Endoscopic Papillectomy in the Treatment of Adenomas of the Papilla of Vater: Excision Is Exclusively for Experienced Experts

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In November 1968, Hiromi Shinya, a Japanese endoscopist and pioneer in fiberoptic colonoscopy practicing in New York, and a Japanese engineer, Hiroshi Ishikawa, working for a well-known endoscope manufacturer, developed a technique to endoscopically resect polyps in the colon. They baptized it “Shinya’s electro cauterizer”. The concept of snaring polyps was born. They made drawings of this primitive snare (actually very similar to the snare we currently use) and sent the whole project to Tokyo. A few months later, in January 1969, the company replied: “this whole idea is very dangerous: *cancelled*!”. Fifty years later, the GI community acknowledges that endoscopic polypectomy not only has revolutionized the management of early neoplasia in the colon, modifying the natural history of colon cancer, but is applied throughout the gastrointestinal tract, from esophagus to colon.

Ten years after the first description in 1983 of endoscopic papillectomy by Suzuki et al. [1], Ken Binmoeller and Nib Soehendra [2] reported the first series of patients in which endoscopic snare polypectomy was used to remove benign tumors situated on the papilla of Vater. These tumors do not differ substantially from a sessile colonic polyp except that they have a “pseudo-stalk” that contains the terminal portion of the common bile duct and main pancreatic duct. From 1993 to 2017, the results of endoscopic papillectomy have been published in 17 articles, including 1,115 patients.¹ The reported complete resection rate in these series varied from 54 to 92%, the presence of malignant foci from 0 to 37%, and the recurrence rate from 0 to 40%. Eventually, 3–30% of patients underwent surgical treatment. These huge variations may be explained, among others, by selection bias and,

unavoidably, by the experience of the single center. Nevertheless, endoscopic papillectomy consistently proved to be relatively safe (complications rate = 18.2%, mainly pancreatitis and bleeding), with a mortality rate of <0.5% [3]. Based on these data, endoscopic snare resection is currently considered a viable albeit less risky alternative to surgical excision for the treatment of papillary adenomas and other rarer benign tumors of the papilla of Vater (ASGE guidelines, [4]). Ideally, although papillary lesions should be snared and completely resected “*en bloc*”, with growing experience, laterally spreading lesions, requiring a piecemeal resection technique, and lesions extending into the terminal part of the common bile duct and the pancreatic duct have been successfully managed by endoscopic snare resection. Furthermore, papillary adenomas with intramucosal adenocarcinoma, and even T1a adenocarcinomas in high-risk surgical patients, without risk of lymph node metastases, are presently considered for endoscopic resection.

In this issue of *Digestive Diseases and Sciences*, Sahar et al. [5] report on a large series of endoscopic papillectomies performed in a single tertiary referral institution collected over > 20 years. This paper corroborates, once more, the short-term and long-term safety and efficacy of endoscopic snare polypectomy for the management of adenomas located on the papilla of Vater. The papers also highlight the safety and efficacy of repeat endoscopic treatment as 19% of patients had residual adenoma and 80% of these patients were re-treated with only 7% recurrence on long-term follow-up.

Despite the numerous reports and the established therapeutic purpose of endoscopic papillectomy, several issues are still a matter of debate. The first concerns the utility of endoscopic ultrasound (EUS) in the preoperative assessment of papillary neoplasia. The majority of authors use EUS only in selected cases in which the suspicion of cancer with deep invasion is suspected, the tumor is > 2 cm, or there is suspicion of intraductal growth into the biliary or

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¹ Unpublished data collected by the author.

pancreatic ducts. The second issue concerns the need for submucosal injection prior to resection. A randomized controlled study has recently shown that submucosal injection has no advantages compared with simple papillectomy [6]. Exceptions include large lateral spreading tumors, where the injection is needed to safely remove more peripherally located tumor tissue. The third issue is the need for pancreatic stenting in order to prevent acute pancreatitis. Most authors recommend insertion of a 5–7F plastic pancreatic stent after papillectomy. The evidence in favor of this recommendation is very weak and based on a single controlled trial, which was terminated early due to the superiority of stenting [7]. Nib Soehendra, who pioneered the technique, never promoted pancreatic stenting in his huge experience. Nevertheless, placing a pancreatic stent at the end of the procedure has become standard practice, except a few patients with pancreas divisum identified by a preoperative MRCP. The final issue concerns performance of a biliary and/or a pancreatic sphincterotomy after papillectomy or stenting of the bile duct in an effort to prevent late strictures of the orifices. Despite the fact that biliary strictures occur in $\leq 2\%$ of patients [3], some authors suggest routine biliary sphincterotomy, particularly when a portion of the biliary infundibulum is still visible after resection. The evidence, however, does not support this practice except in the case of intraprocedural bleeding as insertion of a biliary stent protects the biliary orifice from complications from hemostatic procedures.

One of the limitations of endoscopic papillectomy was thought to be intraductal growth of the tumor beyond 1 cm. Nonetheless, this is no longer the case and both monopolar cauterization using the distal metallic tip of a diathermy needle [8], and more recently, radiofrequency ablation techniques are safe and effective management tools [9].

In conclusion, endoscopic papillectomy is a safe and effective modality now considered first-line treatment for adenomas, other benign tumors, and intramucosal carcinoma of the papilla of Vater. Post-papillectomy, patients require long-term follow-up due to the risk of residual or recurrent

tumor. Ideally, such procedures should be referred to centers with highly skilled endoscopists trained in this method. In the author's experience, performing papillectomy on a Friday afternoon is not recommended unless one is prepared to come in over the weekend to manage potential bleeding from the resection site.

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