

IV should be routinely managed medically. Nevertheless, the authors considered 3 radiologic diagnostic findings: retroperitoneal collection, retroperitoneal gas isolated, or retroperitoneal gas combined with pneumoperitoneum/pneumodiastinum. Of note, only 10 patients presented with more than 1 feature, and retroperitoneum alone was found in 44% of cases. Moreover, nearly all diagnoses (90%) were reached postprocedurally, with about 24 hours being the mean time to diagnosis, with a standard deviation of about 13 hours, which suggests significant variability among cases. Thus, it is likely that a significant number of type IV perforations were eventually included.

In the original report by Stapfer et al² (14 patients), most lesions were diagnosed during ERCP, with the rest being diagnosed without CT assessment. In contrast, in this study, in nearly all patients the diagnosis was based on radiologic investigation (CT 82%), realistically obtained because of some clinical deterioration while the patient was in the hospital.

The problem of opting for the most appropriate treatment is generally encountered in front of clinical or radiologic findings, rather than a given extemporaneous recognition during the procedure.³⁻⁶ Indeed, radiologic evidence may vary significantly according to the timing of assessment and thus has been considered by several authors to be an unreliable factor in predicting the need for surgery.⁵⁻⁷ Actually, retroperitoneal air alone, solely in the absence of physical or laboratory findings, should not be considered cause for alarm and likely can be managed medically.^{4,5,7-10}

Although we congratulate Kumbhari and colleagues on their valuable and timely article, we recommend caution in interpreting and generalizing their data in drawing definitive guidelines.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

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Response:



We thank Drs Guerra and Pulighe for their comments on our manuscript entitled “An algorithm for the management of ERCP-related perforations” and offer the following in response.¹

We excluded Stapfer type III and type IV because the management of these perforations is essentially always nonsurgical. Stapfer type III perforations are generally detected intraprocedurally and are treated with stent placement. We do not believe that Stapfer type III perforations should be managed medically if detected intraprocedurally. Stapfer type IV perforations are asymptomatic, and no therapy is necessary.

Our study documented 4 diagnostic radiologic findings in our patient cohort (in addition to the 3 mentioned in the letter, oral contrast medium extravasation was also included). Drs Guerra and Pulighe claim that it is unusual for patients with Stapfer type I or type II perforations to have only 1 imaging abnormality on CT. Furthermore, they indicate that it is uncommon for Stapfer type I or type II perforations to manifest with retroperitoneal gas only on CT. However, several studies have demonstrated that retroperitoneal gas alone is the most common CT finding in patients with Stapfer type II perforations.^{2,3}

We believe it is of greater clinical interest that the majority of the patients in our study had their diagnosis detected postprocedurally. With current endoscopic accessories and techniques, all intraprocedurally detected ERCP-related perforations, regardless of Stapfer type, should undergo an immediate attempt at endoscopic therapy. Therefore, a management algorithm is most relevant to those patients with a postprocedurally detected perforation. Drs Guerra and Pulighe commented that the mean time to diagnosis

of approximately 24 hours makes it less likely that only Stapfer type I and type II perforations were included in our study. We agree that one would expect ERCP-related perforations to manifest earlier; however, more than 40% of our patients had concomitant pancreatitis, which may have distracted the clinician from a diagnosis of perforation because of the overlap in symptoms and signs and the fact that pancreatitis occurs far more commonly.¹ Another potential explanation is the infrequent “extension” of prior sphincterotomies, particularly in patients with sphincter of Oddi dysfunction, because these commonly resulted in smaller perforations that would be clinically recognized more slowly. We do not believe that the relatively long time to diagnosis indicates that Stapfer type III and type IV perforations were inadvertently included.

Postprocedure CT scanning alone should not guide clinical management. In fact, symptoms drive imaging, not the other way around. Routine “screening” CT scans are not performed in patients admitted for post-ERCP observation. In addition, immediate periprocedure pneumoperitoneum/pneumomediastinum is seen only when the perforation is large. A smaller Stapfer type II perforation may take several hours to become symptomatic and prompt imaging.

DISCLOSURE

Dr Singh is a consultant for Abbvie, Calcimedica, and Novo Nordisk and is an advisory board participant for Salix, Celltrion, and Enteromedics. The other author disclosed no financial relationships relevant to this publication.

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