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Severe acute pancreatitis following biopsy of the minor papilla of the duodenum

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We report the case of a 68-year-old woman with a previous duodenal adenoma resection who underwent esophagogastroduodenoscopy, during which endoscopic biopsy of a hypertrophied minor duodenal papilla was performed with a standard biopsy forceps. The exam was otherwise normal and she was discharged with no pain or discomfort.

Eight hours after the procedure, the patient developed intense abdominal pain, which necessitated urgent admission 6 hours later. Laboratory tests showed that the patient's lipase level was 4106 U/L (normal range, 13 to 60 U/L) and her glucose level was 263 mg/dL, with no other abnormalities. An abdominal computed tomography (CT) scan showed Balthazar's grade E pancreatitis with 70 % necrosis, associated with multifocal partial thrombosis of the splenic vein.

Laboratory follow-up, done later the same day, showed a C-reactive protein level of 135 mg/L (normal range, < 5 mg/L), decreased ionized calcium concentration at 0.93 mmol/L (normal range, 1.15 to 1,3 mmol/L) and hyperlactatemia at 20 mg/dL (normal range, 4 to 14 mg/dL), which got worse the same day. The patient developed multiorgan failure, leading to admission to the Intensive Care Unit (ICU). Other etiologies of acute pancreatitis, such as biliary stones, hypertriglyceridemia and alcohol consumption, were excluded.

Another CT scan 48 hours after the onset of the patient's symptoms revealed worsening of the pancreatic and peripancreatic collections as well as extensive splenic vein thrombosis and multiple arterial vasospasms. Such a presentation is characteristic of severe acute pancreatitis, according to Revised Atlanta Classification for Acute Pancreatitis [1]. Multiorgan failure that persists for more than 48 hours is a predictor of high and early mortality [2]. The patient had a Ranson's score of 8, which corresponded with a 100 % risk of mortality [3]. Unfortunately, despite appropriate care in the ICU, the patient died 4 days after admission.

To our knowledge, this is the first case of fatal necrotizing acute pancreatitis following a minor papilla biopsy. Two severe cases following biopsy of the minor papilla have been reported in the literature [4, 5], for which an almost identical clinical picture of abrupt onset only a few hours after biopsy was described. Those patients were discharged from the hospital after several weeks of care [4, 5], in contrast to our patient who died. In both cases in the literature, the patients presented with pancreas divisum. Such an anatomical variation was not identified in our patent, although it was highly suspected.

Conclusions

In conclusion, even though complications due to endoscopic biopsies are relatively rare, the dramatic developments encountered with our patient clearly underscore the need to draw the attention of endoscopists to the possible risks associated with biopsies of the papilla, especially if the minor papilla is targeted. Perhaps a pancreas divisum should be excluded before performing minor papilla biopsies, or if the procedure is judged to be mandatory, prophylaxis for pancreatitis, as is done prior to endoscopic retrograde cholangiopancreatography – namely, hyperhydration or intrarectal administration of nonsteroidal anti-inflammatory drugs administration – should be provided.

Competing interests

The authors declare that they have no conflict of interest.

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References

[1] Banks PA, Bollen T, Dervenis C et al. Classification of acute pancreatitis – 2012: revision of the Atlanta classification and definitions by international consensus. Gut 2013; 62: 102–111
[2] Garg PK, Singh VP. Organ failure due to systemic injury in acute pancreatitis. Gastroenterology 2019; 156: 2008–2023
[3] Ranson JH, Rifkind KM, Roses DF et al. Prognostic signs and the role of operative management in acute pancreatitis. Surg Gynecol Obstet 1974; 139: 69–81
[4] Gincul R, Ciocirlan M, Dumortier J et al. Severe acute pancreatitis following endoscopic biopsy of the minor duodenal papilla. Endoscopy 2009; 41: E195–E196
[5] Jeong WJ. Acute pancreatitis after endoscopic biopsy of the minor duodenal papilla in an individual with pancreas divisum. Endoscopy 2016; 48: E238–E239

Bibliography
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