

Hot Water Swallows May Improve Symptoms in Patients With Achalasia

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Article: Response of esophagus to high and low temperatures in patients with achalasia

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(*J Neurogastroenterol Motil* 2012;18:391-398)

Cold water swallows may provoke dysphagia or chest pain in some patients with esophageal motility disorders. In contrast, hot water swallows may improve esophageal symptoms. Actually, some patients with esophageal motility disorders experience that their esophageal symptoms tend to improve after drinking hot water. In 1998, Triadafilopoulos et al¹ published the first study on the clinical and therapeutic effects of hot water ingestion in patients with esophageal motility disorders including achalasia. They investigated the effects of hot water swallow on esophageal symptoms using conventional esophageal manometry and esophageal scintigraphy in 48 men and women with intermittent dysphagia to both solids and liquids, chest pain and/or regurgitation. Clinically, 28 (58%) of 48 patients presented significant improvement of their symptoms after ingesting hot water. Esophageal clearance was accelerated, and the amplitude and duration of esophageal body contractions were decreased by drinking hot water in patients with esophageal motility disorders, from mild non-specific motor disorders to diffuse esophageal spasm and achalasia. These findings may suggest this simple and safe maneuver can be applicable in patients with esophageal motility disorders.

There have been several studies regarding effects of food temperature on esophageal function.²⁻⁶ In 1956, Respass et al² published changes in human esophageal motor function after ingestion of iced water and iced barium and they observed dilatation of the cooled esophagus. Several years later, similar results to that of previous study were reported, in which hot water tended to traverse the lower esophageal sphincter more rapidly than did room temperature water and cold water.³ Catalano et al⁴ investigated the effect of water temperature on esophageal function in patients with esophageal motility disorders applying manometric monitoring during the administration of wet swallows with cold and warm water boluses. The esophageal body contractions were changed from normal amplitude peristaltic contractions (warm bolus) to low amplitude aperistaltic contractions (cold bolus). Cooling of esophagus may cause a transient state of relative paralysis in the distal esophagus and lower esophageal sphincter. However, another report showed alterations in bolus temperature did not elicit any significant changes in the parameters of esophageal peristalsis in healthy volunteers.⁶ It is conceivable that changes in esophageal wall temperature can alter only human

Received: September 21, 2012 Revised: None Accepted: September 25, 2012

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Financial support: None.

Conflicts of interest: None.

esophageal peristalsis. We still do not know how cold or hot water swallow alters the esophageal motor and sensory function.

In this issue, Ren et al⁷ from China conducted a small study to elucidate the mechanism of these clinically useful findings in untreated patients with achalasia using high-resolution esophageal manometry. In 36 achalasia patients, 56% of patients had exacerbated dysphagia or regurgitation when they ate cold food according to the questionnaire on food temperature and symptoms. In contrast, 88% had relieved chest pain after drinking hot water. High-resolution manometry was performed in 2 separate days, with room temperature (25°C) then hot water swallow (50°C), and room temperature (25°C) then cold water swallow (2°C), in 12 patients with achalasia who had never been treated with invasive therapies. Cold water swallow increased lower esophageal sphincter resting pressure, prolonged the duration of esophageal contraction. In contrast, hot water swallow decreased lower esophageal sphincter resting and residual pressures during swallowing, and shortened the duration of esophageal body contraction. Hot water swallows and warm ingestion with avoidance of cold water swallows can be recommended in patient with achalasia.

In conclusion, despite some clinical experiences and small studies indicated usefulness of hot or warm food ingestion in pa-

tients with achalasia, further well controlled studies are needed to recommend this simple maneuver as one of lifestyle modifications.

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