to the editor: the article by fogel and sherman (jan. 9 issue) about the clinical approach in patients presenting with acute biliary pancreatitis may confuse readers, because the disease outcome can be associated with substantial mortality when its cause is not properly recognized.

the patient described in the vignette has a very high probability of biliary pancreatitis even in the absence of dilatation or a stone in the common bile duct. stones are suspected to cause acute pancreatitis when the alanine aminotransferase level is at least three times the upper limit of the normal range (positive predictive value of 95%). however, no biochemical or clinical finding can be used in isolation as a predictive test for ductal stones. physicians should consider such variables in combination when deciding on whether a patient needs further evaluation (fig. 1). patients with an intermediate risk of a stone in the common bile duct should undergo noninvasive forms of imaging. endoscopic ultrasonography and magnetic resonance cholangiopancreatography (mrcp) have completely replaced endoscopic retrograde cholangiopancreatography (ercp) to evaluate patients in whom there is clinical or biologic suspicion of stones in the common bile duct. certainly we would agree that first-line ercp in the patient in the vignette is not acceptable.

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figure 1. risk factors for stones in the common bile duct.

patients can be classified as having a low, intermediate, or high risk of stones in the common bile duct according to a combination of biologic and clinical factors. appropriate therapy can be determined accordingly. ercp denotes endoscopic retrograde cholangiopancreatography, and mrcp magnetic resonance cholangiopancreatography. adapted from frossard and morel.
TO THE EDITOR: The indications for ERCP in suspected biliary pancreatitis are not as clearly established as is suggested in the article by Fogel and Sherman. The only undisputed indication for ERCP is concurrent cholangitis. In the absence of cholangitis, with or without signs of biliary-duct stones and obstruction, the indication for ERCP is not scientifically established, because studies have serious shortcomings. First, patient populations are heterogeneous, including some with cholangitis and some without. Second, patients with cholestasis are often not evaluated separately, so subgroup analysis is precluded. Third, ERCP is often performed relatively late after hospital admission (i.e., within 48 to 72 hours). Fourth, sphincterotomy is performed in only about 50% of cases.1 Fifth, there is considerable variation in end-point definitions comprising less relevant outcomes (i.e., ascites and pleural effusion). Finally, the pooled sample sizes of meta-analyses involving patients with predicted severe biliary pancreatitis without cholangitis are too small to detect effects of ERCP with sphincterotomy on the end points of severe complications and death.1-2 These limitations of the evidence are acknowledged in recent guidelines.3,4 A randomized trial with sphincterotomy as an integral part of ERCP which is powered for relevant clinical end points in predicted severe biliary pancreatitis is under way (Current Controlled Trials number, ISRCTN97372133).

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TO THE EDITOR: The authors of the review of ERCP in patients with acute biliary pancreatitis described the potential for the procedure itself to cause pancreatitis, but they did not mention methods that have been shown recently to reduce the risk.

A meta-analysis of 14 randomized, controlled trials showed that placement of small temporary pancreatic stents reduced the risk of post-ERCP pancreatitis in high-risk patients, at least in expert centers (odds ratio, 0.39; 95% confidence interval, 0.29 to 0.53; P<0.001).1 Furthermore, the use of rectal indomethacin reduces the risk of post-ERCP pancreatitis in both high-risk and low-risk patients and has been shown to be more cost-effective than prophylactic pancreatic stent placement.2-5

Data are lacking from randomized trials to guide the use of these tools in patients with gallstone pancreatitis, and there are unlikely to be any such trials, given the obvious difficulty in attributing the cause of any postprocedure deterioration. However, these relatively simple and inexpensive approaches should perhaps be considered in patients with gallstone pancreatitis, especially if the pancreatic duct has been manipulated.

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THE AUTHORS REPLY: Frossard and Spahr raise several excellent points, including the difficulty in identifying a biliary cause in a patient presenting with pancreatitis and the potential consequences of misdiagnosis. Our specific focus, however, was to address the role of ERCP in established gallstone pancreatitis. A discussion of available means to establish this diagnosis is worthy of its own article. We do agree that MRCP and endoscopic ultrasonography have a sensitivity and specificity of greater than 90% for detecting bile-duct stones and can be used to triage patients for ERCP when a stone is identified.

We agree with Schepers et al. that the studies of ERCP in suspected gallstone pancreatitis have “serious shortcomings.” With respect to coexisting cholangitis and biliary obstruction, most trials do not specify inclusion and exclusion criteria. Furthermore, when included, diagnostic criteria differ among studies (see Table S3 in the Supplementary Appendix, available with the full text of our article at NEJM.org). Although Schepers et al. correctly state that recent guidelines acknowledge these limitations, the Cochrane review that they cite concludes that “early ERCP should be considered in patients with coexisting cholangitis or biliary obstruction.” The most recent published guideline\(^1\) states that patients with gallstone pancreatitis and concurrent acute cholangitis should undergo early ERCP. ERCP is not needed in most patients in whom laboratory or clinical evidence of ongoing biliary obstruction is absent. Alternatively, we suggest that patients with biliary obstruction might benefit from ERCP, although the evidence is not strong. Data are lacking from additional prospective trials involving patients with gallstone pancreatitis.

We agree with Yaghoobi that both pancreatic-duct stents and rectal indomethacin are effective in reducing the risk of post-ERCP pancreatitis, and they are considered the standard of care in high-risk patients. To our knowledge, however, no published study has been designed to directly compare these strategies, although meta-analyses do appear to favor the use of nonsteroidal anti-inflammatory drugs (NSAIDs). Data are also limited regarding the use of NSAIDs in low-risk patients. Our article specifically addressed the role of ERCP in gallstone pancreatitis. Patients with choledocholithiasis are usually at low risk for post-ERCP pancreatitis, although duodenal edema (from pancreatitis) may make biliary cannulation more difficult and increase procedure risk. Moreover, studies addressing the efficacy of NSAIDs and pancreatic-duct stents for prevention of post-ERCP pancreatitis have excluded patients with active pancreatitis. The decision to place a pancreatic-duct stent or administer indomethacin, therefore, may not be a straightforward one and is at the discretion of the endoscopist. A number of patient-related and procedure-related factors for post-ERCP pancreatitis need to be considered. As such, this issue appears to be beyond the scope of our article.

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