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ORIGINAL ARTICLE

Pancreatitis subsequent to SARS-CoV-2 infection in a pediatric indigenous patient from the Paranapua tribe

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Abstract

Objective: To hypothesize a correlation between previous infection by SARS-Cov-2 and acute pancreatitis due to the inflammatory process caused by the virus in an indigenous pediatric patient. **Case Report:** A 7-year-old female indigenous patient, from the Paranapua tribe, with a history of contact with community with COVID-19 infected, presenting with acute pancreatitis of unknown etiology even after laboratory and imaging investigation, presenting with pulmonary involvement and IgG positive for SARS-CoV-2. **Comments:** At the threshold of the COVID-19 pandemic, there was an increase in the involvement of various organs and systems, especially in pediatric patients, intriguing the appearance of inflammatory conditions such as acute pancreatitis. This case report describes a rare extrapulmonary form of COVID-19, not yet described in the literature, and a possible correlation between viral inflammation and pancreatic involvement in an indigenous patient from Paranapuã.

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INTRODUCTION

The pancreatitis acute is a parenchyma inflammation pancreatic with etiology in lithiasis bile , infections and changes genetics, among others. Characterized by tissue autodigestion pancreatic enzymes there produced. This condition attacks adults and children, in which it presents rates of 3-13 cases per 100,000 people per year and higher impact , compared to the involvement of adults.[1]

With the emergence and spread of the SARS-Cov-2 virus in 2019, verified cases of involvement no system exclusive respiratory disease, concomitant with global contagion in pandemic state.[2] It was found, in some cases, the involvement of other organs and systems, from the esophagus to the gastrointestinal tract and even same in the pancreas,[3] mainly in patients pediatric patients , generating a picture of pancreatitis acute by effect cytopathic straight from the virus or as result of ischemia and inflammation states systemic at syndrome inflammatory multisystemic (MIS-C), worsening the prognosis of children with the disease.[4]

Same in periods no epidemics, through records histories, it is known that infections respiratory sharp are among the main causes of morbidity and mortality in populations indigenous people, affecting especially the segment childish.[5] We describe a case of a patient of seven years that presented signs and symptoms of pancreatitis, etiology no defined that later he was diagnosed with COVID -19, raising the possibility that there correlation between the infection Preview by SARS-Cov-2 and pancreatitis sharp due to the process inflammatory caused fur virus by invading host cells.

CASE DESCRIPTION

A case of a male patient is reported . female , indigenous of the tribe Paranapuã, of seven years old, referred from a municipal hospital to a referral center ICU pediatric in April 2021. No history of hospitalization prior, presented abdominal pain fever no measured, vomiting and oliguria associated with an increase in enzymes pancreatic lipase (1867 IU; normal up to 37) and amylase (776 IU; normal up to 160). He was diagnosed with pancreatitis etiology acute undefined, guided mainly by the exams laboratory, due communication difficulty at anamnesis, because the patient no was familiar with the language portuguese.

He was initiated Support zero diet clinician, hydration venous, analgesia and investigation Resumen etiological. Abdominal ultrasound ruled out lithiasis bile. on tomography computerized the portion cephalic pancreatic is prominent in relation to the body and tail, with blurring of the planes greasy peripancreatic (Figure 1a). To the imaging exams, no he was possible to determine etiology of pancreatitis. Chest tomography showed 25 % involvement. pulmonary, minimal bilateral pleural thickening and densification poorly defined parenchymal at segment projection basal posterior lung lobes

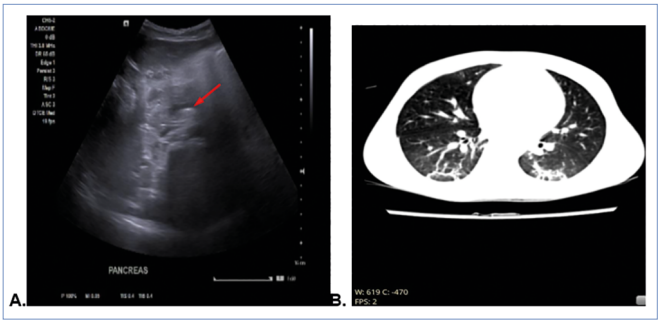


Figure 1. a) Ultrasonography of the pancreas (left) with pancreatic cephalic prominent in relation to body and tail b) tomography pulmonary (right) with pattern in glass densification matte in basilar region of lung lobes lower.

lower (Figure 1b), performed, then investigation of SARS-Cov- 2 infection, since the patient he was exposed to villagers with COVID -19 in days previous. the patient no presented symptoms breathing.

He was performed RT-PCR for COVID-19, with a result negative, however, serology he was reagent for anti -SARS-Cov-2 IgG, suggesting infection Preview fur virus.

DISCUSSION

According to the found clinical and laboratory described in the report, the patient presented pancreatitis, as it is part of the diagnostic criteria (abdominal pain, enzyme changes pancreatic amylase and lipase and imaging changes) described fur Pancreas Committee of the North American Society of Gastroenterology Pediatrics, Hepatology and Nutrition.[6]

The patient ‘s picture can be compared to the first case report relating pancreatitis sharp pediatric and COVID-19[4], which inserts etiology in the defined MIS-C by the US Centers for Disease Control and Prevention[7] and the World Health Organization as fever prolonged, involvement of several systems, parameter elevation inflammatory disorders (CRP, DHL, D- dimer, ferritin and ESR), hypoalbuminemia and lymphocytopenia. the patient not characterized in MIS-C, indicating the possible origin of inflammation pancreatic fur It is made cytopathic virus.

The involvement of organs like the pancreas by SARS-Cov-2 is due to the great number of enzyme receptors converting angiotensin 2 (ACE 2) in these environments, the which bind to the virus and favor your replication.[3] The evolution COVID -19 clinic is dependent on the response host immune system that, in your majority, it is done in a humoral and cellular way, activating macrophages, neutrophils and cytotoxic T lymphocytes. the cells infected are induced apoptosis, providing one wide answer inflammatory through the system complement and cytokines[2].

The tropism for cells pancreas and the environment inflammatory established fur virus, by the presence of those receivers makes the organ be injured, your condition

inflammatory be activated and juice enzymes pancreatic act on their own parenchyma , generating damage interstitial or necrotizing, being able correlate the injury pancreas and symptomatology with the previous viral infection.[4]

No there is possibility of proof of correlation viral inflammation and involvement pancreatic, however that report brings an alert for investigation of other cases with description similar clinic.

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