

To Drain or Not to Drain? That Is the Question

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The paper by Siddiqui et al. [1] reports on a retrospective, multicenter study of self-expandable metal stents (SEMS) for preoperative biliary decompression in patients with resectable and borderline resectable carcinoma of the pancreatic head. Two-hundred and forty-one patients (resectable 174, borderline resectable 67) were evaluated. The primary outcome was the effectiveness of SEMS for adequate biliary decompression; secondary outcomes were safety of SEMS in preoperative patients and patency rates and long-term clinical outcomes. Patients with T4 disease were also included because some studies have reported that neoadjuvant therapy downstages tumors, enabling safe tumor margin-negative resection [2–4]. The overall survival was 49 % at 27 months. The authors concluded that SEMS should be considered for patients with resectable or borderline resectable pancreatic cancer with the initial finding of obstructive jaundice, particularly if neoadjuvant therapy is planned. Although retrospective, this study is unique because it shows that SEMS are safe and effective in achieving durable biliary drainage in patients with pancreatic cancer receiving neoadjuvant therapy.

In patients who are candidates for neoadjuvant therapy, initial biliary drainage is advisable since neoadjuvant therapy can take up to several months to accomplish prior to surgery [5]. Biliary drainage before neoadjuvant therapy gives symptomatic relief, reduces the risk of cholangitis due to chemotherapy-related immunosuppression (although cholangitis is rare in malignant biliary obstruction in patients with an intact papilla), prevents coagulopathy, and normalizes liver function tests. Biliary drainage might not

be necessary if patients are candidates for early surgery, and, in contrast, in some cases might even be harmful. Preoperative biliary drainage with plastic stents is associated with a higher rate of complications than in non-stented subjects [6]. Cholangitis in stented patients can delay surgery due to interruptions in therapy, increasing the probability of disease progression.

In the last two decades, SEMS, in comparison with plastic stents, have been inserted more frequently for benign and malignant biliary strictures. SEMS are superior to plastic stents due to their larger diameter, facilitating preoperative biliary decompression, coupled with a lower incidence of complications such as cholangitis [7, 8], but are much more expensive, limiting their use. However, plastic stents can be placed without the need for a tissue diagnosis, and are inexpensive. Nevertheless, placing a metal stent during the first drainage is advantageous over plastic since the drainage is more effective and durable, obviating the need for exchange in the case of non-resectability. It is our practice to obtain tissue when placing SEMS either by brushing, biopsies, or endoscopic ultrasound-guided fine needle aspiration.

In a recent prospective study by Aadam et al. [9], SEMS were placed in 55 patients with resectable and borderline resectable pancreatic head adenocarcinoma complicated by biliary obstruction. Anticipating surgical resection, the minimum length stent was used in order to preserve the maximum length of uninstrumented common hepatic duct above the stent, for future anastomosis. Of the 55 patients, 23 were resectable and 32 were borderline. SEMS malfunction occurred 260 days after placement in 15 % of the patients (occlusion in 13 % and migration in 2 %). SEMS malfunction occurred in 11 % of patients who ultimately underwent pancreaticoduodenectomy and in 24 % of patients with disease progression. Covered SEMS were

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placed in only 9 patients with previous cholecystectomy, without subsequent complications. The authors concluded that the presence of SEMS did not interfere with pancreaticoduodenectomy, and that removing SEMS is not necessary before surgery, if the shortest stent is used.

Conflicting data regarding the effect of preoperative biliary drainage and its relationship with perioperative complications has been published in the past decade [10–13]. In our institution, the decision to stent is always made in conjunction with the involved specialists, such as the surgeons and oncologists, after tumor staging has occurred. The type of stent is chosen on the basis of tumor resectability, the preferences of the surgeon, and the eventuality of neoadjuvant therapy. For non-resectable tumors, predicted life expectancy and the possibility of performing adjuvant chemoradiotherapy are the main factors.

Due to the rapid progression of malignant disease, “quick and appropriate” diagnosis and staging is essential. Identifying patients early as candidates for neoadjuvant treatments is important because they may increase the probability of having negative surgical margins and reduce the number of micrometastases [14]. The European Society of Gastrointestinal Endoscopy recommends preoperative biliary drainage for patients with potentially resectable obstructive biliary malignancy who are candidates for neoadjuvant therapies, in those with acute cholangitis, or in patients with intense pruritus in which surgery has been delayed for other reasons [15]. Regarding the type of stent, it is preferable to use SEMS in patients who are candidates for neoadjuvant therapies, since plastic stents are more prone to complications. Uncovered metal stents are preferred over covered stents, since covered SEMS are at higher risk inducing cholecystitis, migration, and more rarely pancreatitis [16–19]. Furthermore, given the experience of Aadam et al. [9], SEMS should be chosen to be as short as possible in order to leave enough tissue for further anastomosis. Preliminary data show that drug-eluting metal stents appear to be safe, although long-term safety and efficacy data are lacking [20].

With the hope that the future will bring more sophisticated and effective approach and cure for these patients, it must be recalled that radical surgery is today the only potential cure for pancreatic cancer [21], and therefore maximal efforts should be done to bring the operable patient in the operating room as soon as possible.

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