Resection of Gastric Tumors Involving the Pyloric Channel Using Retroflexion in the Duodenum

Jae Myung Park, Chul-Hyun Lim, Jin Soo Kim, Yu Kyung Cho, In Seok Lee, Sang Woo Kim, Myung-Gyu Choi, Kyu Yong Choi, In-Sik Chung

Department of Internal Medicine, The Catholic University of Korea College of Medicine, Seoul, Korea

Background and Aim: Tumors involving pyloric channel have been considered as difficult lesion for successful endoscopic resection. We studied the feasibility of ESD using retroflexion in the duodenum to resect the gastric neoplasia involving the pyloric channel. Treatment outcomes by new ESD technique using retroflexion were compared with those without retroflexion in the duodenum.

Methods: Twenty cases of gastric neoplasia involving the pyloric channel were resected by ESD between 2005 and 2010. In 13 cases, ESDs were performed both in the side of antrum and duodenal bulb using retroflexion with Hook knife (retroflexion group). In 7 cases, ESDs were performed conventionally only in the side of antrum with Insulated Tip knife in 5 cases and Hook knife in 2 cases (conventional group).

Results: Among 20 cases, adenocarcinoma was 4 cases (57%) in the conventional group and 5 (38%) in the retroflexion group. Mean tumor size was 13.6 mm (range, 4~20) and 15.2 mm (range, 6~27) in the conventional and retroflexion group, respectively. Procedure time was not significantly different between the two groups. The rate of en bloc resection with tumor-free margin was 100% in the retroflexion group and 57% in the conventional group (p=0.031). In the conventional group, two patients with early gastric cancer underwent additional subtotal gastrectomy for positive lateral margin, and one patient underwent surgical repair due to perforation. In the retroflexion group, micro-perforation and pyloric channel stenosis occurred in one patient, which resolved with conservative treatment.

Conclusion: Tumors involving pyloric channel could be successfully resected by ESD with Hook knife using retroflexion in the duodenum without severe complication. This technique appears to be a feasible and effective method in the tumors involving the pyloric channel.