

# Interesting Findings of High-resolution Manometry Before and After Treatment in a Case of Diffuse Esophageal Spasm

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A 45-year-old woman visited the clinic presenting with squeezing chest pain during or after meal for 2 weeks. The findings of her esophagogastroduodenoscopy were unremarkable. Upon suspicion of non-erosive reflux disease, a proton pump inhibitor (pantoprazole 40 mg) had been prescribed to her, however her symptom was not relieved. She then was admitted to the hospital. To exclude coronary heart disease, cardiac tests including electrocardiography and echocardiography were performed, but no abnormality was found. To investigate esophageal motility disorder, high-resolution manometry (HRM) was performed, which revealed normal integrated relaxation pressure in 30% of swallows with reduced distal latency (DL, < 4.5 sec) and increased distal contractile integral (DCI) (Table and Figure A). Diffuse esophageal spasm (DES) was diagnosed and diltiazem (180 mg) was additionally prescribed to her. After 10 days of treatment, her symptom was moderately relieved and the short-term follow-up HRM showed slightly improved DL and decreased DCI (Figure B). After 90 days, her symptom disappeared and HRM findings completely were normalized (Figure C).

According to the Chicago classification, DES is defined as normal mean integrated relaxation pressure and  $\geq 20\%$  of swallows with reduced DL (< 4.5 sec).<sup>1</sup> There are no large longi-

tudinal studies of natural history in patients with DES. One small prospective study has reported that during long-term follow-up, the manometric findings of DES patients changed very little and the intensity of symptoms reduced.<sup>2,3</sup> It suggests that acid sup-

**Table.** The Change of Symptoms and Manometry Findings Before and After Treatment

	Baseline	After treatment	
		10 days	90 days
Chest pain			
Frequency	Daily	Weekly	None
Intensity <sup>a</sup>	10	2	0
Dysphagia			
Frequency	Daily	3-4/wk	None
Intensity <sup>a</sup>	10	6	0
Manometry			
Integrated relaxation pressure (mmHg)	3.2	3.9	2.5
Mean distal latency (sec)	4.8	4.9	5.2
Frequency of reduced distal latency <sup>b</sup> (%)	30	20	0
Mean distal contractile integral (mmHg/cm/sec)	6178.0	365.5	1393.3

<sup>a</sup>Visual analogue scale, <sup>b</sup>Reduced distal latency: < 4.5 sec.

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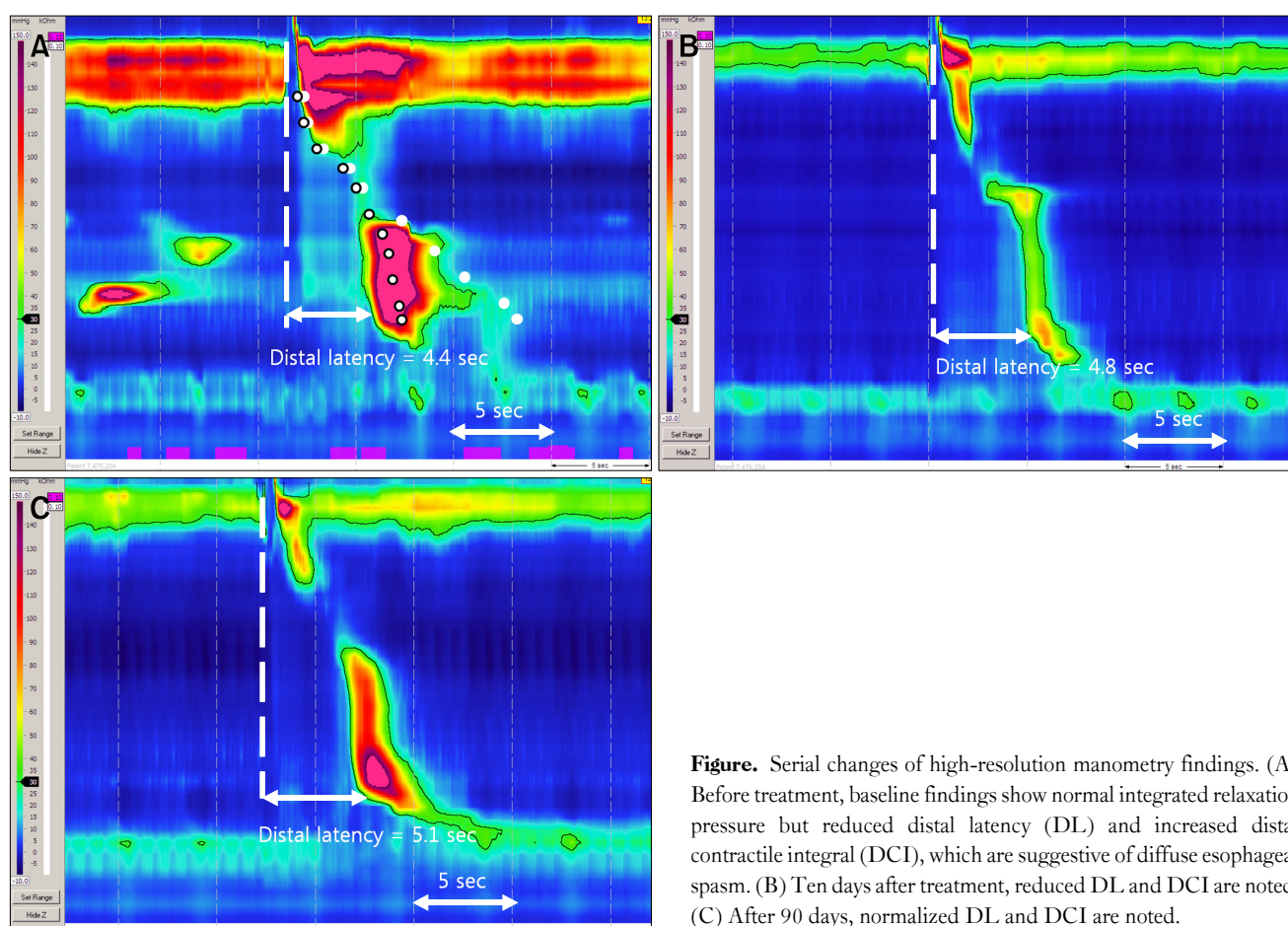
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pression and smooth muscle relaxation are effective in some patients with DES.<sup>2</sup> Herein is an interesting case of DES, in which both HRM features and symptoms responded to proton pump inhibitor and calcium channel blocker.

## References

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