

## Perspective

# Pancreatitis Associated with COVID 19 and Relationship with a Healthy Lifestyle

Gabriel Miranda Nava<sup>1\*</sup>, Maria Preciado<sup>2</sup> and Luis Gallo<sup>2</sup>

<sup>1</sup>Military Medical Specialist in Neurology, Neurophysiology and Sleep Diseases, Mexico

<sup>2</sup>Lamar Guadalajara University, Mexico

## Abstract

In December of 2019 a severe acute respiratory syndrome emerged in Wuhan and rapidly spread through China subsequently was declared a pandemic on March 2020. Transmission of this virus was linked to direct exposure to Huanan Seafood Wholesale Market of Wuhan Making. Common COVID 19 symptoms are cough (50%), fever (43%), myalgia (36%), headache (34%), dyspnea (29%), sore throat (20%), diarrhea (19%), nausea and vomiting (12%), anosmia and agnosia (10%) and abdominal pain being one of the most common symptoms. However, increase data has been reported associating COVID 19 and acute pancreatitis.

During this clinical research we will analyze potential risk for having a pancreatitis and how we can relate this to healthy patterns in a patient, considering age, lifestyle, diet, and doing exercise daily we want to see if there is a relationship as to why most patients during this study were mostly female, overweight and if there is a potential common reason such as obesity, alcoholism, smoking, gallstones and hypertriglyceridemia.

**Keywords:** COVID 19; Pancreatitis; ssRNA; China

## Introduction

In December of 2019 a severe acute respiratory syndrome emerged in Wuhan and rapidly spread through China subsequently declared a pandemic on March 2020. This virus belongs to an RNA enveloped group of viruses of ssRNA that had previously been reported in bats in china [1]. This virus belongs to the corona virus family which comprises an alpha, beta, delta and gamma coronavirus, with a spherical external spike protein and displays a characteristic crown shape when observed under a microscope giving it its name. There are six know corona viruses that typically cause infection in humans although generally cause mild cold like symptoms.

Following the outbreaks of unexplained pneumonia in Wuhan the new coronavirus was identified naming it COVID 19 [2]. Transmission of this virus was linked to direct exposure to Huanan Seafood Wholesale Market of Wuhan making, the first mechanism associated was animal-human transmission, however subsequent cases where not associated with this mechanism, therefore human to human transmission was proposed and further acknowledging that that asymptomatic patients are the most dangerous for transmission [3]. Symptomatic patients commonly present with cough (50%), fever (43%), myalgia (36%), headache (34%), dyspnea (29%), sore

throat (20%), diarrhea (19%), nausea and vomiting (12%), anosmia and agnosia (10%) [4] And abdominal pain being one of the most common symptoms [5]. Nonetheless, through all the year cases of COVID 19 and pancreatitis have been reported.

Pancreatitis has been commonly associated with gallstones and alcohol. Furthermore, causes of pancreatitis are not limited to this and rather extend to: autoimmune, hypertriglyceridemia, post endoscopic retrograde cholangiopancreatography, genetic risk, pancreatic duct injury and medications [6] such as azathioprine, 6-mercaptopurine, didanosine, valproic acid, ACE inhibitors, mesalamine, metronidazole, omeprazole, and macrolides [7]. Nevertheless, about 10% of cases had been associated with infections such as viruses, bacteria and parasites in which Coxsackie virus, *Cytomegalovirus* (CMV), Human Immunodeficiency Virus (HIV), Herpes Simplex Virus (HSV), mumps, varicella-zoster virus, *mycoplasma*, *legionella*, salmonella, *leptospira*, toxoplasmosis, *cryptosporidium*, and ascaris are the most common etiologies [8]. We present an analysis of 44 cases associated with pancreatitis and COVID 19 reported in 24 articles.

## Methods

This is a prospective study enrolling 44 patients that have presented pancreatitis associated to COVID 19, all cases were studied case by case, with patients of different ages and gender enrolled on it, each case with different treatment, signs, symptoms and individuality, all of this patients took a SARS-COV2 test and PCR to confirm their diagnosis. Clinical signs, as well as radiologic signs were taken into account to diagnose pancreatitis in the patients that are presented in the clinical study the study was performed for 24 patients.

## Discussion

During this study we recollected data for 44 patients from 24 different studies in which most patients had presented similar symptoms, most of the patients were over 50 years old, we believe that having a healthy lifestyle can decrease the possibility of having

**Citation:** Nava GM, Preciado M, Gallo L. Pancreatitis Associated with COVID 19 and Relationship with a Healthy Lifestyle. Clin Med. 2021; 3(1): 1032.

**Copyright:** © 2021 Gabriel Miranda Nava

**Publisher Name:** Medtext Publications LLC

**Manuscript compiled:** Apr 06<sup>th</sup>, 2021

**\*Corresponding author:** Gabriel Miranda Nava, Military Medical Specialist in Neurology, Neurophysiology and Sleep Diseases, Mexico, E-mail: drgabrielmiranda@hotmail.com

a pancreatitis associated with COVID 19, we have that at least 25% of the patients in our study had Hypertension or Diabetes Mellitus, we know that maintaining a weight where an individual has a waist circumference inferior to 90 will decrease by far the possibility that they get on further years in their life a chronic disease it will even decrease the possibility of having pancreatic cancer or developing gallstones associated to being overweight or obese.

Exercising is important we know that in United States the major reason of death and mortality are hearth related diseases which are also associated to obesity and overweight, nowadays the two countries with the biggest overweight population are both Mexico and United States they are the countries with the most overweight children in the World.

We will relate COVID 19 to pancreatitis but what are the major reasons for this happening, it most probably is related to being overweight and having obesity, most of the patients that have died in the whole world due to COVID 19 had chronic diseases related to them such as Hypertension which we know is mostly related to triglycerides and inflammatory debris alongside the arterial walls which eventually will lead you to hypertension or Diabetes Mellitus which is related to end glycosylated products also grouping alongside the arterial walls, it is important to note that also heart related diseases such as even having a myocardial infarction is mostly related to inflammatory debris and hypertriglyceridemia that have accumulated alongside the coronary arteries such as the circumflex artery, the left descending artery and the right coronary artery.

We recollected data from 24 articles that were screened and found eligible for data extraction. These articles reported cases of COVID 19 and pancreatitis, these patients seek for clinical attention for treatment of fever (36%), nausea and vomiting (31%), diarrhea (25%), abdominal pain (20%), severe presentation/pneumonia (20%), cough (13%), and all of them were diagnosed with COVID 19 at the admission to the hospital. From this group of patients, the incidence of females was observed to be slightly bigger than with males, the observed ratio was 23:21 patients (Table 1).

The mean age of the group of patients was 50, with a mode of 36 and median of 55 years old. Our data reported that the youngest patient had 24 years old and was a male and our oldest patient was a woman of 90 years old. Table 2 shows the comparison of age between females and males. Reporting 6 males had an age between 21 to 40 years old, 7 males had between 41 to 60 years and lastly 8 patients had ages between 81 to 100, from females the data reported 8 females between 21 to 40 years old, 6 felled in 41 to 60 years old, 7 had between 61 to 80 years and lastly 1 woman felled in the category of 81 to 100 years old (Table 2).

On Tables 3 and Table 4 we demonstrate 18 of the patients denied any co morbidities while 26 reported at least 1 co morbid from the following: hypertension 28%, diabetes mellitus 24%, obesity 8%, asthma 8%, smoking 4% and 8% reported other diseases. We also observed the drugs used in these patients in view of the fact that some acute pancreatitis have been associated to certain drugs.

### Conclusions

We see that most patients presented general symptoms nausea, vomiting, fever and abdominal pain, which are characteristic of pancreatitis we can also add that most patients were female which happens to be that most women over 40 tend to have overweight or obesity, being that most of the patients that we have in our sample is

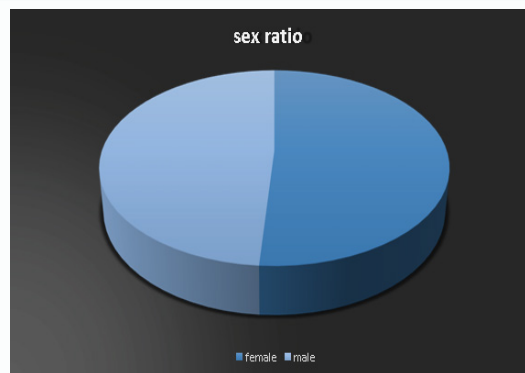


Figure 1: The incidence of females was observed to be slightly bigger than with males, the observed ratio was 23:21 patients.



Figure 2: The comparison of age between females and males.

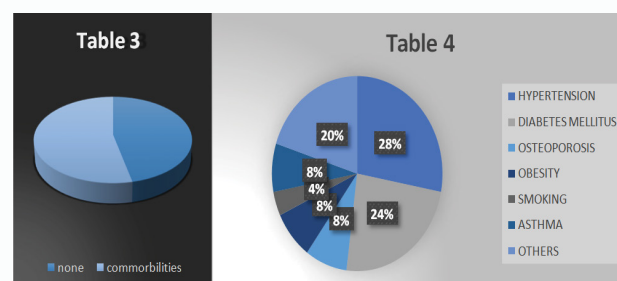


Figure 3 and 4: Demonstrates co morbidities of the patients.

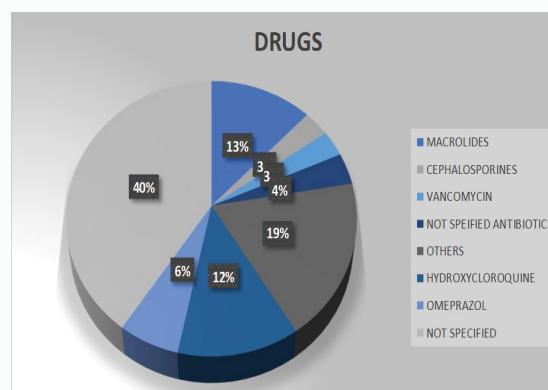


Figure 5: Observation on drugs used in these patients.

over 50 years old, we believe that although this is more an informative research that the importance of a healthy lifestyle, such as a diet, exercising, having habits towards a positive lifestyle can prevent in an enormous amount the impact of having COVID, many of the patients in this study were female, it is important to note that women tend to have obesity and overweight on later years due to the fact of pregnancy, the fact that women over 50 and with menopause tend to keep more lipids on their body and increase weight as they age, as well as the fact that smoking is more prevalent in women than in men which also happens to be alongside obesity one the two major causes for pancreatic cancer more specifically the biggest cause for pancreatic cancer is smoking, also is important to note that women tend to have gallbladder and biliary tree obstructions alongside choledocolitiasis and cholangitis is a lot more prevalent in women which can put in risk a person towards pancreatic problems more than a male individual.

## References

1. Baig AM, Khaleeq A, Ali U, Syeda H. Evidence of COVID-19 virus targeting the CNS: tissue distribution, host- virus interaction, and proposed neutropic mechanisms. *ACS Chem Neurosci*. 2020;11(7):995-8.
2. Kim JM, Chung YS, Jo HJ, Lee NM, Kim MS, Woo SH, et al. Identification of coronavirus isolated from a patient in Korea with COVID-19. *Osong Public Health Res Perspect*. 2020;11(1):3-7.
3. Cascella M, Rajnik M, Cuomo A, Dulebohn SC, Napoli RD. Features, evaluation, and treatment of coronavirus (COVID-19). In: *Star Pearls*. 2021.
4. McIntosh K. Coronavirus disease 2019 (COVID 19): clinical features. 2020.
5. Vege SS. Etiology of acute pancreatitis. 2020.
6. Uddin NM, Suzanne Morrissey. Pancreatitis. *Statpearls*. 2020.
7. Badalov N, Baradarian R, Iswara K, Li J, Steinberg W, Tenner S. Drug induced acute pancreatitis: an evidence- based review. *Clin Gastroenterol Hepatol*. 2007;5(6):648-61.