BroadcastMed | nyw_inoue---poem-peroral-endoscopic-myotomy-from-spastic-disorders-to-severe-submucosal-fibrosis-advanced-sigmoid-achalasia-1080p.mp4

HARUHIRO INOUE: So nice to see you again. It's my great honor to be invited last couple of years to Long Island here. And congratulations, Dr. Stavropoulos, 10th anniversary of your Long Island course.

POEM, it's an endoscopic Heller myotomy, the reason Heller myotomy was developed 100 years ago. POEM is a technique to do it using a flexible endoscope after injection mucosotomy and then create a submucosal tunnel. And then after creating submucosal tunnel, we dissect the circular muscle. And then just close the mucosal entry using clips.

The world's first case of the POEM procedure was done 10 years ago. So please note that date of the procedure, September 8, 2008. This is the world's first case. Junction was tight before procedure and then the anterior approach. And the first created submucosal tunnel. And then we cut the muscle, circular muscle, a total dissection of the low esophageal sphincter.

This at the end of the procedure. And then close the mucosal entry using clips. So this is the volume [INAUDIBLE] before and after procedure. Yes, he's got a score before seven. But the after procedure improved to one. Eight years after procedure, still keeps the same symptom score.

I met the patient in 2017. Last year. I met him. And he said, so 100% satisfaction, a 20-kilogram weight gain, and no GERD symptom. This is actual video clip eight years, eight months after the first POEM procedure, so open hiatus and then no reflux disease.

So anyway, after this, in our institute we perform the 1,600 cases of a POEM. In Japan, approximately 2,300 cases. Success rate depends upon the criteria. But more than 95% success rate. We don't have severe complication, but some minor complication, but all can be treated conservatively.

Then, now, we think the indication of the POEM is all achalasia, including the other motility disorders of the esophagus. This is a case of a jack-hammer esophagus, 68-year male. Endoscopies like this, like a corkscrew-like findings. And then high-resolution myotomy demonstrate a very high contraction of the distal esophagus.

This is after POEM procedure. Muscle [INAUDIBLE] of the body of the esophagus was very

sick. And then we have dissected full lengths of the area where they have abnormal contractions.

So this is another sample of a diffused esophagus spasm, a very good indication. So left side is a before procedure, and the right side is after procedure. This was a [INAUDIBLE], but it's OK.

So the point is in the jack-hammer esophagus and the diffused esophagus spasm, we tried to please up the low esophageal sphincter. We cut only the abnormal muscle. Wow, this is a video clip.

Anyway, in order to please up the low esophageal sphincter, the point-- at the end of-- the beginning of the low esophageal sphincter muscle layer becomes a changed [INAUDIBLE] thing. So low esophageal sphincter itself, a very thin muscle layer. Then we can [INAUDIBLE] the-- now the muscle layer changed to the low esophageal sphincter.

This is a point of low esophagus sphincter here. So this is a very nice demonstration. The low esophageal sphincter itself very thin, and the proximal part of the esophagus's muscle layer was very thick. This is a case of a diffused esophageal spasm.

Eckardt score improved dramatically. So recent publication of the POEM, success rate is very high in any institute, so 92% and more. But one of the problems is-- potential problem is the GERD after POEM procedure, 22% to 53% reported.

So I will skip this point. And talking the GERD after POEM, we have two series of RCT. So [INAUDIBLE] demonstrated limited hiatal dissection. It's a surgical paper. Limited hiatal dissection make less incidence of GERD after Heller myotomy.

So generally, theoretically, anti-reflux procedure is not necessary in the POEM procedure, I think. And another point, another factor which affects the GERD after POEM may be the length of gastric-side myotomy. So in order to control the gastric side length of myotomy, we use the double-scope method, so like this.

So baby scope is in the stomach. And then in a little flex, we can check the submucosal endoscope, already reached through the gastric cardia. This method is-- one advantage is avoid incomplete myotomy. And another point is avoid too much cut onto the gastric cardia, which may cause the GERD after procedure.

So anyway, solution of the GERD after POEM is like this. Solution one is a laparoscopic Dor anti-reflux procedure after POEM. That is one solution. The second solution of controlling of a gastric myotomy length using double scope. 1 to 2 centimeters is the best length of the gastric side. And that third solution may be the POEM plus fundoplication.

So far we've performed 21 cases. A procedure is like this. We perform our POEM procedure in an anterior wall. And then at the end of the myotomy, we get in the abdominal cavity directly through the distal end of the submucosal tunnel and then catch a grasp the gastric fundus, and then make fundoplication like this.

So actual procedure is like this. This is right after anterior myotomy. So in abdominal side, we can identify the diaphragm through the submucosal tunnel, so light behind the diaphragm. Now we are trying to make a direct connection to the gastric cavity.

This is a peritoneum. And behind, we can see left liver lobe. Cut and open-- now we open the peritoneal cavity and then widen the opening of the peritoneum. And then after this we can see anterior. Can see left liver on the abdominal wall. And the bottom half, we can recognize the gastric wall, anterior gastric wall, gastric fundus.

Then this is a simulation using a grasping forceps. We catch the anterior wall of the stomach and the pull it back to the esophageal distal end of the tunnel. This is simulation. Behind you can see a liver lobe.

So in our procedure we use a loop and a clip technique. We place the endoloop using clips-- four or five clips onto the gastric fundus. This is second clip. Anyway, four or five clips is necessary to catch, to grasp the gastric wall. And then, so this is an anchor.

Anchor is placed on the distal end of the submucosal tunnel muscle layer and the [INAUDIBLE] ulcer. This is the first one. And then we put the three or four clips to the site. And then after that, we close the loop and then make a fundoplication.

So during this procedure, we actually check the condition of the gastric cardia in a little flex view. The junction is open because we perform the POEM procedure. And then now the submucosal endoscope already out of the gastric fundus anterior wall. And then we catch it, the same case.

So we catch the anterior wall outside the stomach and then pull it toward the abdominal esophagus. Now you can see fundoplication. This endoscopic image is very similar to

[INAUDIBLE] fundoplication. And then please also note that the hiatus becomes tight, relatively tight.

So this is the pH-impedance monitoring before original POEM and the POEM-F. So improve of the [INAUDIBLE] score. So in conclusion, Chairman, ladies, and gentlemen, we have several solutions for GERD after POEM.

One of the simple solutions, when we performed the original POEM procedure, it's better to avoid the too long gastric myotomy. Best length of the gastric myotomy is 1 to 2 centimeters. Now, in order to make it a double-scope, check during the procedure is very important. Another solution must be a POEM plus endoscopic fundoplication. Thank you very much.