

Pancreatitis and Covid

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Abstract: *The spread of the new coronavirus SARS-CoV-2, discovered in China in January 2020, led to a pandemic in March 2020. The coronavirus disease 2019 (COVID-19) has been linked to many systemic inflammatory reactions and high morbidity and mortality rates. Patients with gastrointestinal symptoms progress more rapidly than others. COVID-19 induced acute pancreatitis is not common and can occur in cases of mild infection or even after resolution of the viral infection. We report in our study a series of 3 patients with acute pancreatitis.*

Keywords: COVID-19, Acute pancreatitis, Gastrointestinal, Abdominal pain

Introduction:

The spread of the new coronavirus SARS-CoV-2, discovered in China in January 2020, led to a pandemic in March 2020. This pandemic has affected more than 2 million people in the world mainly affects the respiratory system but gastrointestinal manifestations have been observed including pancreatitis

Methods and results:

We report in our study a series of 3 patients with acute pancreatitis.

The first patient of 60 years old, hypertensive and under treatment, was admitted to the emergency room with acute abdominal pain and sudden onset of symptoms. The examination revealed abdominal sensitivity with fever and vomiting, a lipasemia 3 times normal with a CT scan confirming the diagnosis of stage C pancreatitis, and during his hospitalization in the department, a covid test was performed without any respiratory symptoms (figure 1)



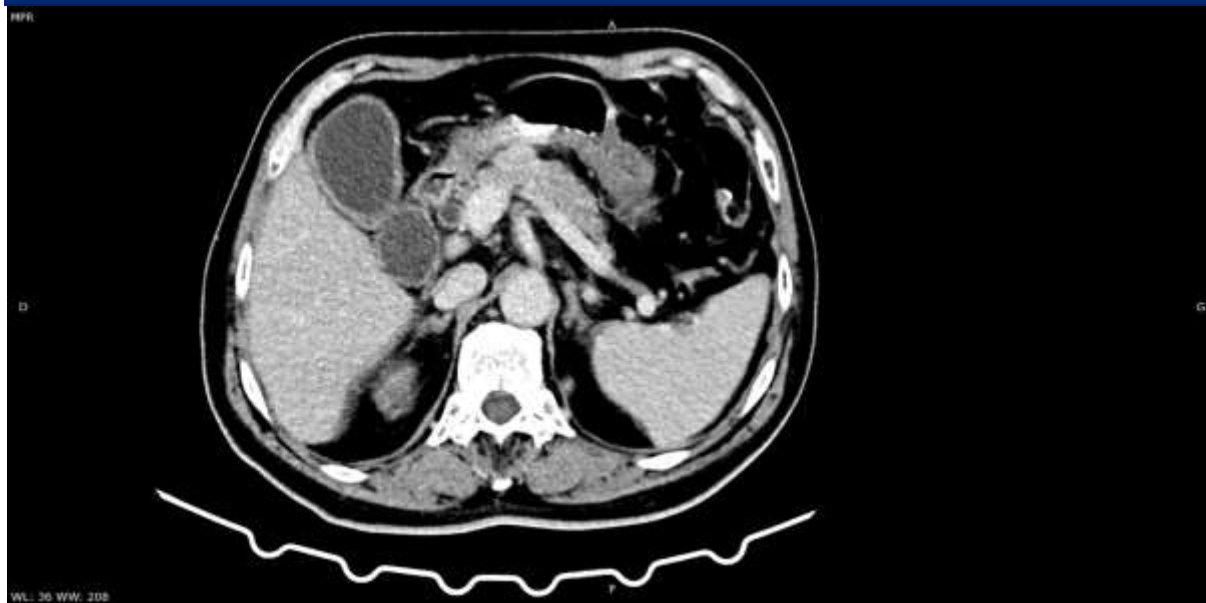


Figure 1: Abdominal CT scan showed stage A pancreatitis.

The second patient, 72 years old, type 2 diabetic, was admitted to the emergency department for moderate respiratory distress with SARS Cov2. She had received oxygen therapy. During the first week of hospitalization, they had presented vomiting associated with abdominal pain. Physical examination revealed epigastric tenderness. Biological examinations showed a high level of lipasemia (210 and 250 IU/L respectively). The lipid and phosphocalcic balance were normal. Abdominal CT scan showed stage A pancreatitis. (figure 2)

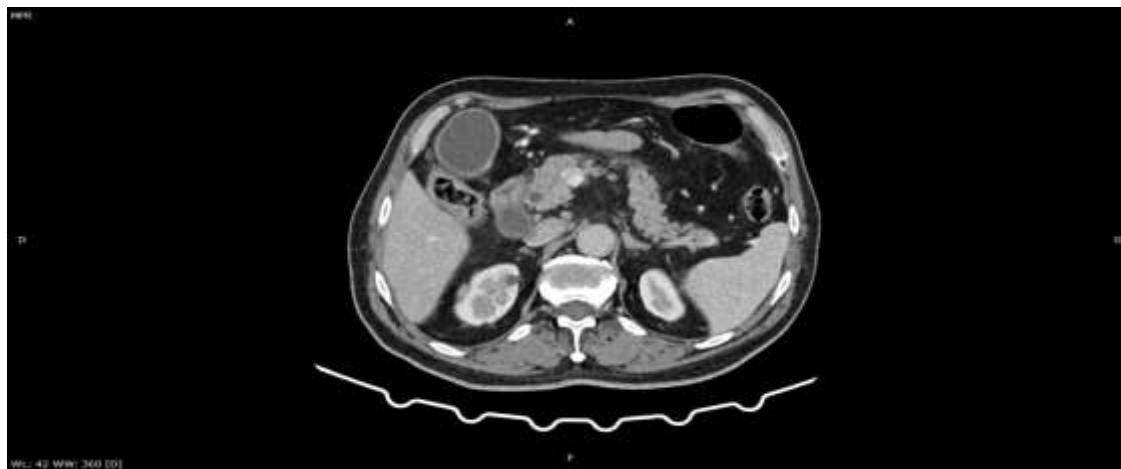


Figure 2: Abdominal CT scan showed stage A pancreatitis. (figure 2)

The third patient was 50 years old and had no other risk factors, neither alcoholism nor biliary disease. Two of them presented with fever, dry cough, dyspnea and vomiting with epigastric tenderness, the rest presented with severe stabbing epigastric pain radiating to the back. A lipasemia greater than $3\times$ normal, a thoraco-abdominal CT confirming acute pancreatitis with pulmonary involvement: ground glass opacities at 25 percent involvement (figure 3)

The patients received parenteral rehydration with strict digestive rest. The evolution was favorable in all 3 cases



Figure 3: a thoraco-abdominal CT confirming acute pancreatitis

Discussion :

There are many causes of acute pancreatitis in adults. Passage or impaction of gallstones remains the main cause. Other causes can be alcohol abuse, metabolic disorders, autoimmune diseases, drugs and toxins. Viruses such as mumps, Coxsackie B, measles, Epstein-Barr and hepatitis A, B and E can also cause acute pancreatitis. A few cases suggesting an association between H1N1 and acute pancreatitis have been reported [1,4]. One study also suggested a direct impact of COVID19 infection on the pancreas [7].

Pancreatic injury in COVID-19 could be caused directly by viral involvement or could be secondary to enzyme abnormalities in the context of severe disease without substantial pancreatic injury [5].

Diagnosis usually depends on clinical parameters, but imaging plays an important role in aiding diagnosis when the clinical picture is unclear. It also helps to detect possible causes, complications, and assess the severity of the disease based on imaging assessment systems.

Contrast-enhanced CT has a sensitivity and specificity of more than 90% for the diagnosis of acute pancreatitis [2].

According to the Atlanta Classification of Acute Pancreatitis, which is an international multidisciplinary classification of the severity of acute pancreatitis, the severity of acute pancreatitis can be divided into interstitial edematous pancreatitis or necrotizing pancreatitis [6].

Early aggressive intravenous fluid resuscitation provides micro and microcirculatory support to prevent severe complications such as pancreatic necrosis [3].

Conclusion:

Although acute pancreatitis is not a rare condition, the possibility of a rare and direct causal relationship between COVID-19 infection and acute pancreatitis. This may help physicians in their decision making, predicting that COVID-19 is a possible cause.

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