

**Multicenter collaborative retrospective review of peroral endoscopic myotomy for esophageal achalasia; examination of more than 1,300 cases at 8 facilities in Japan**

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Score	Reviewer	Reject Comment	Overall Comment
5	Natan Zundel		
6	Andrew Kastenmeier		
6	Ashwin Kurian		
4	James Ellsmere		

**Introduction:** Peroral endoscopic myotomy (POEM) is revolutionary treatment for esophageal achalasia. Since Inoue et al. reported the first use of POEM in 2008, many cases have been reported worldwide, but there are few studies including more than 1000 cases. We report the outcome of POEM at 8 facilities in Japan.

**Aim:** To review the results and adverse effects of POEM performed for achalasia between September 2008 and July 2017 at 8 facilities in Japan.

**Methods:** Follow-up data after POEM was gathered within 3 months postoperatively by medical interview, endoscopic examination, and manometry. The same evaluations were repeated annually. To assess the safety of the procedure, we evaluated adverse events using the Clavien-Dindo classification.

**Results:** During the decade under review, 2164 POEM procedures were performed, for which adequate information was available for detailed review in 1307 cases.

The achalasia was the straight type in 1053 cases (80%), sigmoid type in 238 cases (18%), and related disorders in 16 cases (2%). The average patient age was 51.0 years (range 3–95 years); 711 (54%) were males and 596 (46%) were females. Previous treatment included balloon dilatation in 30% and surgery in 3%. The average operation time was 100 minutes. The mean total length of myotomy was 14 cm, extending into the stomach a mean of 3 cm. The pressure of the lower esophageal sphincter was reduced from a mean of 41.3 mmHg to 18.2 mmHg, a significant difference between pre- and postoperative values. The response rate (Eckardt score  $\geq 3$  or less) was 95.2%. We noted 50 adverse events (3.8%) of grade IIIa or less, but all were alleviated with conservative treatment. There were no grades IIIb or greater adverse events. After POEM, erosive esophagitis according to the Los Angeles classification was not present in 36%, grade A in 34%, B in 24%, C in 6%, and D in 0%. In addition, symptomatic GERD after POEM was confirmed in 16%. However, both erosive esophagitis and symptomatic GERD responded to treatment with a proton pump inhibitor (PPI).

**Conclusion:** In this study of more than 1,000 cases, the outcome of POEM for achalasia was good. No serious adverse events occurred, and about GERD after POEM, no cases were refractory to treatment with PPI. POEM is a safe and effective treatment for esophageal achalasia.