

Endoscopic resection or surgical management for nonampullary duodenal neoplasms?

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An increasing number of nonampullary duodenal neoplasm (NADM) are reported probably due to the increasing prevalence of upper gastrointestinal endoscopy (1,2). NADM encompass a variety of lesions including adenomas, neuroendocrine tumors, and gastrointestinal stromal tumors. Management of NADM depends on symptoms, histopathology and endoscopic features (3). Among NADMs, duodenal adenomas are precancerous lesions so early detection and removable is desirable (4,5). Surgery has been accepted as the standard treatment for duodenal neoplasms (6). Although surgery is highly effective, it may be associated with perioperative morbidity, mortality and long term complications affecting the patient's quality of life (7). Compared to surgery, endoscopic treatment is less invasive, results in shorter hospital stay and lower costs (8). For this reason, endoscopic resection has been suggested as an effective alternative for NADM.

Indications and methods of endoscopic resection for duodenal adenomas remain controversial. Endoscopic mucosal resection (EMR) is the most common endoscopic technique. However, recurrence rates after EMR is high and is associated with considerable adverse events (9,10). This is because EMR in the duodenum is technically difficult (11). The duodenal lumen is thin, narrow and tortuous. Also, the submucosa is fibrotic and rich in vessels resulting in poor lifting by submucosal injection. Endoscopic treatment can be considered as an alternative to surgery only if the rates of

recurrence and complications are comparable to surgery.

In an original article published in *Surgical Endoscopy*, Bartel *et al.* reviewed 121 consecutive patients who underwent surgery or EMR for sporadic NADMs (12). Decision to undergo surgery or EMR was based on multidisciplinary board review of expert endoscopist and surgeons. Recurrence rates and adverse events requiring prolonged admission after each treatment were examined. Surgery included partial and total pancreas-preserving partial duodenectomy (PPPD) with the majority being performed laparoscopically. Surgically resected lesions were larger with more advanced neoplasia and submucosal lesions compared to EMR. *En bloc* resection with negative margins was achieved in all surgical resections but was only achieved in 53% of EMR specimens. As expected, EMR had shorter procedure time, less blood loss, and shorter hospitalization compared to surgery. Early recurrence occurred in 32% of patients and late recurrence occurred in 26% of patients after EMR. All recurrences were <10 mm in size and were treated endoscopically. There was no recurrence after surgery. Complications occurred in 15% of EMR patients and 26% of surgery patients. All complications after EMR were treated endoscopically without need for surgery.

EMR is generally recommend for duodenal adenomas ≤ 20 mm in size and less than 33% of the duodenal circumference (6,12). In this study, 26 lesions measured 20–30 mm and 15 lesions measured 31–50 mm with presumed

involvement of 33% of the duodenal circumference. The authors reported that recurrence rate of these large lesions were similar to lesions ≤ 20 mm with a nonsignificant higher complication rate. The need for long-term surveillance after EMR may be interpreted as a disadvantage. However, the results of this study suggested that EMR can be an effective alternative to surgery in patients for even lesions previously delegated to surgery. Future studies are warranted to determine the optimal indication of EMR in patients with duodenal adenoma.

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Footnote

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