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*Abstract issue*



 **Thieme**

**Conflicts of Interest** Authors do not have any conflict of interest to disclose.

#### References

- [1] Mavrogenis G, Zachou M, Tsevas I, Markoglou K, Zachariadis D, Spanomanoli A, Chatzis M, Bazerbach F. Tunnel-free peroral endoscopic myotomy reduces procedural time and maintains efficacy in Zenker's diverticulum. *Ann Gastroenterol* 2024; 37: 509–513
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### MP041 The choice of the endoscopic method of treatment of Zenker's diverticulum depending on its size

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**Aims** Zenker's diverticulum is a rare disease with a frequency of 1:10,000 of the population. Today, endoscopic treatment can be considered the gold standard, but the recurrence rate after endoscopic treatment remains high and depends on the size of the diverticulum.

**Methods** 18 patients with Zenker's diverticula of various sizes, from 3.0 to 11 cm, took part in our research for the period of 2023-2024. The patients were divided into two groups, the first group included 7 patients with diverticula whose size was on average from 3 to 5 cm, the second group included 11 patients who had diverticula from 5 to 11 cm in size. The size of the diverticulum was estimated by X-ray and endoscopic data. All operations were performed under general anesthesia in the supine position and antibiotic prophylaxis. The degree of dysphagia was assessed according to the Eckhard School, in the first group it was 4-5 points and in the second 6-7 [1-4].

**Results** in the first group, we used the Z-POEM free tunnel method, which made it possible to reduce the operation time from 40 minutes to 15-20 minutes. There were no complications during the operation, the wound was closed with 4-5 hemostatic clips. No recurrence was observed during observation. In the second group, patients underwent Z-POEM + mucosotomy method. Mucosotomy was performed in all patients with large diverticula, mucosotomy was performed to the bottom of the diverticulum, both from the side of the diverticulum and from the side of the esophagus. The dissected mucosa was closed with hemostatic clips in the form of a horseshoe. Depending on the size, the number of clips could be from 7 to 20 clips. There were no complications during the operation. In the long-term follow-up, only two patients with diverticula measuring 10 and 11 cm were diagnosed with dysphagia, 4 months after the operation, which was due to insufficient mucosotomy. During the control endoscopic examination, we observed a mucous bridge, which was re-dissected.

**Conclusions** according to our data, we can conclude that Z-POEM free tunnel is an effective method in the treatment of diverticula up to 5 cm in size, with a reduction in the time of surgery and hospital stay. For large diverticula, the Z-POEM method with mandatory mucosotomy is effective, which gives a low percentage of recurrence in the distant observed. Patients in both groups have symptoms of dysphagia according to the scale Eckhard decreased and was at the level of 0-2 points, which indicates the effectiveness of endoscopic treatment.

**Conflicts of Interest** Authors do not have any conflict of interest to disclose.

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### MP042 Comparative Analysis of Z-POEM and Flexible Endoscopic Septotomy for symptomatic Zenker's Diverticulum

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**Aims** Nowadays, endoscopic treatment for esophageal Zenker's diverticulum is considered the standard of care, with flexible endoscopic septotomy (FES) being the first technique to be widely adopted. Since 2016, submucosal tunneling Per-Oral Endoscopic Myotomy (Z-POEM) has emerged as an innovative therapeutic approach. However, medium-term efficacy comparisons between Z-POEM and FES remain limited. The aim of this study was to compare the clinical success and safety of Z-POEM and FES.

**Methods** This study was a retrospective analysis of a large group of patients treated for Zenker's diverticulum across two tertiary care centers. The patients were divided into two groups: those who underwent Z-POEM between 2021 and 2024, and those who underwent FES between 2008 and 2024. Demographic and clinical data, including Charlson Comorbidity Index, Kothari scores, clinical success rates, adverse events, and follow-up duration, were analyzed and compared among the two groups [1-4].

**Results** Sixty-six patients affected by Zenker's diverticulum underwent endoscopic treatment in the study period. Of these, 32 patients (mean age 66.8 ± 10.7 years) underwent Z-POEM, while 34 patients (mean age 73.5 ± 10.2 years) underwent FES. The mean Charlson Comorbidity Index was similar between groups (Z-POEM: 3.28 ± 1.80 vs. FES: 3.4 ± 1.6; p = 0.708). The pre-procedural Kothari-Haber score was comparable (mean 7.3 ± 1.4 for Z-POEM vs. 7.3 ± 1.1 for FES; p = 0.981). The post-procedural Kothari-Haber score was significantly lower in the Z-POEM group (1.3 ± 1.3) compared to the FES group (2.7 ± 2.8; p = 0.010), indicating better symptom resolution. The median follow-up period was 37.7 months (IQR: 14.8 – 74.6 months) for the FES group and 12.2 months (IQR: 7.4 – 21.9 months) for the Z-POEM group (p < 0.0001). Technical success was achieved in 100% in both groups. Clinical success was significantly higher in the Z-POEM group (93.8%; 95% CI: 75% – 99%) compared to the FES group (64.5%; 95% CI: 50% – 82%; p = 0.005). The rate of adverse events was lower in the Z-POEM group (6.25%) compared to the FES group (23.53%), however this difference did not reach statistical significance (p = 0.084).

**Conclusions** This multicenter retrospective study suggests that Z-POEM is an effective and safe alternative to FES for the treatment of Zenker's diverticulum. The Z-POEM technique demonstrated a significantly higher clinical success rate and a trend towards fewer adverse events. Of particular interest, no differences in terms of efficacy and adverse events were observed between the first 10 patients (during the learning curve) treated with Z-POEM and those treated thereafter. It should be noted that although the follow-up period for Z-POEM was generally shorter, no recurrence of symptoms was observed even in patients with longer follow-up durations. These findings support the use of Z-POEM as a viable and effective approach, warranting further investigation in larger multicenter cohorts to confirm its advantages [5].