Digestive leaks: An approach tailored to both indication and anatomy

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Therapeutic endoscopy plays a major role in the management of digestive leaks, particularly those that occur after surgery. It also offers an effective treatment alternative to repeated surgery in fragile and/or septic patients.

Endoscopic treatment options include placement of self-expandable stents (SES) to bypass the leak, closure of the defect using clips (mainly for treatment of acute iatrogenic perforations) [1], and internal drainage of the leak. Insertion of SES is the most popular and the most often reported option used for leaks that occur after bariatric surgery or those resulting from iatrogenic or spontaneous perforation of the esophagus. For obvious anatomical reasons, water-tightness can be ensured in these locations, allowing leak closure by second intention [2]. The success of SES, however, depends both on the timing (less effective when endoscopic treatment takes place weeks or months after the surgery [3] and the particular anatomy of each patient. Sometimes the leak cannot be effectively covered by a stent, and in these cases, this therapy can be combined with obstruction of the leak with plugs or combined closure with a macroclip [4].

When feasible, SES placement remains, in our opinion, the primary approach for management of digestive leaks, but this technique requires that the collection has been drained percutaneously or that the external fistulae are drained. Even when SES placement is feasible anatomically, internal drainage (or internalisation of the fistula using pigtail stents) can be offered as first-line therapy in delayed leaks, those occurring days or weeks after surgery. In these situations, endoscopic internal drainage (EID) can avoid the need for repeated percutaneous or surgical drainage of the collection. It is also useful for those relapsing after initial stent therapy [4].

The patients reported on by Donatelli et al [5] [*reference to be modified depending on journal issue*] in this issue represent an ideal group for EID, both for anatomical and clinical/timing reasons. Indeed, the majority of their patients have fistulae located in the duodenum or the colon, which are not anatomically adapted for stent therapy, while their patients with esophagojejunal leaks after total gastrectomy had no external drainage, making EID the best first-line approach. Their results are excellent, especially using only single plastic stents, but we must be careful before extending these recommendations to any leak along the gastrointestinal tract. The internal drainage of anastomotic leaks is far from being a new concept. Previous studies on the principle of transluminal drainage of peri-digestive collection [6], have reported the use of temporary insertion of a transgastric catheter into the upper digestive tract defect. Mediastinal collections may be more difficult to manage and, in these cases, a more "active" EID may be useful, consisting of vacuum drainage using a dedicated sponge [7]. However, these reports were associated with trans-nasal drainage, which is often associated with long delays before resumption of oral feeding.

EID drainage definitely has a place in management of digestive leaks but it must be integrated into a tailored therapeutic approach based on the anatomical location of the leak, clinical presentation, presence or absence of external drainage, and the timing of treatment after the original insult. This series of patients with postsurgical leaks represents a cohort selected based on the above criteria. Enthusiasm must, however, be balanced and EID is not the panacea for every case. This is even more clear for post-bariatric leaks [4,8] where optimal treatment requires SES placement, EID, sometimes necrosectomy, and/or fistula tract management with bioactive plugs or fibrin glue. However, this case series is another argument for considering EID as one of the potential first-line approaches in cases of post-operative gastrointestinal leak. Future studies, it is hoped, will help us to further define the place for this technique in

the endoscopic armamentarium of leakage treatment. In situations where these techniques offer equal chance of success, delay before resuming oral food intake, hospitalization duration, and cost should be considered. However, it is reasonable to think that individual situations will need individual answers and that different treatment options will have to be available in departments that strive to become referral centers for endoscopic leakage and fistulae treatment.

Competing interests: None

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