



RESEARCH ARTICLE

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COMPLICATIONS OF ACUTE PANCREATITIS IN CRITICAL PATIENTS: AN INTEGRATIVE REVIEW

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ABSTRACT

Objective: To describe the main complications that affect the patient with a diagnosis of pancreatitis in intensive therapy environment. **Methodology:** it is an integrative literature review to search for articles in the LILACS, PUBMED and SCIELO, with articles published between 1992 to 2018, in the Portuguese language, English and Spanish. **Results:** There were found initially 478 studies, of which 14 were included in this review. Among the main local complications in patients with acute pancreatitis can highlight the infected necrosis, as a pseudocyst, abscess, intestinal perforation and abdominal hemorrhage. Among the systemic complications stand to respiratory insufficiency, acute renal injury, septic shock, multiple organ dysfunction among others. **Conclusion:** varies the complications that may be resulting from acute pancreatitis. For the admission of these patients in the ICU and a detailed clinical examination is based to correct identification of pancreatitis, immediate treatment and better management of this pathology and its complications, which can directly reflect on the final outcome of these patients.

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INTRODUCTION

Defines whether acute pancreatitis with being an acute inflammatory process of the pancreas which may involve peripancreatic areas or organs. This disease can cause important changes, such as interstitial edema and consequently cellular infiltrate, in addition to tissue destruction and hemorrhage. Clinically, the same may have nausea, vomiting and abdominal pain in the epigastric region and periumbilical (FRAZÃO *et al.*, 2017). Other findings include the presence of hyperamylasemia (up to three times the baseline value) or hiperlipasemia, associated with the

radiological findings compatible with pancreatitis (GUIMARÃES-FILHO *et al.*, 2009). Data indicate that the PANCREATITIS represents the second cause of hospitalization due to intestinal diseases in the United States, such as the costs with this disease came to more than 2 billion dollars. However, with the passing of the years, mortality related to this disease has reduced compared to the past, which resulted in an increase in morbidity and consequently a higher rate of hospitalization time and hospital expenses (GUIMARÃES-FILHO *et al.*, 2009; HOUGHTON *et al.*, 2018). Linked to this, the emergence of new technologies and an improvement in the process of clinical treatment of these patients, require a better classification and prediction of risk in these patients (GUO *et al.*, 2015). As regards the classification of the severity of acute pancreatitis, the same can be accomplished in many ways, but there is a

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highlight for scales of Atlanta and Baltazar. The scale of Atlanta, is divided into two clinical presentations: the mild form of benign evolution also known as interstitial and the severe form, known as necro-hemorrhagic pancreatitis or "ENTEROCOLITIS". This ultima involves local complications, such as infection, fluid collections peripancreáticas, necrotic abscesses, cysts, and even multiple organ failure (Zubia-Olaskoaga *et al.*, 2016). In the Classification Baltazar, the confirmation of pancreatitis occurs through the tomographic evaluation, able to indicate the severity of the event and anticipate possible complications and guide the course of treatment according to the classification (DE SANCTIS *et al.*, 1997). Acute pancreatitis can also be classified according to the scale Base-factor, which is based on the presence of local factors, such as necrosis (infected or sterile), positive cultures, as well as the presence of organ dysfunction, whether it be transient (when lasts for less than 48 hours) or persistent (greater than 48 hours) (DILLINGER *et al.*, 2012). As the score of Ranson, this merged in 1984 and was the first scale used for classification of patients with pancreatitis. Account with 11 clinical criteria, of which 5 can be evaluated at admission and the rest in the next 48 hours (ALEXANDER *et al.*, 2015). It is believed that 20% of patients with pancreatitis develop a serious condition of this disease and that often result in systemic complications such as sepsis and multiple organ failure, which directly affects with index of mortality in this population (AMÁLIO *et al.*, 2012). Parts of these deaths occur in the first few hours. This is due to the intense inflammatory response triggered by the release of inflammatory mediators and who subsequently develop syndrome of multiple organ dysfunction (BHATIA *et al.*, 2005). Those who survive to this period, still run the risk of developing extensive pancreatic necrosis and subsequently, failures of its organs (BUMBASIREVIC *et al.*, 2009). Therefore, patients with severe acute pancreatitis should be forwarded to the ICU for monitoring of possible complications and better immediate intervention, since it is an environment of high technology, with an intensive support of high quality. This makes the best results are achieved when undergoing early invasive procedures (upto 3 weeks), such as percutaneous drainage, drainage and endoscopic necrosectomy (CONSTANTINOIU COCHIOR, 2018; RASSLAN *et al.*, 2017). In addition, study started from the following guiding question: What are the complications of pancreatitis in critical patients?

This study is justified by the fact that the acute pancreatitis is a very frequent pathology in the current scene, and the knowledge of some complications arising out of this pathology, you can awaken a clinical look of health professionals regarding the monitoring of signs and symptoms, as well as for the elaboration of strategies for intervention, in order to allow for an early intervention and routed to each complication and a better outcome of these patients regarding the fatal complications. However, this study aimed to discuss through literature on complications of acute pancreatitis in critical patients diagnosed with acute or chronic pancreatitis exacerbated.

MATERIALS AND METHODS

It is an integrative literature review regarding the main complications that affect the patient with acute pancreatitis admitted to the intensive care unit. The research aims to describe the main complications that affect the patient in an

intensive care environment and traveled the following steps: elaboration of the goal and guiding question search and selection of studies, preparation of a synoptic table containing the main results, synthesis and discussion of the literature. The guiding question was elaborated through the research strategy PICO, which consists in an Acromion To Patient, operation, control or comparison and Outcome (MAMÉDIO *et al.*, 2007).

The search took place by means of the following descriptors: "acute pancreatitis," "intensive therapy units", and prognostic factors in the data bases Publisher Medline (Pubmed), Latin American and Caribbean Literature in Health Sciences (LILACS), *Scientific Electronic Library Online* (SciELO). To refine searches the term boolean "AND" was used between the descriptors (Table 1). The PUBMED database, the corresponding mesh term has been added between the descriptors (Table 1). As inclusion criteria (filters) were considered primary studies published between 2004 and 2018, available on the integra published in English, Spanish and Portuguese and to respond to the proposed objective. Were disregarded annals of congress, review articles, guidelines and protocols, theses and dissertations, studies published prior to 2004 and who do not respond to the proposed objective. The studies published in two or more databases were considered only once. The studies were systematized in 2 tables containing relevant data such as title, method, level of evidence according to Closs, Cheater (1999), the number of participants in each study (sample) and the main complications of acute pancreatitis found (Table 1 and 2). The articles were selected after a complete reading, analytical, and in conjunction with 2 or more respondents of studies. Thus, the articles that had doubts when the inclusion criteria, were discussed as to their inclusion in the group, which allowed an analysis of the inclusion of articles.

Table 1. Levels of evidence by study type. Brasilia, 2018

Se	Type of study
I	Strong evidence based on a thematic review of several randomized clinical trials and well planned.
II	Strong evidence of, at least, a randomized controlled study of appropriate design and adequate size
III	Evidence from well-designed studies without randomization, single group pre and post, cohort, temporal series or case – control
IV	Evidence from well-designed studies experimental not performed in more than one center or research group.
V	Opinions of respected authorities based on clinical evidence, descriptive studies or reports of committees of experts

Source: Closs, Cheater, 1999.

Table 2. Strategies used in the database selected. BRASILIA-DF, 2018

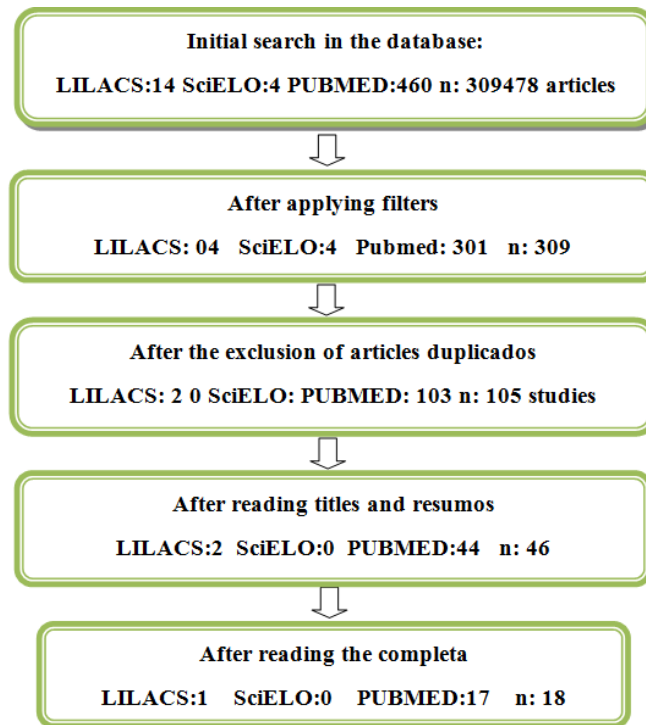
Data Base/	Strategy used
LILACS	Intensive Care Units And PANCREATITIS AND
SCIELO	Prognosis
PUBMED	("Intensive Care Units"[Mesh]) AND "PANCREATITIS"[Mesh] AND "Prognosis"[Mesh]

RESULTS

Initially, 478 studies were found, being 14 in LILACS, four in the SciELO and 460 in PUBMED. After application of filters (primary studies published between 1992 and 2018 available at integra, published in English, Spanish and Portuguese and to respond to the proposed objective) resulted in 309, being 04 in the LILACS, SciELO 04 and 301 in PUBMED. After the exclusion of duplicate studies, resulted in 105 articles.

They were submitted to exploratory reading (title and abstract), which resulted in a total of 46 studies. These were submitted to a complete scan, and analyzed critically regarding the content presented.

So after exclusion of studies that have not answered the question, were included in the *corpus* of this research a total of 18 studies. The main results were summarized and presented in tables 2 and 3 (Table 2).



Source: Authors, 2018.

Figure 1. Flow diagram of search and selection of studies. Brasília, DF, Brazil, 2018

Table 2. Characteristics of selected articles in this review. Brasília, DF, Brazil, 2018

Author, Year	Title	Method/level of evidence	Sample
Lin et al. 2011.	Acute renal failure in severe pancreatitis: A population-based study.	RS / level V	261 Patients
Zubia-Olaskoaga et al. 2016.	Comparison Between Revised Atlanta Classification and Determinant-Based Classification for Acute Pancreatitis in Intensive Care Medicine. Why Not Use the Modified Determinant-Based Classification?	PS / level V	374 patients.
González et al. 2004.	Comportamiento de agudepancreatitis en el decenio Intensivo durante 1993-2003	RS / level V	51 patients.
Kumar 2014.	Direct Endoscopic Necrosectomy Versus Step-Up* Approach for pancreatic necrosis Walled-Off	PS / level V	24 Patients
Wilkman et al 2013.	Early Hemodynamic variables and outcome in Severe Acute Pancreatitis	RS / level V	159 patients.
Imaizumi 2004.	Efficacy of Continuous Regional Arterial Infusion of Protease Inhibitor and antibiotic for Severe Acute Pancreatitis in Patients Admitted to an Intensive Care Unit	RS / level V	51 Patients
Tseng et al. 2009a.	Clinical outcomes in patients with ICU-related pancreatitis.	RS / level V	148 Patients
Vege et al. 2009.	Low mortality and high morbidity in Severe Acute Pancreatitis Without Organ Failure: The Case for revising the Atlanta Classification to Include "Moderately Severe Acute Pancreatitis"	RS / level V	207 patients.
Nesvaderani et al. 2015.	Epidemiology, etiology and outcomes of acute pancreatitis: A retrospective cohort study.	RS / level V	932 patients.
Painted et al 2016.	New Atlanta Classification of acute pancreatitis in intensive care unit: Complications and prognosis	PS / level V	56 Patients
Hajjar et al 2012.	Modern Therapeutic Approach of Acute severe forms of Pancreatitis: A Review of the Literature and Experience of Surgical Department In III Cluj	RS / level V	81 patients.
Arroyo-Sánchez et al. 2008.	Acute Pancreatitis en la Unidad de Intensive Care And Intermediosye evolución: Review of 36 cases.	RS / level V	36 patients.
Waele et al. 2004.	Perioperative factors determine outcome after surgery for severe acute pancreatitis	RS / level V	56 patients.
Tee et al 2018.	Serial evaluation of the SOFA score is reliable for predicting mortality in acute severe pancreatitis	RS / level V	159 patients.
Constantinoiu And Cochior 2018.	Severe Acute Pancreatitis - Determinant factors and Current Therapeutic Conduct	PS / level V	297 patients.
Adam et al, 2013.	Severe acute pancreatitis admitted to intensive care unit: SOFA is superior to ranson's criteria and APACHE II scores in determining prognosis	RS / level V	43 patients.
Kadiyala et al, 2016.	The Atlanta Classification, Revised Atlanta Classification, and Determinant-Based Classification of Acute Pancreatitis Which Is Best at Stratifying Outcomes?	PS / level V	338 patients.
Guo et al. 2015.	Determinant-based classification and revision of the Atlanta classification, which one should we choose to categorize acute pancreatitis?	PS / level V	867 patients.

RS: Retrospective study; PS: Prospective study.

Table 3. Main complications present in patients with acute pancreatitis according to the literature selected. Brasília, DF, Brazil, 2018

Author (s), year	Complications of acute pancreatitis
Lin et al. 2011.	Acute Kidney Injury: (15.5%). Systemic complications: Shock (61.25%); renal failure (62.8%); respiratory insufficiency (62.6%) Local complications: sterile necrosis (56.7%); infected necrosis (24.3%); intestinal perforation (10.2%); abdominal hemorrhage (7.2%)
Zubia-Olaskoaga et al. 2016.	Local complications: a Pseudocyst (5.9%); abscess (1.9%); infection (1.9%). Systemic complications: Shock (13.7%); acute respiratory infection (13.7%); sepsis (7.84%); multiple organ failure (7.84%); others (9.8%).
González et al. 2004.	Systemic complications pre-surgical procedure: Pulmonary complications: (8.3%); circulatory complications (4.16%); renal complications (4.16%) Systemic complications post-surgical procedure: Pulmonary (20.9%); Circulatory System (4.16%); Renal (4.16%).
Kumar 2014.	Local complications: abdominal complications (23.9%) Systemic complications: Shock (64.2%).
Wilkman et al 2013.	Local complications: pancreatic abscess (11.8%); intra-abdominal bleeding (1.96%); gastrointestinal perforation (1.96%).
Imaizumi 2004.	Respiratory insufficiency: (59.5 %)
Tseng et al. 2009a.	Local complications: gastrointestinal bleeding Systemic complications: Renal Insufficiency
Vege et al. 2009.	Respiratory complications requiring ventilatory support (3.86%); complications of other organs (3.86%)
Nesvaderani et al. 2015.	Local complications: Infection of necrotic tissue (8.9%); Abdominal Abscess (37.5%); pancreatic pseudocyst (1.8%); pancreatic fistula (3.6%), splenic venous thrombosis (3.6%); Other: (3.6%). Systemic complications: hemodynamic failure (67.8%); acute renal failure (28.6%); acute respiratory insufficiency (78.6%); acute liver failure (25%); acute hematological failure (14.2%).
Painted et al 2016.	Local complications: pancreatic fistulas (18.5%). Systemic complications: sepsis (5%); multiple organ failure (7.4%).
Hajjar et al 2012.	Local complications: pancreatic pseudocyst (11.2%). Systemic complications: respiratory dysfunction (36.1%); renal and metabolic dysfunction (25%); Shock and coagulopathy (8.3%); multiorgan dysfunction (22.2%).
Arroyo-Sánchez et al. 2008.	Local complications: pancreatic necrosis (59.1%); infection after pancreatic necrosis (41.2%). Systemic complications: respiratory failure (70%); acute renal failure (58%); cardiovascular failure (81%); syndrome of multiple organ dysfunction (DMOS) (41%)
Waele et al. 2004.	Systemic complications: respiratory complications with the need for mechanical ventilator (48.1%); Shock (27.4%); renal replacement therapy (14.1%)
Constantinoiu And Cochior 2018.	Local complications: ABSCESSSES (38.5%); fistula (7.7%); PSEUDOCYSTS (35.9%); pancreatic necrosis (77%).
Adam et al, 2013.	Systemic complications: Cardiovascular Failure (55.4%); Renal Failure (49.4%); respiratory failure (41.0%). Local complications: INTERSTITIAL PANCREATITIS (89.3%); sterile necrosis (80.6%); infected necrosis (19.4%).
Kadiyala et al, 2016.	Local complications: pancreatic necrosis (92%); peripancreatic necrosis (39%); infected necrosis (39%). Systemic complications: multiple organ failure (35%); transient failure of components (17.5%); persistent failure of components (72%)

Source: Authors, 2018.

Generally, the complications of acute pancreatitis are diverse and can be divided into local or systemic. The same can be manifested from the simplest form as a possible pseudocyst, up to the most severe form as the infected necrosis. On tangem the local complications, these were very frequent in studies, a fact that can be justified by his character diversificador. As the serious complications resulting from acute pancreatitis, the infected pancreatic necrosis was the most common complication, being mentioned in 6 studies. The sterile or Interstitial pancreatitis, the pseudocyst and abscess were identified in 4 studies, followed by intestinal perforation and abdominal hemorrhage that were mentioned in other studies 3. Among the main systemic complications described are the respiratory insufficiency that was addressed in 9 articles (47.3%), acute renal injury in 7 studies (36.8%), shock in 6 (31.6%), multiple organ dysfunction in 5 articles (26.3%), sepsis and coagulopathy were reported in 3 studies (15.8%) each and hepatic complications reported in only 2 articles (10.5%). Acute renal failure (ARF) was reported in seven articles, of which 2 pointed this complication as being the most frequent.

DISCUSSION

According to a study published in 2011, the anger related to pancreatitis is directly related to increased mortality, with outcome of 23.76% in patients with ARF +

PANCREATITIS, against 8.08% in patients with the diagnosis of ARF (LIN *et al.*, 2011). Respiratory complications, such as respiratory insufficiency with the need for ventilatory support, was also mentioned as a complication very frequent, being present 9 studies, however, the same was reported as the most prevalent complication in only two studies. With respect to sepsis, this was mentioned in 03 studies, but in none of the studies, pointed out this pathology as the main complication. However, five studies, pointed out the multiple organ dysfunction as a complication directly related to postoperative sepsis pancreatitis. Therefore, patients with acute pancreatitis should be monitored daily and integral way regarding these and other complications, so that the initial clinical alterations are perceived and treated early, as well as the more serious late complications are treated specifically and monitored through daily analysis of pancreatic markers and other complementary examinations. As regards the diagnosis of pancreatitis, this occurs by the presence of at least two of the following criteria: abdominal pain, amylase and lipase values from two to three times the basal value (>200 and 190 U/L, respectively) and the aid of images compatible with pancreatitis, whether by computed tomography, magnetic resonance imaging, or abdominal Doppler; (ZUBIA-OLASKOAGA *et al.*, 2016; DE SANCTIS *et al.*, 1997; PACHECO; Carlos; OLIVEIRA, 2007). Its incidence and prevalence, are directly related to factors such as gender, age, social conditions, habits and even the style of life (NESVADERANI *et al.*, 2015). A study showed that patients diagnosed with severe pancreatitis, often remain, too

much time in the ICU. And a large part of this time of ICU (76% of the time of hospitalization), they are subjected to ventilatory therapy by means of mechanical ventilation (ADAM *et al.* 2013). However, the need for ventilation, without confirmation of the presence of acute pancreatitis, is very common, making the diagnosis of pancreatitis is often performed late. In this respect, Tseng *Et al.*, (2009a), alert to this fact, since patients on mechanical ventilation, are often subdiagnosed regarding the presence of acute pancreatitis, since factors such as tube and sedation prevent the verbalization of abdominal pain, hindering the suspicion and consequent diagnosis of this pathology. Therefore, the understanding of the processes that occur in the pancreatic parenchyma during the inflammatory process, the knowledge of its associated factors, as well as the request and interpretation of specific complementary examinations, are fundamental for an early diagnosis, correct classification and consequently a better therapeutic conduct to be taken (GUO *et al.*, 2015; HAJJAR; IANCU; BODEA, 2012). Patients with the severe form of pancreatitis should be transferred to an intensive care unit. Such a measure is to prevent complications in the first two weeks, since this is the period required for encapsulation of pancreatic lesion, allowing for a more secure later surgical approach (ZUBIA-OLASKOAGA *et al.*, 2016; EL-SÁNCHEZ GARCÍA VENTURA; AGUIRRE MEJÍA, 2008).

Regarding complications of acute pancreatitis, realizes that the same can be divided into two distinct groups (local complications and systemic complications). De Sanctis *et al.*, (1997) indicate that the best score for diagnosis of local complications and the patient classification is to Balthazar, who gives himself through the tomographic evaluation or other imaging methods. Among all the local complications, we highlight the sterile necrosis, infected necrosis, intestinal perforation and abdominal hemorrhage (ZUBIA-OLASKOAGA *et al.*, 2016). Among the local complications resulting from acute pancreatitis, but rare form, is a gastrointestinal hemorrhage. This when this it is necessary to have a surgical intervention for its repair. However, in cases of early surgery, this can aggravate the framework of the patient, since there is still no delimitation of the lesion installed (VEGE *et al.*, 2009; KUMAR; CONWELL; THOMPSON, 2014; IMAIZUMI *et al.*, 2004). Another local complication present, however, one of the main resulting from acute pancreatitis, is infected pancreatic necrosis. This severe complication is the second leading cause of death in patients with pancreatitis, coming to give a mortality rate of 21.3% (ZUBIA-OLASKOAGA *et al.*, 2016). As the need for surgical intervention in these patients, a study showed a reduction of severe complications, such as infected pancreatic necrosis, from 41.2% to 22.7% in patients who underwent early surgery, when compared to patients undergoing surgery late (WAELE *et al.*, 2004). However, it is perceived that the need for surgical intervention contributes directly to the mortality of these patients in the ICU. This assertion can be supported by a recent study, published in 2016, showed that patients with acute pancreatitis requiring surgical intervention, had an ICU mortality was significantly higher in comparison to patients with acute pancreatitis who did not require surgical intervention (42.3% vs. 6.7%, $p = 0.002$) (PAINTED *et al.*, (2016). Another study, Zubia-Olaskoaga *et al.*, (2016), shows that the mortality by infected necrosis was the second leading cause of death with 21.3%, a value close to that obtained by imaizumi *et al.*, (2004), in

patients who were not treated with the technique of continuous infusion of protease inhibitors and antibiotics. This technique consists in the infusion via the mesenteric artery of protease inhibitors and antibiotics, preventing and reducing the infection in pancreatic tissue, and thus reducing the rates of surgery (32% to 9%) and consequently also the mortality. The gastrointestinal hemorrhage presents itself as a rare complication of pancreatitis, however, it seems to be related to increased morbidity and mortality. But when this is required surgery to repair. However, in cases of early surgery, this can aggravate the framework of the patient, since there is still no delimitation lesion (VEGE *et al.*, 2009; KUMAR; CONWELL; THOMPSON, 2014; IMAIZUMI *et al.*, 2004). Therefore, the management of patients with acute pancreatitis in the ICU, as monitoring (clinical examinations and diagnoses daily) and preventive intervention of local complications, are indispensable, since, when present, reflects directly on the final outcome of the patient, increases the rate of ICU stay, and consequently, increased costs and hospital expenses. As the systemic complications, these are closely related to severe inflammatory response caused by acute pancreatitis. This inflammatory response, provides the release of cytokines and other pro-inflammatory in conjunction with nitric oxide. This free radical for its time, is responsible for the intense systemic vasodilation, resulting in changes in cardiac output, with consequent need of intensive hemodynamic support and monitoring of changes of other organic functions (TSENG *et al.*, 2009b; LEÓN GONZÁLEZ *et al.*, 2004).

The systemic complications may be classified as transitory, when occur up to 48 hours and persistent when they exceed 48 hours (ZUBIA-OLASKOAGA *et al.*, 2016). Among the most common complications in patients with pancreatitis in the ICU, are the respiratory complications, representing in some, about 47, 3%. These complications associated to an APACHE II, low PaO₂/FIO and presence of renal injury, are directly related worse outcomes and with the increase of mortality (TSENG *et al.*, 2009b). A study in 2011 to analyze the outcomes of 261 patients with acute pancreatitis, pointed out that patients with renal injury associated with acute pancreatitis is an outcome of higher mortality when compared to patients with acute pancreatitis without renal injury. This mortality ranged around 8.08% for patients with acute pancreatitis isolated, to 23.09% mortality for patients with renal injury and acute pancreatitis (LIN *et al.*, 2011). Painted *et al.*, (2016) points out that the hepatic complications can also manifest in patients with pancreatitis. This complication have as a mechanism of injury, the sharp release of mediators and cytokines in splenic area, which are conducted by the movement of the portal vein and supra-liver. How is secondary to an intense inflammatory response, in the majority of cases, it is related to other systemic complications, thus contributing to the development of multiple organ dysfunction (MALACHI, 2008). As the sepsis and septic shock as complications of acute pancreatitis, there were few studies that addressed this theme in an isolated manner. These studies generally indicate the need for early intervention and volume resuscitation and immediate antibiotic therapy for these patients, as well as the other care mediators suggested in the global guidelines to combat and control of sepsis and septic shock (WILKMAN *et al.*, 2013; KHAN; LI; TENNER, 2005). In these patients, the abundant inflammatory response in sepsis is also responsible for the release of chemical mediators that cause changes in the wall of blood vessels, or

even the activation of coagulation factors, triggering the formation of thrombi and consumption of clotting factors, resulting in disseminated intravascular coagulation (DIC) (CARNEIRO; SIQUEIRA-Batista, 2004). Therefore, quick and correct management of sepsis in patients with pancreatitis, in addition to contribute for control and prevention of septic shock, also contributes to the prevention of other complications also fatal, thereby offering a better outcome of septic patient with pancreatitis.

Conclusion

It is crucial that health professionals know the main complications of acute pancreatitis, since this pathology can direct different outcomes for the patient, including death. Therefore it is necessary to correct sorting and classification of these patients, in order to promote a better management and prevention of complications and reduce the mortality of these patients. Among the several complications that can develop a framework of acute pancreatitis can highlight the systemic complications, since they are responsible for the gravity of the patient. Among the major systemic complications are, respiratory insufficiency, renal injury, sepsis and septic shock, liver failure and even syndrome of multiple organ dysfunction, which is considered a fatal complication in the vision of health professionals. Among these, the most frequent in the selected studies, are respiratory failure and acute kidney injury. These pathologies, when associated with acute pancreatitis, increases the time of hospitalization, hospital costs and consequently the mortality of these patients. It should be emphasized that the presence of some of these complications as the first sign, may hinder the correct diagnosis of acute pancreatitis, which requires a thorough clinical examination so that the primal diagnosis is not done in the wrong way. Another important fact and that patients with acute pancreatitis are severe patients. And that in the presence of these complications intensify even more the framework, which requires a quality assistance and integral, with continuous monitoring by 24H. In this way, the ICU is the ideal location for therapy in these patients, which will be offered throughout the intensive support and where the pancreatic lesion and its complications are best evaluated and treated thus contributing to a better outcome of patients.

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