

# Closure of a Large Gastric Defect with Resolution Clips After Endoscopic Submucosal Dissection in the Gastric Fundus



CASE PRESENTED BY:

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## PATIENT HISTORY

A 59-year-old male came for an endoscopy examination with a complaint of six-month history of abdominal fullness. The exam revealed a submucosal tumor in the gastric fundus. Endoscopic ultrasonography showed it originated from the muscularis propria (MP) layer, measuring 2.2×1.2cm in diameter. An abdominal CT scan with contrast was arranged. The lesion was mainly intraluminal growing (Figure 1). He was admitted to our endoscopy unit for endoscopic resection of the tumor.

## PROCEDURE

A standard endoscopic submucosal dissection (ESD) was performed for this patient. After mucosal marking, submucosal injection, precutting of the mucosal and submucosal layers around the lesion were performed with a hook knife. A circumferential incision was made as deep as the MP layer using an insulated-tip knife (Figure 2). The submucosal tumor was carefully dissected en bloc from the serosa, leaving the serosal layer intact (Figure 3). The resulting large gastric defect (<3cm) was successfully closed using Resolution® Clips.

We first narrowed the wound by air suction. Then we used the tip of the clip jaw to hook one side of the mucosa and grasped the other side within the span. The deployment of the first Resolution Clip made the wound a linear one (Figure 4). The following clips were deployed uneventfully and the huge wound was sealed perfectly (Figure 5). The entire procedure took 25 minutes (from mucosal marking to specimen retrieval).

## POST PROCEDURE

The patient was on nothing by mouth after surgery. Post procedure medication included a proton pump inhibitor, antibiotics and haemostatics. The patient was observed for signs of abdominal pain, abdominal distension and peritonitis. None were observed. The patient was on a postoperative fluid diet on day two and discharged uneventfully on day three.

## DISCUSSION

The successful closure of gastric defect after ESD procedure for MP-derived lesions is crucial to prevent gastrointestinal (GI) leakage and leads to the earlier healing of the wound. In this case, the tumor was located in a very difficult place for ESD procedure, the gastric fundus. The re-open and re-close functions of the Resolution Clip enables the easier repositioning of the clips. The deployment of the first clip was very important in this case, because it made the wound a linear one which is much easier for the deployment of the following clips. Effective closure of the wound is required for submucosal lesions originating from deep layers of the gastric wall. The cost effectiveness of clips makes this a mainstream option for closure procedures. The jaw span of Resolution Clip is 11mm-wide, ensuring a strong and deep grasp of the tissue, thus preventing delayed perforation and GI leakage.

## CONCLUSION

This case illustrates the effectiveness of Resolution Clips for closing a large gastric defect after ESD procedure for an MP-derived submucosal tumor in the gastric fundus, allowing safe and rapid recovery for this patient.

