Abstract as presented at ESGE Days 2026 (European Society of Gastrointestinal Endoscopy), Milan, Italy by Toru Okuzono M.D., Ph.D., Director Gastroenterology, Sendai Kousei Hospital, Sendai, Japan

DEVELOPMENT OF A NOVEL ANCHOR DEVICE FOR EUS-GUIDED GASTROJEJUNOSTOMY

BACKGROUND

EUS-guided gastrojejunostomy (EUS-GJ) using a lumen-apposing metal stent (LAMS) has been increasingly performed; however, misdeployment and dislocation remain as major complications. Misdeployment may occur when the jejunum separates from the gastric wall after puncture, whereas dislocation may occur when either the gastric or jejunal flange becomes dislodged after stent deployment. As a preprocedural step for EUS-GJ, techniques using a 19-gauge needle to place an anchor have been reported; however, these approaches are technically complicated and time-consuming. Shortening the procedural time is essential for the success of EUS-GJ. Therefore, we developed a novel anchoring device that can be deployed in a single step using a 19G needle. Using this new device, we performed EUS-GJ in living pigs. This product is an investigational, non-approved medical device.

AIM

To evaluate the feasibility of a newly developed anchor device designed for EUS-GJ.

METHODS

Between May and November 2025, EUS-GJ using the novel anchor device was performed in five live pigs (30-36kg). Necropsy was performed immediately in four pigs, whereas one pig underwent necropsy approximately one month later. First, an ENBD tube was advanced beyond the ligament of Treitz, and the jejunum was distended with saline. Using a GF-UCT 260 scope, the stomach and jejunum were fixed with a 20mm anchor device prior to deployment of an electrocautery-enhanced metal stent. The novel anchor was preloaded at the tip of a dedicated 19G needle. After puncturing the saline-distended jejunum from the stomach, the distal flap of the anchor was deployed by pushing the stylet, and withdrawing the needle enabled fixation of the gastric and jejunal walls. We evaluated the success rate of anchor placement, the time required from 19G needle puncture to anchor deployment, and the presence of retained anchors between the stomach and jejunum at necropsy.

RESULTS

Anchor deployment was successful in all cases, and retention between the gastric and jejunal walls was confirmed at necropsy in all pigs. The mean deployment time was 57 seconds (34-85 seconds).

CONCLUSION

The novel anchor device enabled simple and rapid wall fixation during EUS-GJ. This device may have the potential to reduce adverse events such as misdeployment or dislocation and improve the safety of EUS-GJ procedures.