

### **The Commonest Medical, Surgical, and Oncological Causes of Acute Abdomen in Adults with COVID-19. A prospective Observational Study**

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#### **Abstract**

**Objectives:** This study sought to determine the commonest causes of acute abdominal pain (medical, surgical, and oncological) during the COVID-19 pandemic.

**Methods:** From May 1, 2020, to February 28, 2022, 910 adult patients > 18 years of age of both sexes were admitted to the emergency department or already admitted but complaining of an acute abdomen and diagnosed with COVID-19.

**Results:** The mean age of the studied group was 48.13±11.97 years, with male predominance (66%). Medical causes of the acute abdomen were in 34% of cases, and 66% were surgical causes. Gastric causes of the acute abdomen were the most common medical causes. Referred pain from COVID-19 pneumonia was the cause of abdominal pain in 20.8% of cases. Acute appendicitis was the commonest surgical cause of acute abdomen (42.4%), mostly Grade V, followed by acute cholecystitis (11%) and biliary colic (9.8%). Acute pancreatitis was the cause in 12.7% of cases, and its causes were mainly idiopathic (48.7%).

**Conclusions:** Surgical causes of acute abdominal pain were more common than medical causes. The commonest medical causes of the acute abdomen during COVID-19 were gastric causes, while acute appendicitis, gallbladder diseases, and intestinal ischemia were the commonest surgical causes. Idiopathic acute pancreatitis was more common than gallstone pancreatitis, and most cases were mild. Surgery is the most common cause of death from the acute abdomen, followed by respiratory failure caused by COVID-19 and then medical causes of acute abdomen.

Trial registration: It was approved by the institutional review board (IRB) for all parts of this study by ZUMEC 152020-23. Clinical trial registration: NCT05295251. Retrospective registered.

**Key words:** COVID-19, acute abdomen, surgical causes, medical causes, oncological causes