LETTER TO THE EDITOR

A fatal course of pancreatic pseudocyst rupture: reflections on the management of the patient

Edyta Niemiec, Robert Staron, Marcin Krawczyk, Łukasz Krupa

To the editor We have read the article by Janoska-Gawrońska et al¹ with great interest. We would like to congratulate the authors on this publication and their retrospective analysis of this complex medical case, which was very interesting and educational despite its tragic end.

They described a case of a 51-year-old patient with acute pancreatitis complicated by ascites and large pseudocyst formation. The patient was managed conservatively and, apart from exacerbations of epigastric pain, remained stable. He suddenly lost consciousness during defecation, which was followed by cardiac arrest and death. His autopsy revealed pancreatic pseudocyst rupture that resulted in massive bleeding and death.

Autopsies consistently hold substantial educational value in medical training and practice. Learning from such cases is pivotal for all medical practitioners and should lead to improvements in our daily clinical practice and patient care. It is commendable to reflect on fatal cases and share these reflections with colleagues.

Pancreatic fluid collections (PFCs) are a frequent complication of pancreatitis. The revised Atlanta classification of acute pancreatitis² categorized inflammatory PFCs into acute peri-PFCs, pancreatic pseudocysts, acute necrotic collections, and walled-off necrosis. The presented patient had 2 large pseudocysts and ascites.

Invasive treatment of pseudocysts should be considered when they cause symptoms such as abdominal pain, weight loss, difficulties with eating, or if they are infected or cause sepsis. In the setting of symptomatic pseudocysts, endoscopic ultrasound (EUS)-guided drainage is the method of choice over surgical and percutaneous approaches. Multiple studies have shown that it improves patient quality of life, reduces costs, and shortens the hospital stay, as compared with other modalities.³ Such a treatment approach is feasible when the pseudocyst capsules are well-defined.

Multidisciplinary approach is crucial for the medical management of patients with pancreatitis complicated by PFCs. Janoska-Gawrońska et al¹ stated that the patient

was consulted by surgeons and endoscopists, and was deemed unsuitable for interventional treatment due to the presence of ascites and sepsis (spontaneous bacterial peritonitis [SBP]). However, we wonder whether minimally invasive EUS--guided drainage of the pseudocyst might have been an appropriate treatment option for the patient. Intra-abdominal sepsis and abdominal pain were indications for interventional treatment, and the presence of ascites should not contraindicate EUS-guided treatment. Upon reviewing the computed tomography images presented in the paper, it appears that cystogastrostomy could have been performed. If necessary, ascites could have been drained percutaneously before the EUS--guided intervention. Of concern, however, were the patient's concomitant conditions, including segmental pulmonary embolism and portal vein thrombosis, which required anticoagulant treatment. The presence of ascites and pseudocysts increased intra-abdominal pressure, which was further exacerbated during defecation and likely contributed to the cyst rupture. EUS-guided treatment of the infected cysts (cystogastrostomy) might have reduced the intra-abdominal pressure, although it would have increased the risk of postprocedural bleeding in the context of the need for anticoagulation. Whether this would have changed the outcome will remain a matter of speculations.

Another aspect that warrants discussion, yet remains unclear, is the diagnosis of SBP, which is difficult to establish in this clinical situation. SBP is a frequent and severe complication in patients with cirrhosis. This is an infection of ascites in the absence of an apparent intra-abdominal focus, and its diagnosis should be considered when the neutrophil count is above 250 cells/µl in the ascitic fluid.⁴ The patient was diagnosed with pancreatitis with ascites and concomitant portal vein thrombosis; the results of the fluid analysis were consistent with exudative ascites with elevated amylase activity. The cause of ascites in this situation is complex, which renders the diagnosis of SPB difficult. Fluid leukocyte

Correspondence to: Łukasz Krupa, MD, Department of Gastroenterology and Hepatology with Internal Disease Unit, F. Chopin Specialist University Hospital in Rzeszow, ul. Szopena 2, 35-055 Rzeszów, Poland, phone: +48 178666336, email: Ikrupa@ur.edu.pl Published online: October 26, 2023. Pol Arch Intern Med. 2023 doi:10.20452/pamw.16594 Copyright by the Author(s), 2023 count in this clinical scenario is difficult to interpret given the inflammatory process in the abdomen. Also, the authors reported that the leukocyte count was greater than 500 cells/ μ l. The diagnosis of SBP (in transudative ascites due to liver cirrhosis) is based on the neutrophil count. This aspect serves as a subject for academic discourse and did not exert any immediate influence on patient care.

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CONFLICT OF INTEREST None declared.

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REFERENCES

1 Janoska-Gawrońska A, Pietrukaniec M, Kopyś-Sikora M, et al. A fatal course of pancreatic pseudocyst rupture. Pol Arch Intern Med. 2023; 133: 16529. ☑

2 Banks PA, Bollen TL, Dervenis C, et al. Classification of acute pancreatitis – 2012: revision of the Atlanta classification and definitions by international consensus. Gut. 2013; 62: 102-111. ♂

3 Varadarajulu S, Bang JY, Sutton BS, et al. Equal efficacy of endoscopic and surgical cystogastrostomy for pancreatic pseudocyst drainage in a randomized trial. Gastroenterology. 2013; 145: 583-590.

4 Rimola A, García-Tsao G, Navasa M, et al. Diagnosis, treatment and prophylaxis of spontaneous bacterial peritonitis: a consensus document. International Ascites Club. J Hepatol. 2000; 32: 142-153.