

# International Training Grant Recipient Shares Insight on Learning Endoscopic Submucosal Dissection (ESD), Peroral Endoscopic Myotomy (POEM) From Japanese Pioneer

By Ryan Law, DO

Dr. Law was recently named Editor-in-Chief of the *ACG Case Reports Journal*.

As the recipient of the 2013 ACG North American International Training Grant, I was afforded the opportunity to work at the Digestive Disease Center at Koto-Toyosu Hospital learning techniques of endoscopic submucosal dissection (ESD) and peroral endoscopic myotomy (POEM) under the mentorship of Dr. Haruhiro Inoue, a pioneer in the field of endoscopy. Koto-Toyosu Hospital is a newly-built flagship teaching hospital for Showa University located in Tokyo, Japan, offering care to local, national, and international patients.

ESD is a recently described advanced endoscopic procedure used to resect early cancers and other submucosal lesions within the esophagus, stomach, and colon. This technique has been refined, and is routinely performed, in the Far East due to the high incidence of gastric cancer; however, ESD is less commonly performed in the United States and is limited to expert centers due to the relative rarity of early diagnosed gastric cancers. In the last decade, the development of the POEM procedure has revolutionized the treatment options for achalasia, an esophageal motility disorder historically treated with surgical intervention. The POEM procedure is performed via creation of a submucosal tunnel which permits access to and incision of the poorly functioning esophageal musculature, the main culprit in achalasia. Dr. Inoue and his colleagues routinely perform ESD within the GI tract and, in 2010, were the first to perform the POEM procedure in humans, thus Koto-Toyosu Hospital seemed an ideal location to learn these advanced therapies.

During my 4 weeks in Tokyo, I was able to observe a variety of ESD cases and nearly 25 POEM procedures. This experience helped solidify the indications, didactic theory, and endoscopic skill associated with both techniques. I was most impressed by the meticulous care that went into each POEM procedure. Generally, Dr. Inoue and his team would perform between 1-3 POEM procedures 3 days per week, with the other days reserved for routine endoscopy and didactics. All procedural plans and imaging were carefully



ACG Training Grant recipient Ryan Law, MD (far left), recently studied ESD and POEM techniques in Japan with Haruhiro Inoue, MD.

discussed amongst the endoscopy team prior to beginning the POEM with the goal of minimizing risk to the patient. The POEM procedure was performed with precise and painstaking detail and only finished after adequate relaxation of previously abnormal esophageal musculature was demonstrated. Through observation I was able to gain insight into the complexity of the procedure, the necessary techniques and accessories required, and potential pitfalls encountered during the learning process.

My clinical interests include all aspects of therapeutic endoscopy and endoscopic innovation, and I hope to incorporate the techniques learned under Dr. Inoue's guidance into my future clinical practice. With the solid foundation of ESD and POEM knowledge gained from this experience, I plan to begin the next phase of my training using an ex vivo pig model with subsequent progression to an in vivo pig model and eventually human subjects. I am truly grateful to the ACG, Dr. Inoue, and the Digestive Disease Center staff at Koto-Toyosu Hospital for this unique and incredible experi-

ence, an opportunity which would not have been possible otherwise. ACG



Dr. Law (above, in dark suit) with some of the Koto-Toyosu Hospital team. A POEM case is performed (right).

