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Case Report

Retrospective Analysis of Acute Abdomen Surgeries in Adult Patients Due to Acute Appendicitis and Constricted Hernia During Covid-19 Lockdown in Comparison with the Pre Lockdown Period in A Tertiary Hospital in Western Greece

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Abstract

The COVID-19 pandemic led to the imposition of restrictive measures from March 23 to May 4, 2020 in Greece (Lockdown). The Lockdown combined with the fear of the new disease led to the working hypothesis that the attendance of patients with urgent surgical problems may have been affected. The purpose of this study was the retrospective analysis and comparison of emergency surgical cases due to acute appendicitis and constricted hernia admitted to the Department of Surgery of a tertiary hospital in Western Greece. The study period was March-April 2020 in comparison with January-February 2020. January-February 2020: 18 patients met the criteria of the study. None of the patients with acute appendicitis suffered from peritonitis or other complications. None of the patients with constricted hernia required enterectomy. March-April 2020: 17 patients with acute appendicitis and constricted hernia were admitted. Of the patients with acute appendicitis, 20% suffered from peritonitis at the time of diagnosis. Of the patients with tight hernia, 14% required enterectomy.

The total number of surgeries did not change significantly pre Lockdown and during the Lockdown period. An increase in the number of complications has been observed during the Lockdown period, possibly due to the delayed quest of medical attention.

Keywords: COVID-19; Lockdown; Emergency surgical cases; Acute appendicitis; Constricted hernia

1. Introduction

Coronavirus disease 2019 (COVID-19) due to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was initially described in December 2019 in Wuhan City, Hubei Province, China [1, 2]. The disease causes pneumonia, respiratory distress syndrome, and acute respiratory failure [3].

After the first confirmed COVID-19 case in 26th February 2020 in Greece and the cases reported afterwards, the country implemented a broad shutdown of public areas, indoor places of public gathering (schools, places of worship, cinemas, theatres, sports halls) and travel restrictions, universally described with the term Lockdown [4, 5]. Lockdown measures were implemented in Greece from March 23rd to May 4th, 2020. As a result, people were restricted in their homes, avoiding areas with high transmission risk. Such places were also the emergency departments of hospitals [4, 5].

2. Methods

The working hypothesis of the present study was whether there was a reduced attendance to the Emergency Department and consequent admissions to the Department of Surgery of patients with acute abdomen who finally underwent surgery during the Lockdown due to appendicitis and constricted hernia. The research population included all adult patients presented to the emergency department with symptoms and signs of acute abdomen who proved to suffer from acute appendicitis and constricted hernia (inguinal, umbilical, and postoperative). The period of study was March and April 2020 in comparison with the pre Lockdown period, that is January and February 2020. There were no changes in the admission criteria in the Surgery Department prior or during the Lockdown.

3. Results

During January-February 2020, 18 patients admitted to the Surgery Department met the aforementioned criteria. None of the patients with acute appendicitis suffered from peritonitis or other complications at the time of diagnosis. None of the patients with constricted hernia required enterectomy. During March-April 2020, 17 adult patients admitted to the Surgery Department with acute appendicitis and constricted hernia. Of the patients with acute appendicitis, 20% suffered from peritonitis at the time of diagnosis. Of the patients with constricted hernia (including inguinal, umbilical, and postoperative), 14% required enterectomy. Diagnosis was based on clinical

criteria and confirmed by abdominal computed tomography scan. In all our patients, the gastrointestinal symptoms were justified by the clinical picture they presented.

4. Discussion

The total number of surgeries has not changed significantly during the period of Lockdown compared with pre Lockdown period. On the other hand, there has been an increase in the number of complications and more severe clinical manifestations in patients with acute abdomen due to acute appendicitis and constricted hernia during the Lockdown period. As there was no change in the criteria of patient admission to the Department of Surgery during and before the Lockdown, our data possibly reflect delayed seeking medical attention due to fear of exposure in the face of confirmed coronavirus cases in hospitals. As a result, there has been also a delay in diagnosis and treatment leading to complications. These data are consistent with a corresponding study conducted in children with acute appendicitis [6].

In conclusion, emergency surgical cases should not be affected from the constrictions implemented for the confrontation of the covid-19 pandemic and should be performed under any circumstances. Our data showed that our patients sought delayed medical attention for two major causes of acute abdomen that is acute appendicitis and constricted hernia. As a result, they appeared with more complications as they had delayed diagnosis and treatment.

Acknowledgments

None

Competing Interests

The authors declare that they have no competing interests.

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