

## Cystotome or nonelectrocautery dilating catheters for fistula tract dilatation during endoscopic transmural drainage of pancreatic fluid collections

Dear Editor,

EUS-guided transluminal drainage is a safe and effective minimally invasive therapy for pancreatic fluid collections (PFC).<sup>[1,2]</sup> It is a multi-step process with the step of dilating the transmural tract created by the needle puncture being the critical step. The fistula tract can be dilated using either electrocautery dilating catheters or nonelectrocautery-based dilating catheters.<sup>[3]</sup> The cautery dilating devices include standard wire-guided needle knife and specialized fistulotomy devices (Cystotome), whereas the noncautery devices include endoscopic retrograde cholangiopancreatography cannula or sphincterotome or a 4/6 mm biliary balloon dilator. Noncoaxial cautery-enhanced dilating devices such as needle knives have increased risk of perforation and bleeding. On the other hand, co-axial cautery devices such as cystotome dilate along the guide wire and therefore are not associated with the risk of un-intentional site perforation. However, cautery-enhanced devices are perceived to be associated with an increased risk of complications, especially bleeding.<sup>[4]</sup> Despite an abundance of literature on the role of endoscopic transmural drainage in the treatment of PFC, there is a scarcity of data on comparative safety and efficacy of cystotome *versus* noncautery-based dilation catheters as a fistula dilating device. A retrospective study comparing 15 patients who underwent dilation with cystotome and 13 patients who were treated with a nonelectrocautery dilation catheter reported that cystotome is safe and contributes to a shorter procedure time.<sup>[3]</sup>

We retrospectively compared the safety and efficacy of 6 Fr cystotome (Cysto Gastro-Set; Endo-Flex, Voerde, Germany) with a 4 mm biliary dilating balloon (Hurricane RX, Boston Scientific, Natick, MA, USA) as a fistula dilation device in 158 patients undergoing endoscopic transmural drainage of PFC over last 10 years. In the initial period, all patients underwent an attempted

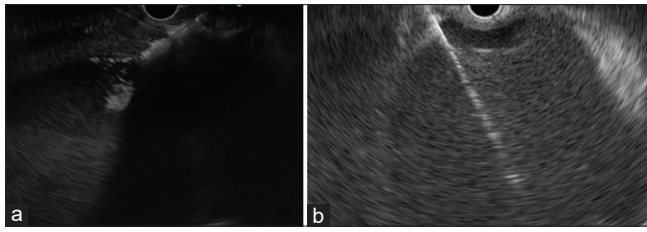
dilatation of fistula tract using noncautery method, and failures were treated with cautery dilatation using needle knife. Subsequent to availability of cystotome, patients in a later phase of the study underwent fistula tract dilatation using a cystotome or dilating balloon depending on the availability of accessories (the accessories were re-used) and affordability of patient due to economic considerations and availability of health insurance.

Thirty-one patients (28 males; mean age:  $37.6 \pm 6.8$  years) underwent attempted fistula tract dilatation using a cystotome [Figure 1a], whereas 127 patients (103 males; mean age:  $37.5 \pm 9.5$  years) underwent attempted dilatation using a balloon catheter [Figure 1b]. The mean size of PFC, thickness of puncture site as well as etiology of underlying acute pancreatitis was comparable between two groups. Majority of collections were located adjacent to body of the pancreas in both the groups. The transgastric route of puncture was used in majority of patients in both the groups (noncautery *vs.* cautery: 96.7% *vs.* 97.6%, respectively). The technical success was 100% in the cystotome group, whereas the fistula tract could be successfully dilated using a balloon in 80% of patients ( $P = 0.0045$ ). No adverse effects were observed in the cystotome group, whereas one patient developed pneumoperitoneum after dilatation in the noncautery group.

In conclusion, the fistula tract dilatation using a cystotome is more effective and safer as compared to a biliary dilating balloon.

### *Declaration of patient consent*

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will



**Figure 1.** EUS-guided transmural drainage of pancreatic fluid collections. The transmural tract being dilated using a cystotome (a) or a dilating biliary balloon (b)

not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

### *Conflicts of interest*

Surinder Singh Rana is an editorial board member of the journal. The article was subject to the journal's standard procedures, with peer review handled independently of this editor and his research groups.

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