	19.3	0.020	>0.05	-0.047	0.972	0.660-1.433
6.	Acute intestinal obstruction	58	39.7	>0.05	88	60.3	146	32.0	0.224	>0.05	0.022	1,068	0.813-1.403
7.	Complicated hernia	51	39.5	>0.05	78	60.5	129	28.3	0.145	>0.05	0.018	1,060	0.787-1.428
8.	Gastroduodenal perforative ulcer	22	71.0	<0.01	9	29.0	31	6.79	15.17	<0.01	0.182	3,962	1,867-8,405

1 shows the distribution of abdominal organs by age in the general population with "post-COVID syndrome".

The characteristics of the frequency of distribution of acute surgical diseases are presented.

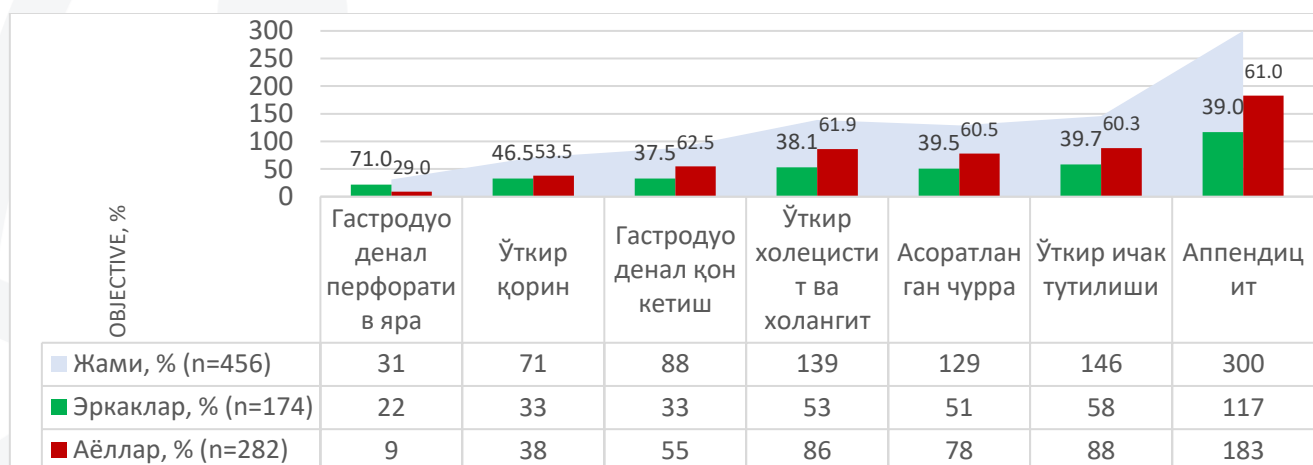


Figure 1. Characteristics of the prevalence of acute surgical diseases of the abdominal cavity (ACSD) in the population with "post-Covid syndrome" (Appendix 16)

The most common causes of appendicitis, acute cholecystitis and cholangitis, as well as acute intestinal obstruction, are also noteworthy in PS, which is mainly observed in women.

The prevalence of gastrointestinal diseases in the population with PS in different age groups is observed with the following features [shown in Figure 4.2 and Table 4.2 in the appendix]: acute abdomen in a young age - from 38.0% [$\chi^2 = 0.309$; $P > 0.05$; $r = 0.026$; $r = 0.047$], acute cholecysto-cholangitis - from 5.8% and 94.2% [$\chi^2 = 234$;



$P < 0.001$; $r = -0.717$], gastroduodenal bleeding - from 43.2% and 56.8% [$x^2 = 11.26$; $P < 0.001$; $r = -0.157$]; acute intestinal obstruction - from 10.3% and 89.7% [$x^2 = 210.7$; $R < 0.001$; $r = -0.680$], preserved hernia - 5.4% and 94.6% [$x^2 = 213$; $R < 0.001$; $r = -0.684$], and gastroduodenal perforating ulcer - 25.8% and 74.2% [$x^2 = 15.24$; $R < 0.001$; $r = -0.182$].

"Navqiran" and "Middle and old age" are recorded mostly - 22-44 and 45-59 years old. The prevalence of post-COVID-19 CBC in the female population of the PC (Figure 2) was confirmed as follows: acute abdomen in the "young" and 45-89 years old - 65.8% and 34.2% [$x^2 = 0.310$; $P > 0.05$] appendicitis - 62.3% and 37.7% [$x^2 = 0.081$; $P > 0.05$], acute cholecystocholangitis - 7.0% and 93.0% [$x^2 = 156.8$; $P < 0.001$], acute pancreatitis - 0.0%, gastroduodenal bleeding - 50.9% and 49.1% [$x^2 = 3.368$; $P < 0.05$], biliary obstruction - 9.1% and 90.9% [$x^2 = 149.8$; $R < 0.001$], complicated hernia - 6.4% and 93.6% [$x^2 = 139.5$; $R < 0.001$], and gastroduodenal perforating ulcer - 11.1% and 88.9% [$x^2 = 10.07$; $R < 0.05$],

It is noteworthy that the risk of acute surgical complications associated with COVID-19 increases with age.

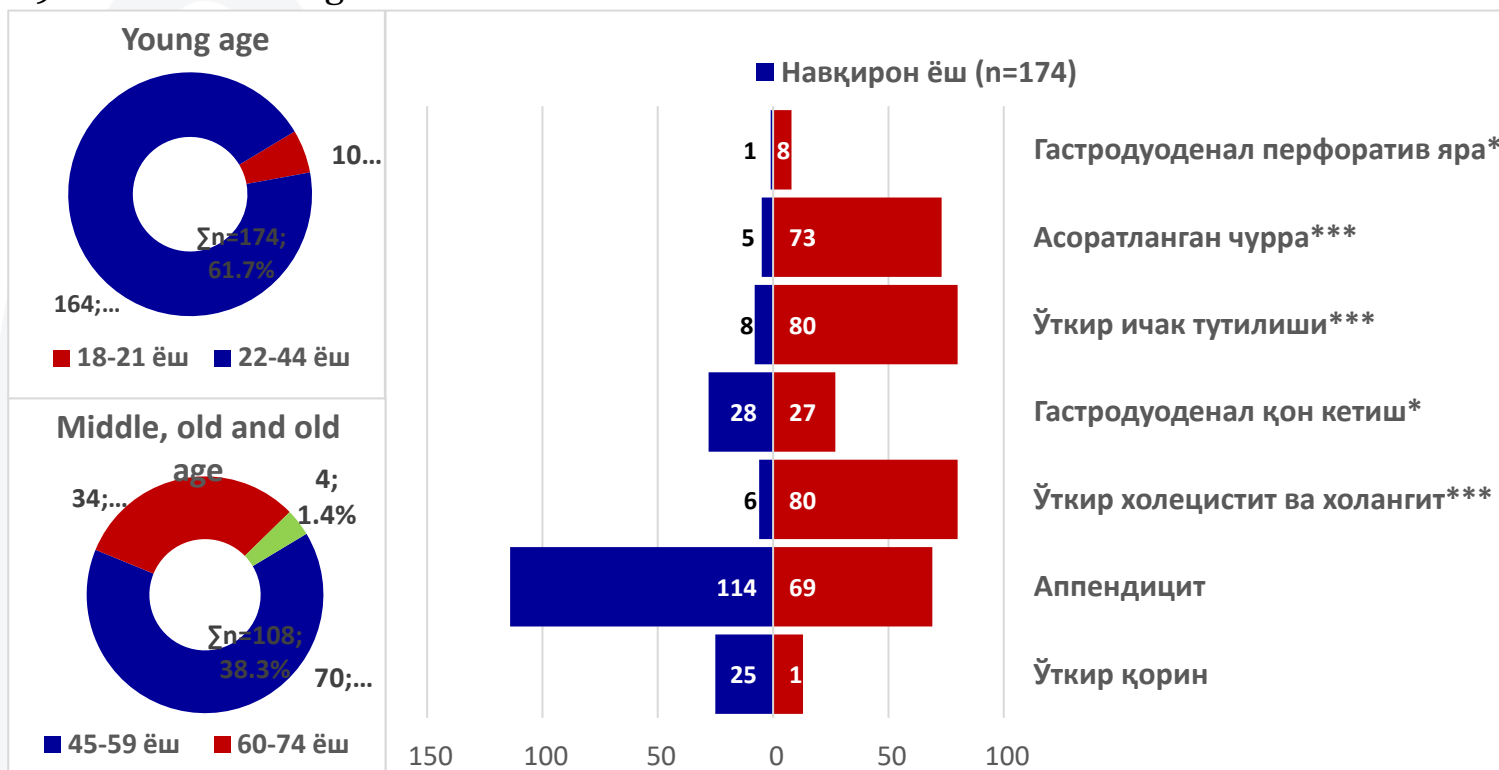


Figure 2. Characteristics of the prevalence and expression of acute surgical diseases of the abdominal cavity depending on age in the female population with "post-Covid syndrome"



4.3 . Characteristics of the prevalence and expression of acute surgical diseases of the abdominal cavity in the female population "with post-Covid syndrome" depending on age (Appendix 18)

Acute abdominal pain in the female population with "post-Covid syndrome" depending on age

incidence of surgical diseases

The prevalence and characteristics of acute surgical diseases of the abdominal cavity in the male population with PS, depending on age, are presented in Figure 3.

In this population, PS-associated CBC is also observed at relatively high frequencies in the age group of 45-89 years.

Relatively high frequencies of acute abdomen are detected in the age group 45-89 years, expressed in specific prevalence rates: 1) acute abdomen - 6.1% at 18-21 years, 51.5% at 22-44 years and 51.5% at 18-44 years; 27.3% at 45-59 years, 12.1% at 60-74 years, 3.0% at 75-89 years and 42.4% at 45-89 years [$\chi^2 = 0.146$; $P > 0.05$; $r = 0.029$]; 2) appendicitis - 1.7% at 18-44 years, 52.1% at 22-44 years and 53.8% at 18-44 years; 45-59, 30.8%, 60-74 - 13.7%, 75-89 - 1.9% and 45-89 from 46.2% [$\chi^2 = 0.081$; $R > 0.05$; $r = 0.022$]; 3) acute cholecystitis - at 18-21 - 0.0%, at 22-44 - 3.8% and from 18-44; 45-59 - 52.8%, 60-74 - 39.6%, 75-89 - 3.8% and 45-89 from 96.2 [$\chi^2 = 79.42$; $R < 0.001$; $r = -0.676$]; 4) acute pancreatitis - 0.0%; 5) gastroduodenal bleeding - 0.0% in 18-21 years old, 30.3% in 22-44 years, 30.3% in 18-44 years; 45-59 - 33.3%, 60-74 - 30.3%, 75-89 - 6.1% and 45-89 - 69.7% [$\chi^2 = 8.525$; $R < 0.001$; $r = -0.236$]; 6) acute bowel obstruction - 0.0% at 18-21, 12.1% at 22-44 and 12.1% at 18-22; 48.3% at 45-59, 36.2% at 60-74, 3.4% at 75-89, and 87.9% at 45-89 [$\chi^2 = 63.48$; $R < 0.001$; $r = -0.604$]; 7) complicated hernia at 18-21 years old - 0.0%, at 22-44 - 3.9% and at 18-44 - 3.9%; 45-53 - 52.0%, 60-74 - 39.2%, 75-89 - 3.9%, and 45-89 - 96.1% [$\chi^2 = 74.74$; $R < 0.001$; $r = -0.655$]; 8) gastroduodenal perforation ulcer - 0.0% at 18-21, 31.8% at 22-44 and 31.8% at 18-44; 45-59 - 31.8%, 60-74 - 27.3%, 75-89 9.1% and 45-89 from 68.2 [$\chi^2 = 5.272$; $R < 0.05$; $r = -0.179$],

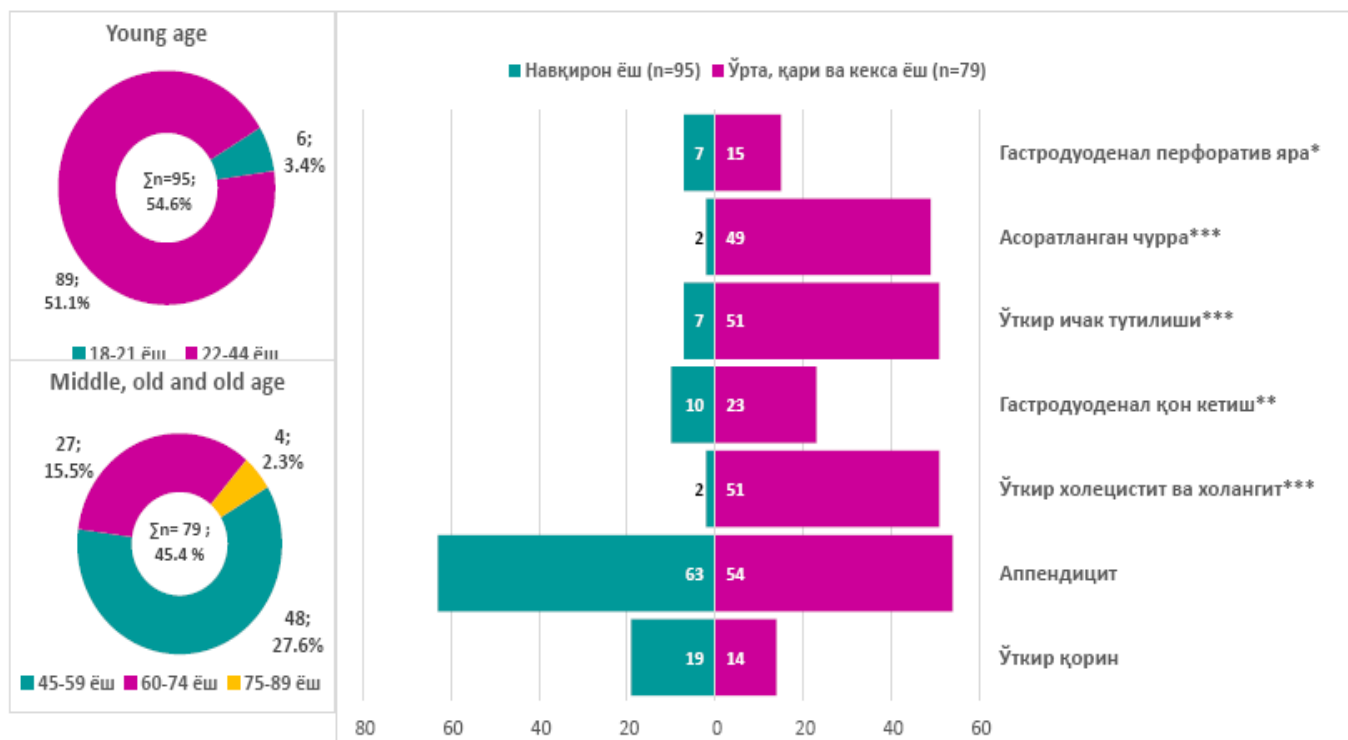


Figure 3. Characteristics of the prevalence of acute surgical diseases of the abdominal cavity depending on age in the male population with "post-Covid syndrome"

Conclusion

In general, it can be concluded that acute surgical diseases of the abdominal cavity organs in the population with post-covid syndrome show certain clinical and epidemiological characteristics, and taking them into account will change and improve both clinical and preventive practice.

It depends on the risk factors, rural and urban conditions, ethnic, social and labour factors, and the transition against the background of PS becomes more important. Information about this is presented in the next chapter.

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