

# Some Aspects of The Etiology and Pathogenesis of Acute and Chronic Pancreatitis

**Shaposhnikov Veniamin Ivanovich\***

*Professor of surgical diseases, Vice-Rector for Science Noncommercial educational private institution of higher education "Kuban Medical Institute, Russia*

**\*Corresponding author:** Shaposhnikov Veniamin Ivanovich, Professor of surgical diseases, Vice-Rector for Science Noncommercial educational private institution of higher education "Kuban Medical Institute, Russia



## ARTICLE INFO

**Received:** 📅 July 16, 2019

**Published:** 📅 July 30, 2019

**Citation:** Shaposhnikov Veniamin Ivanovich. Some Aspects of The Etiology and Pathogenesis of Acute and Chronic Pancreatitis. Biomed J Sci & Tech Res 20(1)-2019. BJSTR. MS.ID.003408.

**Keywords:** Acute; Chronic; Pancreatitis; Zymogene; Enzymes; Etiology

## ABSTRACT

### Annotation

The author offers his own version of acute and chronic pancreatitis etiopathogenesis, based on a plot in the head of the pancreas tissues, which differs from the rest of this gland. In his view, this fabric produced substances that activate pancreatic zymogen in joint hit them into the duodenum. If they fall into the pancreatic duct, the intensification of profermentov in enzymes that occurs is accompanied by destruction of the gland. Leads development mechanism in more detail certain types of acute pancreatitis.

### The Purpose of The Study

**Objective:** to show the presence of that secretes head of the pancreas tissue substances that activate zymogen pancreas.

## Introduction

Currently, there is rapid growth in the number of diseases associated with the pathology of pancreas. These include acute and chronic pancreatitis. It should be pointed out that over the past 40years in developed countries there has been a doubling of these diseases (5-7 new observations on 100 000 inhabitants). These negative phenomenon researchers associated with the increase in alcohol consumption and an increase in diseases of the biliary tract [1-5]. If acute pancreatitis characterized as inflammatory and destructive, the chronic as inflammatory-Dystrophic process this gland due to alcohol consumption, smoking and a number of other adverse external factors and inside Wednesday. They include:

- a) Alimentary (use the meat greasy, fried and spicy foods),
- b) Presence of diseases techno-excretory tracts, gastrointestinal tract, endocrine system and other organs,
- c) Hereditary predisposition ( Type an autosomal dominant with incomplete pen trance),
- d) Medicinal (ap-appointment of estrogen, corticosteroids, no steroidal anti-inflammatory medications, sulfonamides, antibiotics and other medicines),

- e) Viral (collateral hepatitis b and c, mumps, Coxsackie virus, etc.),
- f) dysmetabolic (presence of diabetes mellitus, hyperparathyroidism, hemochromatosis, gyperlipidem-ia, etc.), 7) autoimmunologic heskij,
- g) Postpartum,
- h) Postoperative.

However, almost 40% of patients have cause its development remains an unrecognized [6-8]. Specific gravity alcohol factor, among other forms, reaches 40-60%, while patients are mostly men (up to 95%), while among those suffering from pancreatitis, biliarnym women prevail (25-40%), with many it is combined with diabetes Type 2 diabetes, chronic colitis and other gastrointestinal diseases [9-12].

Acute pancreatitis as a pathological process, not diagnoses 60-70% of patients. Encountered the same abdominal pain is usually associated with food toxicity and feces, exacerbation of chronic cholecystitis, or other diseases of the abdominal cavity organs and tissues. And only later, with the development of chronic pancreatitis

patients recalled this episode in history. In 10-20% of cases of acute pancreatitis, which was identified with the aid of computer tomography, ultrasound and endoscopic studies, there has been a further shift in the chronic [13-15]. 80% of patients have chronic pancreatitis developed after several bouts of pancreatitis, Burg and 20% after uninterrupted (latent) currents in the continuation of 1-3 months. Researchers have noted difficulties in the diagnosis of postoperative pancreatitis and its etiology is connected with the transition of infection, or lymphogenous, or contact through the gland tissue from the area of inflammation [16-18]. The severity of the same flow of acute pancreatitis, with the development of enzymatic peritonitis cause suppression of the immune system that is observed in elderly patients, in the presence of simultaneous diseases, trauma, surgery, childbirth, and so nex. From all forms of acute pancreatitis, at first glance, defies any explanation postpartum, which develops almost immediately after birth and reflected this gland necrosis. In the medical literature have not given this pathological process no explanation. It is difficult to accept and the exclusive risk factor of fried meat-eating, if in some Eastern countries, in particular in Kazakh-stan and in Central Asia all fear, it is included in the basic food supply, especially in winter, without harm to health. It turns out she is a danger only to Europeans. Neglected and modern large-scale application in agriculture, pesticides and herbicides, as well as the creation of Genomodificirovannye legumes (e.g. soybean), vegetables and fruit. And these technologies drastically disturb the quality of the food. If you take a critical look at this achievement of modern science, it becomes clear that the man as a biological creature must either internally change or die out. People themselves pose a formidable challenge for survival. Evaluating this and other possible risk factors of life, should be critically rethink the etiology and pathogenesis of these diseases of the pancreas.

## Material and Methods

For 60 years, the surgical activity had a lot of time to take a personal part in the treatment of patients suffering from acute and chronic pancreatitis. It should be noted that, if in the early years of his medical practice these diseases met no more than 1-3 times a month over the past 20 years, the same number of them is observed only for one day. And it is not connected with the improvement of the diagnosis of these diseases, and with the objective increase in their numbers. During this time, watched all of the above forms of pancreatitis, with only 2000 to 2015 years when teaching activities took place on the basis of MUNICIPAL 2JeHO, took a direct part in treating up to 20 thousand patients with acute and chronic diseases of the body. The alcohol factor prevailed among all the other causes of acute and chronic pancreatitis, even among young women. In older patients was the main cause of the pathology of psoriasis. Particular attention has been given to those forms of pancreatitis, which were not sufficiently detailed in the medical literature. This is primarily related to destructive postpartum pancreatitis that was observed in 3 of puerperal aged 19 to 22 years. This pathology

has evolved from them through 5-7 hours after birth, although they, like all of puerperal, bothered by moderate persistent pain in the abdomen, usually this pain associated with abdominal muscles traumatization "extrusion" the fetus from the uterus. These women have births were the first and were they excessive voltage during 4-5 hours. After delivery the food and alcohol, they do not take, requiring more thorough reflection on the causes of the development of this terrible pathology, which flowed with heavy shock pancreatogenesis. Women have been rescued. The complex therapeutic interventions were included local hypothermia of the pancreas. These observations, as well as all others, and formed the basis for the development of new views on etiology and pathogenesis of acute and chronic pancreatitis.

## Results

For understanding issue named, you must first highlight some of the features of the anatomical structure of the pancreas, and it in the embryo is formed from two beginnings-endoderm and mesenchyma. It was clear that this does not happen by accident, but deliberately, and this will be discussed in this article. From endoderm formed the entire iron and head, body and tail. The head has a width of 3.0 -7.5 cm, body-2 -5 cm, tail- -3.4 0.3 cm. From the tail to the head passes her duct, which usually merges with the General bilious channel (rarely), then this collector penetrates the wall of the duodenum and opens on top of the large (materova) papilla. At the exit there is a sphincter of Oddi, who has three rings and a thickness of up to 2 cm. This structure stores the zamykatelnuju function, even if pressure prostate duodenum rises up to 300-350 mm water column and thus prevents the contents of the gut, and in holedoh, and in the pancreatic duct. It would seem that with anatomical point of view everything is fine-tuned for existence, but it is not. It turns out in the front there is an additional (santoriniev) duct, which opens into the lumen of the duodenum through a small (santoriniev) papilla, but it has a sphincter Helly is a circular muscle that functions as a valve, which the sphincter of Oddi, prevents the contents of duodenum in santoriniev duct of the pancreas. This sphincter is at 8-40 mm above the big duodenal nipple. If endoscopy faterova nipple, contrasting with the main pancreatic duct, no communication between primary and secondary channel. Despite its existence, this anatomicheskomu education neglected it is like no! It was not clear what function it performs, and that it is in the duodenum and in what quantity. Obviously needed response to a question, and I tried to make.

## Discussion

It is known that the pancreas is both an exocrine and endocrine function. Veshnjaja secretion is de-signed to digest food, and internal-to regulate the carbohydrate, fat and protein exchanges. Normally this gland per day works out to 1-2 liters of juice, which contains various zymogen, salt and water. Zymogen (trypsinogen, prolipaza, projelastaza, and others) are all located in the inactive form, and they become more active, or in the duodenum, or lumen

in the initial Division of the small intestine. If this happens in the gleam of the main duct gland, then immediately comes the destruction of her cloths. Allocation of pancreatic juice increases when food enters the duodenum, and to digest, requires a quick activation of profermentov with their transfer into an active form-amylase, trypsin and lipase. The strongest stimulator of pancreatic secretion is hydrochloric acid gastric juice, but it activates pepsinogen stomach, translating it into pepsin. When you hit the same her duodenum in this intestine bleeding ulcers develop, and so the body produces neutralizing its activity at the level of the pylorus of the stomach. Which means that no contact run chains of chemical reactions from hydrochloric acid may not be, and the emergence of the duodenum Secretin and pancreozymin to enhance the profermentov of pancre-atic juice, has a different source of education. Moreover, pancreatic juice contains salt, which provide him with alkaline reaction, and it is necessary for splitting carbohydrates amylase. These data indicate that should be a factor which ensures that pancreatic profermentov immediately after hitting the pancre-atic juice into the duodenum. And he has and is located in the head of the pancreas.

It is a fabric formed from mesenchyma, increases in the size of the head. She has her (santoriniev) duct. Numerous operations performed at pankreonekroze, suggests that with the full collapse of the tail and body of the gland, part of her head (anterior upper fragment) remains. This fabric around the perimeter has a dense texture and is welded with the wall of the duodenum, i.e. had a clear difference from the rest of the gland. On the Internet, when describing the anatomical structure of the pancreas, no information about the characteristics of this gland. This creates a certain difficulty and the study of etiology and pathogenesis of diseases of the body, because it is difficult to understand how digestion of food is, if you are inactive zymogene, and secretin and pankreozimin produced wall of duodenum, themselves require stimulation of gastric hydrochloric acid. But everything becomes clear when you consider the above features the head of the gland. Without a doubt, this isolated segment produces substances that activate the zymogen pancreatic juice. To them especially kallikrein. This mediator on the santorinievu stream enters the duodenum and triggers a chain of chemical reactions. If you violate this physiological process that happens or passive or active leaking kallikreina, sometimes with food, in the main pancreatic duct. Profermentov activation occurs, which leads to him the development of pancreatitis.

## Conclusion

The proposed version of acute and chronic pancreatitis etiopathogenesis, allows you to give a clear explanation of the reasons for the development of a pathological process. So, for example, postpartum acute destructive pancreatitis arose as a result of prolonged excessive descent in time muscle of the abdomen, dramatically increased intra-abdominal pressure, and

this led to the increase in kallikreina and other content duodenal ulcer; the main pancreatic duct. Advancing a total revital-ization of the profermentov that ended the destrukcij gland. Something similar was observed and in Puerto pankreonekroze. Trypsinogen with alcohol and fatty meat food reached the initial Division of the small intestine and intensified jenterokinazoj, turning into trypsin excess alcohol was irritated by the Emetic Centre of mecum and regurgitation. Sharply increased pressure in the duodenum. Sphinc-ter of Oddi did not provide zamykatelnoj features and food with trypsin and penetrated by lipase into the main duct, leading to the disintegration of tissues. Similar, with some nuances, and in other types of acute pancreatitis. Chronic pancreatitis is directly connected with the same views of chronic intoxication, although initially and run for the same reason.

## References

- Gabriel SA, Dynko VY, Golfand VV (2013) Endoscopic Retrograde intervention in treatment of patients with pancreaticobiliary diseases area. *Kuban scientific medical bulletin* 3: 41-43.
- Glushkov NI, Zhane DA, Skorodumov AV, Subbotin AA, Arjammova EV (2007) Modern methods of ultrasonic Diagnostics of acute pancreatitis in patients of elderly and senile age/*Kuban scientific medical Bulletin* 4 -5: 59-63.
- Gubergriz NB, Khristich TN (2000) *Clinical pankreatologija*. Donetsk 416.
- Gubergriz NB (2009) *Pankreatologija: from the past to the future Vestnik pankretologov Club* 2: 13-23.
- Dunayevskaya SS, Antjufrieva DA (2013) Chronic relapsing pancreatitis with formation of calcinates and petrifikatov of the pancreas as the outcome of acute alcoholic pancreatitis. /*Kuban scientific medical bulletin* 3: 57-59.
- Dunayevskaya SS (2013) Immune system Role in assessing the gravity of the current severe acute pancreatitis/*Kuban scientific medical bulletin* 3: 59-61.
- Zubritskiy VF, Levchuk AP, Pokrovskiy KA, Zabelin MV (2010) *Diagnosis of destructive pancre-atitis*. -M.: Moscow 143.
- Mehtiev SN, Grinevich VB, Kravchuk Yu (2004) A Dynamics of a painful abdominal syndrome in chronic recurring pancreatitis while therapy mikrofericheskim and tabletirovannym pancreatitis. /*Scientific-practical Journal of Gastroenterology St. Petersburg* 2-3: 9.
- Nesterenko YA, Glabaj VP, Shhapovaljanc SG (2000) *Chronic pancreatitis*. M Moscow 33.
- Perisaeva EA (2013) Prevention and diagnosis of acute postoperative pancreatitis/*Kuban scientific medical bulletin* 3: 103-110.
- Pugaev AV, Achkasov EE (2007) *Acute pancreatitis*. Profile 335.
- Tolstoy AD, Panov PV, Vashetko RV, Skorodumov AV (2004) *Parapancreatitis: Etiology patho-genesis diagnosis treatment/Spb. IZD-vo clear light Pp*: 256.
- Shapovaljanc SG, Mihajpusov SV (2010) *Acute pancreatitis. /In: Emergency abdominal surgery. Guide for physicians*. -Moscow 181-226.
- De Siqueira J, Tawfiq O, Garner J (2014) Managing the open abdomen in a distric general hospital. *Ann R Coll Surg Engl* 96(3): 194-198.
- Sartelli M, Catena F, Ansaloni L, Moore E, Malangoni M, et al. (2013) Complicated intra-abdominal infections in a worldwide context: an observational prospective study (CIAOW Study). *World Journal of Emergency Surgery* 8(1): 1

16. Schreiber J, Nierhaus A, Vettorazz E, Braune SA, Frings DP, et al. (2014) Rescue bedside laparotomy in the intensive care unit in patients too unstable for transport to the operating room. *Critical Care* 18(3): 123.
17. Torer N, Yorganci K, Elker D, Sayek I (2010) Prognostic factors of the mortality of postoperative intraabdominal infections. *Infection* 38(4): 255-260.
18. Yuan Y, Ren J, He Y (2013) Current status of the open abdomen treatment for intra-abdominal infection. *Gastroenterol Res Pract* 53.

ISSN: 2574-1241

DOI: 10.26717/BJSTR.2019.20.003408

Shaposhnikov Veniamin I. Biomed J Sci & Tech Res



This work is licensed under Creative Commons Attribution 4.0 License

Submission Link: <https://biomedres.us/submit-manuscript.php>



#### Assets of Publishing with us

- Global archiving of articles
- Immediate, unrestricted online access
- Rigorous Peer Review Process
- Authors Retain Copyrights
- Unique DOI for all articles

<https://biomedres.us/>