

# ACUTE HEMORRHAGIC PANCREATITIS.

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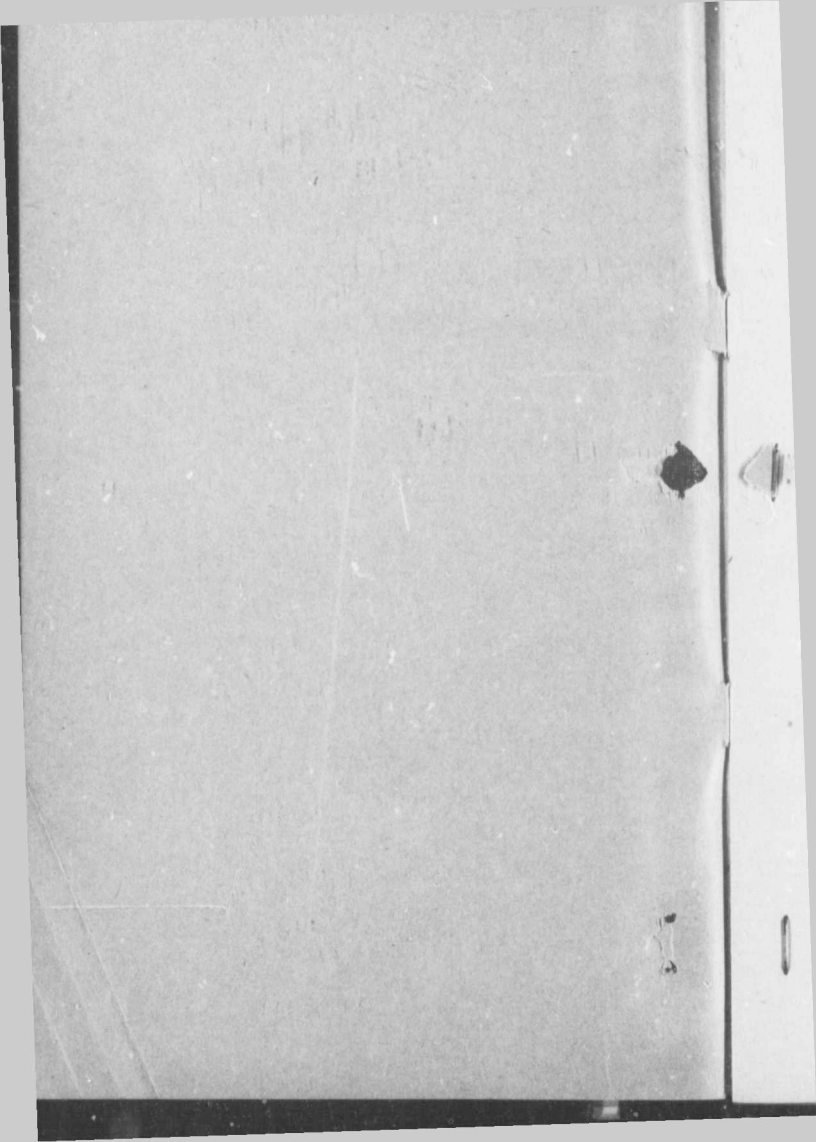
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# Acute Hemorrhagic Pancreatitis

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In the following case the woman was a patient at this institution under the care of Dr. Stockton, who makes the following clinical report:

*Patient.*—The woman, aged 55, was admitted to the institution ten years ago. She had delusions of persecution, hallucinations of sight and hearing and was restless, sleepless, dull and melancholy.

*History.*—Little is known regarding her life and condition previous to admission, but from what could be gathered from herself and from the commitment papers the indications are that she had led a dissolute, immoral life and that she was addicted to the use of morphia. From the time of her admission until the onset of her illness her physical health was good except for a moderate constipation which required the use of a mild purgative from time to time. Mentally there were no marked alterations, but she manifested some retardation of thought and occasional periods of irritability and quarrelsomeness, with obscene and immoral talk. On arising on the morning of March 14, 1904, she complained of feeling ill and suffered from nausea and vomiting, but was up and about until 11 a. m., when she began to complain of great pain and distress in the region of the stomach, aggravated when lying on the back, and of more or less tenderness on examination. The severity of the pain was such that an opiate was necessary to relieve it. At 6 p. m. the temperature was 102.6 and pulse 130, with but little alteration in the local or general condition. Vomiting continued, the vomit matter being bile-stained. The pain was dull and aching, its acuteness probably lessened by the opiate. The following morning there was considerable tympanitis, rigidity and tenderness, most marked in the epigastric region, and general jaundice supervened. Vomiting had somewhat lessened. The pain was still dull and boring in character. While attempting to

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\* Read before the Marion County Medical Society, Indianapolis.

get out of bed about 11 a. m. she suddenly became semi-conscious and died in a very short time.

*Autopsy.*—The autopsy, performed three and one-half hours after death, revealed the following condition:

The body was that of an adult female, white, apparent age 55, weight 145 pounds, height 5 feet 5 inches. The body was well-developed, well-nourished and rather fleshy. There was considerable general jaundice. There was postmortem rigidity in the neck, hands and feet. Postmortem lividity was slight posteriorly. The abdomen was prominent, tense and tympanitic. Liver dullness was indefinite.

On opening the abdominal cavity, the omentum and the intestines protruded. The intestines were considerably distended with gas. The omentum and peritoneum were of a pink, light-red color, and a thin, dark-red, odorless fluid ran out of the incision. About 350 c.c. was diffused through the general peritoneal cavity. The appendix was 6 cm. long and lay to the inner side of the cecum, curled behind the lower end of the ileum, and was apparently normal. The pyloric half of the stomach, the duodenum and the transverse colon were pushed forward by a dark-red, rather soft mass, lying posterior to them; and apparently involving the whole of the pancreas. Scattered throughout the omentum, the mesentery and the walls of the stomach and intestines were numerous small, white nodules, varying in size from a pin head to a split pea, rather soft, white on section, and most abundant in the neighborhood of the pancreas. All the structures in the immediate surroundings of the pancreas were intensely swollen and edematous and infiltrated with a fluid similar to that lying free in the peritoneal cavity. The infiltration and edema extended into the retroperitoneal tissues, surrounding both kidneys, and down into the postcecal tissue on the right side, giving the whole a boggy, sodden appearance and a dark-red color. The mass involving the pancreas consisted of coagulated blood diffused through the whole of the pancreas, except a very small portion of the head and tail. The source of the bleeding could not be found. The mucous membrane of the stomach and intestines were pale in color, swollen and edematous.

The liver was of a pale, yellowish-red color, softened. The lobules were indistinct. The gall bladder contained about 20 c.c. of dark, reddish-brown bile and a moderate number of small, brown-colored calculi. The bile ducts were patent and opened by a separate orifice from that of the pancreas into the duodenum.

The spleen was slightly softened, and the splenic artery and vein were filled with coagulated blood.

The kidneys contained several small cysts and were markedly congested. The bladder contained a few centimeters of slightly albuminous urine, but no sugar.

Apart from the abdominal conditions, there was some fatty infiltration of the heart, marked atheromatous degeneration of the large arteries, with some calcareous deposit, bilateral chronic pleuritic adhesions, cicatricial contraction of the lower lobe of the right lung, excess of cerebrospinal fluid, considerable subarachnoidal exudate and marked atheroma of the arteries at the base of the brain.

#### REMARKS.

Incomplete as the clinical report is, it yet indicates some of the most prominent symptoms that should lead one to suspect an acute involvement of the pancreas. The onset of this condition is usually sudden, but may be preceded by epigastric uneasiness for a day or two. It occurs more frequently in adult males, and particularly in fleshy people. It usually begins with abdominal pain, which is intense, more or less diffuse and persistent, with paroxysmal exacerbations. It is increased by movement, and is associated with well-marked tenderness above the umbilicus, distention of the superior abdominal region and by vomiting. Nausea and vomiting are early symptoms and increase in severity. No relief follows the act of vomiting. The vomited matter consists of food and mucus, later of bile and blood in various stages of degeneration.

A condition of collapse soon follows. The abdomen usually becomes distended and tender. The bowels, as a rule, are constipated, rarely there is diarrhea. Slight jaundice is usually present and increases the longer the patient lives. The mass may be palpable but usually the distention and tenderness are so great as to render palpation very difficult, if not impossible except under anesthesia. Severe attacks are usually fatal in 24 hours. When less acute, a gangrenous condition is often produced and proves fatal in from two to five days from absorption of the toxic material. When the condition is still less acute it may lead to abscess formation, or become subacute, or chronic; and in mild forms it may lead to resolution and recovery.

The hemorrhage may precede or take place during the inflammatory process. If it precedes the inflammation, the bleeding is usually within and without the glandular substance, and usually runs an extremely acute course. If it occurs during the inflammatory process, the bleeding is less profuse and runs a less acute course.

The diagnosis is difficult, as there are several conditions with a similar group of symptoms. The principal ones are: 1, Acute ptomain poisoning; 2, perforation of a gastric or duodenal ulcer; 3, gangrenous appendicitis; 4, phlegmonous cholecystitis; 5, acute intestinal obstruction.

Judging from the important part taken in the digestive process by the pancreatic secretion that is discharged into the duodenum, and in the process of metabolism by the internal secretion that is given off by the pancreas to the blood or lymph stream or both, one would expect that the clinical manifestations of a diseased condition would be so characteristic that a diagnosis would be comparatively easy, but there are several reasons why this is not the case:

1. The pancreas is rarely involved in a pathologic process without other organs being affected, particularly the biliary ducts, the stomach, and the duodenum.

2. Every function performed by the pancreas can be performed to some extent by some other organ in the body except the glycogenic function.

3. The greater portion of the gland may be destroyed and yet the remaining portion apparently may be able to carry on the normal function of the entire gland.

While these conditions may give rise to very conflicting and perplexing combinations of symptoms, yet there are some pronounced features manifested which should lead one to suspect a diseased condition of that special organ. Fitz has laid down a rule that when a previously healthy person or sufferer from indigestion is suddenly seized with violent pains in the epigastrium, followed by vomiting and collapse, and within twenty-four hours by a circumscribed epigastric swelling, tympanitis, and resistance, with slight rise of temperature, one should suspect acute pancreatitis.

In a lecture delivered before the Royal College of Surgeons of England, Mr. P. J. Cammidge<sup>1</sup> stated that there were present in the urine certain products which were almost if not quite pathognomonic of acute pancreatitis. His method of examination to prove their presence is as follows: To 10 c.c. of filtered urine is added 1 c.c. of strong hydrochloric acid, boiled gently

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1. Cammidge: *Lancet*, July 1, 1905; abstracted in *THE JOURNAL*, A. M. A., July 29, 1905, p. 359.



for 10 minutes on a sandbath. A mixture of 5 c.c. of filtered urine and 5 c.c. of distilled water is then added and the whole cooled in running water. The excess of acid is then neutralized by slowly adding 4 grams of lead carbonate. The whole is again filtered, the flask rinsed with 5 c.c. of distilled water. To this are now added 2 grams of sodium acetate and 0.75 gram of phenylhydrazin hydrochlorate and boiled for three to four minutes on the sandbath. It is then poured into a test tube and allowed to cool undisturbed, when a flocculent precipitate forms consisting of rosettes of golden-yellow crystals. The presence of sugar of albumin must be previously gotten rid of, as these substances interfere with the process and the results. As somewhat similar results are obtained in patients suffering from certain diseases in which active tissue changes are going on, a differentiating test must be applied, which consists in taking 20 c.c. of filtered urine and adding 10 c.c. of saturated aqueous solution of mercuric chlorid, filtering. To 10 c.c. of the filtrate add 1 c.c. of strong hydrochloric acid and boil as in the former process. It is then diluted with 5 c.c. of the former filtrate, and 10 c.c. of distilled water, cooled and treated as in the former instance.

The practical results of these examinations of the urine by these two methods Cammidge summarized as follows: If no crystals are obtained by either method the pancreas is not at fault, and the explanation of the symptoms must be sought for elsewhere. If crystals are obtained by the first method and not by the second, active inflammation of the pancreas is present and surgical interference is generally indicated. In acute inflammation of the pancreas the crystals are fine and dissolve in a 33 per cent. solution of sulphuric acid in about thirty seconds. In chronic inflammation the crystals are coarser and dissolve in one to two minutes. If crystals are obtained by both methods there may exist: 1, Malignant disease of the pancreas; 2, chronic disease of the pancreas; 3, non-pancreatic diseases.

In malignant disease the crystals are very coarse, and require from three to five minutes to dissolve, and operation is contraindicated. In chronic inflammation the crystals are smaller and dissolve in from one to two minutes. In non-pancreatic disease the crystals dissolve in one minute. Thus it seems that the size of the crys-

tals and their solubility are directly dependent on the acuteness of the inflammatory process.

As regards the treatment, the pathologic condition indicates that practically only one line of treatment can be beneficial, and that is evacuation of the septic material, arrest of the hemorrhage, and free drainage by surgical methods. Even though the mortality following operation in the acute stage is very high, 36 out of 59 operative cases proving fatal, yet when one considers the fact that the disease almost invariably ends fatally when not treated surgically, an operation is strongly indicated.

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