

The Effectiveness of Visceral Manipulation on Dyspepsia

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Abstract

Background: Dyspepsia affects 30-40% of the American population (1). Although commonly thought of as a result of lifestyle, most clinicians agree the mechanism of pathophysiology is a dysfunction of the gastroesophageal junction (GEJ). The conservative treatment for dyspepsia is to modify the lifestyle (foods, medications, tobacco, alcohol, elevation of the head of bed) and acid suppression, often for life.

Methods: An alternative to traditional approaches is presented in this pilot study, specifically, using visceral manipulation to relax the fibromuscular restrictions of the GEJ and surrounding organs. Five patients consented to visceral manipulation of the GEJ for treatment of dyspepsia.

Results: Four of five patients reported reductions in symptom scores from 6-20 points (out of 50 total points) at a 2-week follow-up.

Conclusions: These findings suggest that repeating the technique 5-6 times within the same treatment, as recommended by Barral (3), may allow the GEJ to regain natural elasticity and function in the dynamic balance of forces from the thoracic and abdominal pressures.

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Introduction

Dyspepsia or gastroesophageal reflux disease (GERD) describes the condition in which the esophageal mucosa is exposed to the retrograde flow of gastric contents, usually creating a variety of symptoms, most commonly heartburn. It is estimated that at least 30-40% of the American population suffers from dyspepsia at least once a month (1). This statistic probably reflects the occasional overeater or a person consuming foods known to have a neurohormonal relaxation effect on the GEJ. There are multiple factors contributing to the pathophysiology of dyspepsia. These include the volume and nature of gastric contents, the resilience of the mucosal barrier to insult, and the motility of the esophagus and stomach (2). Although many authors refer to the gastroesophageal junction (GEJ) as a sphincter, it functions as a physiological sphincter only if the appropriate tone and elastic qualities of the GEJ are present. This pilot study was undertaken to explore the relationship of tone in the GEJ and symptoms of dyspepsia. By recording the symptoms of dyspeptic patients before and after visceral manipulation of the GEJ, this study demonstrated that manipulation would reduce the symptoms of dyspepsia.

One of the most important distinctions to be made regarding this pilot study is the underlying premise that the GEJ is not a sphincter. It is a physiological sphincter when it is maintained in good tone, and can exist with balanced reciprocal pressures from the abdomen and thorax.

Recall that the esophagus is closely related anatomically to the trachea and left bronchus as it deviates to the left to join the cardia of the stomach. The diaphragmatic section of esophagus is covered by peritoneum anteriorly and posteriorly, and surrounded by the

right crus of the diaphragm as it curves left under the esophagus, over the top and down the right to become the suspensory muscle of the duodenum or the ligament of Trietz. In addition there is a tough fibrous phrenoesophageal ligament and a subperitoneal sheath which surrounds the GEJ and attaches it to the peritoneum and the diaphragmatic crura. Forces that can interfere with the sphincter-like function include changes in abdominal or thoracic pressure, changes in the peristaltic motion of the esophagus, or stretching of the gastrophrenic ligament or the upper fundus.

The GEJ is approximately 2-3 cm in length and is subject to the constant motions of the beating heart and aorta and everchanging pressures of the abdominal and thoracic cavities. The esophagus has its own motion of peristalsis which prevents reflux when sleeping and during abdominal distention, as after a meal. A longitudinal tension is present on the esophagus and contributes to the closing of the GEJ. The esophagus also has an axis upon which it rotates and this twisting motion adds to the reinforcement of the GEJ. A final ligament of support is the coronary (triangular) ligament of the liver as it is a continuation of the gastrophrenic ligament. Any change in thoracic or abdominal pressure can strain the fibromuscular and elastic nature of the GEJ and disrupt the delicate tone preventing reflux. An additional factor to be considered is the stretching of the upper fundus or gastrophrenic ligament which can create abnormal tensions on the cholinergic gastric fibers and vagus nerves. This would act as a stimulus for the secretion of gastric acid. Muscular tone and alterations in function are commonly seen in scleroderma, hiatal hernia, cirrhosis of the liver and any surgical interventions of either the thorax or abdomen, as these alter the reciprocal pressures and neurohormonal balance.

Materials and Methods

This pilot study was undertaken at the Family Medicine Center in Colorado Springs during a two-year family practice residency program. Patients were selected who routinely used antacid medications and were interested in an alternative. Patients were selected if they had 3/10 of the following symptoms: heartburn, acid regurgitation, belching, bloating, early satiety, symptoms worse at night or with a full stomach, nausea, anorexia, or emotional stress. Five patients were selected by the above symptoms and through written, explained consent, agreed to have visceral manipulation and complete the necessary paperwork consisting of a symptom scale at the time of treatment, a 2-week follow-up and exclusion information. The symptom questionnaire included 5 categories of how dyspepsia affected their quality of life. These 5 categories included pain and intensity, interference with eating, sleeping difficulties, positions of discomfort, and physical activity. Exclusion criteria were met for 8 possible contraindications for visceral manipulation. These included a history of thoracic or gastric surgery, a history of ulcers, gastric cancer, or of hiatal hernia, as well as information regarding symptoms of chest pain, hematochezia, alcoholism or weight loss. The symptom questionnaire was designed from the Dallas Pain Questionnaire and had ratings from 1-10, with ten denoting the most intense symptom. The direct visceral relief technique of the GEJ was performed as described in Jean-Pierre Barral's book "Visceral Manipulation II" (3). This technique is performed with the patient in a seated, kyphosed position with the operator's fingers in the subcostal area, standing behind the patient. The fingers are pushed posteriorly, and approximately 2 cm. to the left of the linea alba. This allows for the localization of the cardia and GEJ. The patient is then

bent backward while pressure with the fingers is directed downward to lower the cardia and pull the GEJ out of the thorax, releasing the gastrophrenic, diaphragmatic crura and peritoneal restrictions. It is recommended that the technique is applied repeatedly 5-6 times and delicately as to reach a limit of discomfort, but not cause pain.

Results/Discussion

Four of the five consenting patients received relief in the study and the patient who only improved by one point, suffered recall of past sexual abuse during the treatment period. Most manual manipulators understand that the stomach can be a center for emotional stress and the patient and myself were prepared for this possible challenge. The remaining four patients felt a reduction in the intensity and occurrence of dyspepsia, but none were completely symptom free. The ratings on the symptom questionnaire at the two week follow-up were reduced from 5-20 points, from a total of 50.

The relief technique described by Dr. Barral is most effective when repeated 5-6 times within the same treatment and is enhanced by manipulation of various other regions first, namely the attachments of the liver, pylorus, fundus, the psoas and skeletal restrictions. I was interested in the application of this technique in the busy office practice and did not follow the recommendations of Dr. Barral. With the findings of improvement in this study, using only one application of treatment, I believe if done with sufficient time and releasing the recommended areas of restriction, that this form of treatment may be beneficial to chronic sufferers of dyspepsia, seeking an alternative to traditional therapies.

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