中文題目:經口內視鏡食道下括約肌切開術對於治療食道弛緩不能病患的安全性與臨床療效:一南台灣醫學中心報告 英文題目: The safety clinical efficacy of Per-Oral Endoscopic Myotomy(POEM) for Achalasia: A single center experience in Southern Taiwan

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**Background:** Achalasia is a primary esophageal motor disorder of unknown etiology characterized manometrically by insufficient relaxation of the lower esophageal sphincter (LES) and loss of esophageal peristalsis. Achalasia equally affects both sexes and all ethnicities and it is one of the rare primary motility dysfunctions of the esophagus which has no curative treatment. Peroral endoscopic myotomy (POEM) was a revolutionized treatment of achalasia and was first described in 2010 by Professor Inoue. We aimed to evaluate the safety and clinical efficacy of POEM for achalasia patients in Kaohsiung CGMH.

<u>Method:</u> From July 2015 to May 2020, patients with achalasia who received POEM treatment was enrolled into this study retrospectively. The diagnosis of achalasia including clinical symptoms (dysphagia, food regurgitation, body weight loss, chest pain), endoscopic finding, barium esophagogram, and esophageal manometry study (conventional or high-resolution). Endoscopic ultrasound and/or chest computed tomogram was arranged to exclude secondary achalasia. Eckardt score and LES pressure was recorded before POEM and three to six months after POEM. We collected the patient data by chart review, including the patient characteristics (age, sex, body mass index), the pre-POEM and post-POEM LES pressure, pre-POEM and post-POEM Eckardt score, procedure time of POEM, and post POEM complication or symptom. The definition of clinical remission after POEM was totally disappeared of symptoms or the Eckardt score had improved by at least 2 points and didn't exceed a score of 3.

**Results:** 32 patients (19 female, 59%) who underwent POEM were enrolled into this study. The mean age is 46.3 years old. The mean BMI is 20.6. There are 10 patients received high-resolution manometry (HRM). Seven patients had previous endoscopic-guided pneumatic dilatation for achalasia before POEM. Six patients were diagnosed as type I achalasia and 4 patients as type II according to Chicago classification. The mean pre-POEM LES pressure was 34.8 mmHg and post-POEM 3months LES pressure was 21.5 mmHg. The average POEM time was 47.4mins. The average Eckardt score improved from 8.3 to 0.7 after POEM. The average postoperative follow up time was 16.5months. There was no POEM related immediate or delayed major complications (bleeding, perforation or mortality). Three patients had fever and one patient had asthma attack after POEM during admission. Only one patient received two times POEM due to recurrent symptom of dysphagia. Six patients (18%) had Gastroesophageal reflux disease (GERD) after POEM procedure.

<u>Conclusions</u>: Our data showed that the POEM treatment for achalasia was safe with low complication rate. 96.9%(31/32) patients had long-term clinical remission after POEM except one patient who received 2<sup>nd</sup> POEM one year after due to recurrent dysphagia. However, there was about 18% of patients had GERD after treatment.