

## Emphysematous Pancreatitis as a Manifestation of Diabetes Mellitus: About A Case

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### Abstract

### Case Report

Emphysematous or gangrenous pancreatitis is a rare and fatal complication of acute necrotizing pancreatitis. It is characterised by the presence of gas in the necrotic pancreatic parenchyma and/or peripancreatic collections. The bacteria most often incriminated are gram-negative, notably E. coli, and the route of bacterial dissemination is hematogenous. It is a pathology that occurs in immunodepressed areas, particularly in diabetics. and it is rarely the mode of revelation of the latter, as was the case in our patient. Abdominal CT is the examination of choice for making the diagnosis. Its evolution depends on the precocity of antibiotic therapy, which must be aggressive to control the infection, and on percutaneous drainage or surgical debridement, and recovery is generally prolonged.

**Keyword:** Emphysematous or gangrenous pancreatitis, diabetes mellitus, Abdominal CT, the Balthazar classification,

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## INTRODUCTION

Emphysematous or gangrenous pancreatitis is a rare and fatal complication of acute necrotizing pancreatitis [1]. It is characterised by the presence of gas in the necrotic pancreatic parenchyma and/or peripancreatic collections. Abdominal CT is the examination of choice for making the diagnosis [1]. The presence of bullae is generated by gas-producing bacteria, the mortality rate is 10-36%, and percutaneous sampling can identify the causative organism [2]. We report a case of diabetes mellitus with emphysematous pancreatitis.

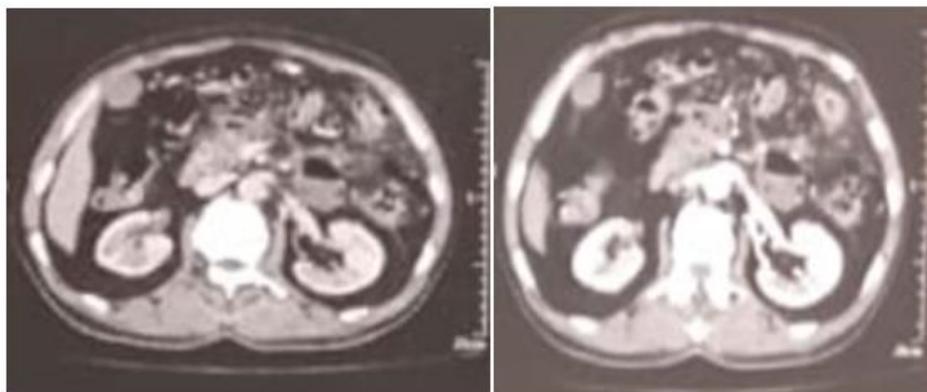
## OBSERVATION

61-year-old patient, history of acute pancreatitis, lithiasis 1 year ago, no other medical or surgical history, admitted with transfixing epigastralgia with dorsal irradiation associated with immediate postprandial vomiting, all evolving in a context of significant weight loss for the last 1 month and a polyurologydyspical syndrome.

Examination: conscious patient, agitated, polypneic at 28 cycles/minutes, tachycardia at 100 beats/minutes, distended and sensitive abdomen, hyperkeratosis of the heels, amyotrophy of the interosseous, hyperglycemia at 3.74 g/l with 3 acetone and 3 sugar crosses.

Work-up: hyperleukocytosis: 20,000 with neutrophilic predominance 17,000, hemoglobin 14g/l, platelet count: 173,000, CRP: 402 mg/l, lipasemia: 700 IU/l, amylasemia: 160 IU/l, HCO<sub>3</sub><sup>-</sup>: 6 mmol/l,

Abdominal CT: collection of the body and tail of the pancreas, measuring 48\*108 mm, seat of air bubble, associated with infiltration of the peripancreatic mesenteric fat and on the left flank, pneumoperitoneum visible at the level of the posterior cavity of the epiploons and opposite the left colonic angle and in the periportal trunk: emphysematous pancreatitis stage E of Balthazar. Initial management was in the ICU.



**Fig-1-2: Abdominal and pelvic CT: emphysematous pancreatitis**

## DISCUSSION

Emphysematous pancreatitis is an acute bacterial superinfection of necrotizing pancreatitis. The bacteria most often incriminated are gram-negative, notably *E. coli*, but other germs may also be found, such as *Klebsiella*, *Pseudomonas*, *Enterobacter* and *Clostridium perfringens*, and the route of bacterial dissemination is hematogenous [3]. However, other causes can be found, notably colonic or intercutaneous fistula, perforated duodenal ulcers [4]. It is a pathology that occurs in immunodepressed areas, particularly in diabetics [1]; the prevalence of diabetes mellitus in patients with emphysematous pancreatitis is 24.1% [4], and it is rarely the mode of revelation of the latter, as was the case in our patient. Abdominal CT is the key examination in the diagnosis, allowing the presence of gas to be demonstrated and pancreatitis to be classified according to the Balthazar classification. The prognosis of pancreatitis is guarded as its mortality is 34.5%. Its evolution depends on the precocity of antibiotic therapy, which must be aggressive to control the infection, and on percutaneous drainage or surgical debridement, and recovery is generally prolonged [2, 5]. Despite adequate management, mortality remains high and occurs in the setting of sepsis or multivisceral failure [1, 2, 5].

## REFERENCE

1. Niryinganji, R., Mountassir, C., Siwane, A., Tabakh, H., Touil, N., Kacimi, O., & Chikhaoui, N. (2020). Emphysematous pancreatitis: A rare complication of acute necrotizing pancreatitis. *European journal of case reports in internal medicine*, 7(6).
2. Lee, S. H., Paik, K. H., Kim, J. C., & Park, W. S. (2021). Percutaneous endoscopic necrosectomy in a patient with emphysematous pancreatitis: A case report. *Medicine*, 100(46).
3. Wig, J. D., Kochhar, R., Bharathy, K. G., Kudari, A. K., Doley, R. P., Yadav, T. D., & Kalra, N. (2008). Emphysematous pancreatitis. Radiological curiosity or a cause for concern. *Jop*, 9(2), 160-166.
4. Grayson, D. E., Abbott, R. M., Levy, A. D., & Sherman, P. M. (2002). Emphysematous infections of the abdomen and pelvis: a pictorial review. *Radiographics*, 22(3), 543-561.
5. Chou, C. Y., Su, Y. J., Yang, H. W., & Chang, C. W. (2020). Risk factors for mortality in emphysematous pancreatitis. *Journal of Drug Assessment*, 9(1), 1-7.