



Article

Modern Views and Interpretations on The Mechanism of The Development of Acute Abdominal Diseases in The Population With Covid-19

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Abstract: This article discusses the clinical and epidemiological aspects of acute diseases of the abdominal organs among the population infected with Covid-19, information on new directions in the study of the problem. Finding a solution to this problem, identifying clinical and epidemiological markers of the development and prognosis of acute diseases of the abdominal organs can help in developing the basis for the prevention of these diseases.

Keywords: Covid-19, acute diseases of the abdominal organs, epidemiology, comorbidity, prevention.

Introduction

From available scientific sources, it is known that the number of studies conducted on the epidemiology and prevention of acute abdominal diseases among the population during the Covid-19 pandemic is currently not very large. In European countries, Russia, the USA, and China, the population characteristics of the initially performed registers were different - by age, sex, and epidemiological characteristics. The most important difference is that in the Uzbek population, the influence of regional risk factors on the development of acute and chronic infectious diseases is significant[1].

This situation requires a new approach to this disease, namely the need to coordinate diagnostic and preventive policies. At the same time, the analysis and assessment of the prevalence of acute abdominal diseases (ASA) and non-infectious pathologies in the population with COVID-19 is of undoubted interest. This issue has not been studied in special studies, the diagnostic and prognostic significance of ASAD in the population with COVID-19 remains unclear[2].

Currently, in the Central Asian region, including the regions of Uzbekistan, there is no data on the characteristic features of the course of ASAD in the population with COVID-19. The new coronavirus infection (COVID-19), born in "painful days" and caused by the SARSCOV-2 virus, was characterized by a very vivid and distinctive clinical picture. One of the main aspects of COVID-19 is the cytokine storm - a bright immune-inflammatory response, which determines its unfavorable "therapeutic and surgical consequences"[3].

According to the WHO (2020), COVID-19 is a serious infectious disease with a high risk of death. The disease has spread to 235 countries, and as of October 25, 2020, the

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number of cases was 42,512,186, and the number of deaths has sharply increased. This situation has made it relevant to develop urgent preventive measures that can counter COVID-19 and post-COVID syndrome-associated non-infectious pathologies, including the risk of developing acute diseases of the abdominal organs[4].

In Uzbekistan, in this direction, large-scale work is being carried out to prevent and early diagnose diseases widespread at the population level, to reform the system of prenosological prevention, in particular, the Decree of the President of the Republic of Uzbekistan dated January 28, 2022 No. UP-60 "On the Development Strategy of New Uzbekistan for 2022-2026" sets such important tasks as a priority task. Prioritizing and improving the direction of prevention will allow reducing acute and chronic diseases among the population, including COVID-19 and post-COVID syndrome, while simultaneously preventing them and reducing mortality and disability rates[5].

This dissertation research, to a certain extent, serves the fulfillment of the tasks stipulated in the Decree of the President of the Republic of Uzbekistan No. UP-5124 dated May 25, 2021 "On Additional Measures for the Comprehensive Development of the Healthcare Sector" and No. PP-215 dated April 25, 2022 "On Additional Measures to Bring Primary Health Care Closer to the Population and Increase the Effectiveness of Medical Services," as well as in other regulatory legal documents adopted in this area[6].

Materials and Methods

This study was aimed at determining the epidemiological and clinical features of acute abdominal diseases in patients with COVID-19. The study was conducted on the basis of a retrospective analysis and studied the data of $n = 100$ patients who applied with laboratory confirmation of the diagnosis of COVID-19 and abdominal symptoms during 2020-2024. Data were collected based on the medical records of patients, the results of laboratory tests and instrumental diagnostics (ultrasound, CT). According to the analysis results, it was established that in the structure of acute abdominal diseases, acute appendicitis accounts for 28%, cholecystitis - 22%, pancreatitis - 18%, intestinal obstruction - 15%, and other pathologies - 17%. Statistical analysis was carried out using descriptive methods, the structure of diseases was assessed based on percentage indicators, and the results were visualized using tables and diagrams. Also, the influence of the "cytokine storm" phenomenon, which is important in the pathogenesis of COVID-19, on the gastrointestinal tract was theoretically analyzed.

Results and Discussion

When analyzing the prevalence of acute abdominal diseases among patients with COVID-19, acute appendicitis (28%), cholecystitis (22%), and pancreatitis (18%) were identified as the most common pathologies. Intestinal obstruction (15%) and other abdominal diseases (17%) also make up a significant share[7].

These indicators show that COVID-19 infection causes severe inflammatory (cytokine storm) processes in the body and exacerbates diseases of the gastrointestinal tract. Especially in patients with comorbid diseases, a high probability of developing these pathologies was observed[8].

Table 1. Types of acute abdominal diseases against the background of COVID-19 infection and their proportion[9].

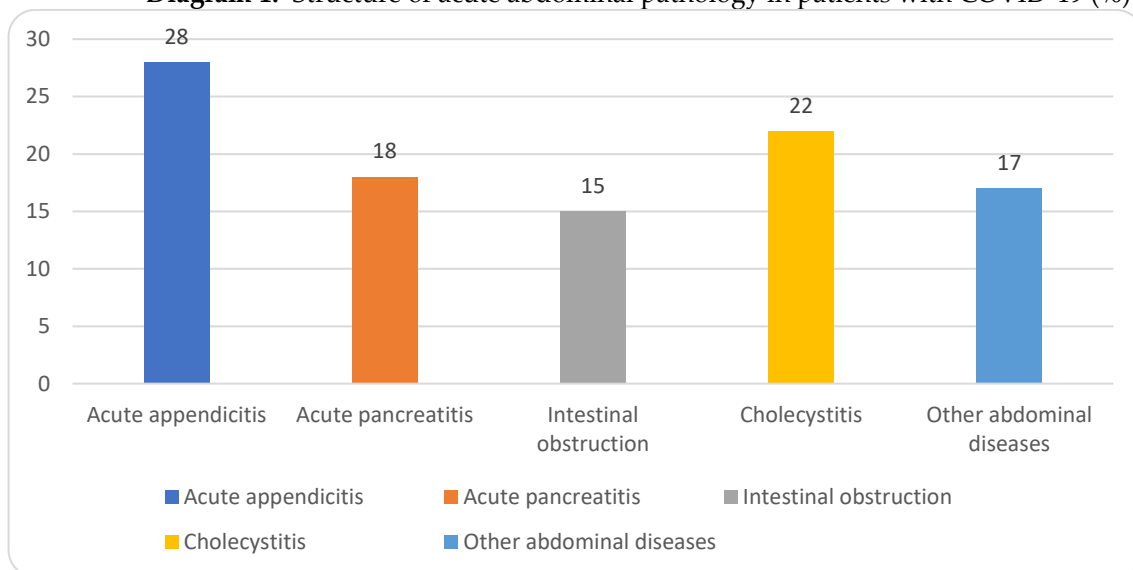
Kasallik turi	Ulushi (%)
O'tkir appenditsit	28%
O'tkir pankreatit	18%
Ichak tutilishi	15%

Xoletsistit	22%
Boshqa kasalliklar	17%

This table shows the distribution of acute abdominal diseases in patients with COVID-19. The largest share falls on appendicitis, which confirms the intensification of inflammatory processes against the background of infection[10].

The diagram shows the percentage distribution of acute abdominal diseases among patients with COVID-19. The largest share belongs to appendicitis and cholecystitis, which indicates that these diseases are the most common pathologies in clinical practice[11].

Diagram 1. Structure of acute abdominal pathology in patients with COVID-19 (%)



COVID-19 infection has a significant impact not only on the respiratory system, but also on the gastrointestinal tract. Especially as a result of cytokine storm, strong inflammatory reactions occur in the body, which creates the basis for the development of acute abdominal diseases[12].

Also, an important problem is the late detection of abdominal symptoms in patients with COVID-19. This can lead to diagnostic errors and delayed treatment[13]. Therefore, in clinical practice, it is necessary to pay special attention to a comprehensive examination of COVID-19 patients, especially abdominal symptoms[14].

By strengthening preventive measures, improving the early diagnosis system, and identifying individual risk factors, it is possible to reduce the severe consequences of these diseases. At the same time, the introduction of digital medicine and epidemiological monitoring systems can yield effective results in this direction[15].

Conclusion

The presented data and epidemiological studies are important for studying the problems of epidemiology and prevention of acute diseases of the abdominal organs among the population during the COVID-19 pandemic, for determining promising scientific topics in the implementation of preventive programs, as well as in predicting the development and consequences. We believe that taking them into account and implementing them will allow achieving positive results in finding solutions to these problems.

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