

CLINICAL VIGNETTE

Integrative East-West Approach to Treatment of Idiopathic Gastroparesis

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Case Presentation

A 67-year-old male with no significant past medical history presented to the East West Medicine Clinic with abdominal pain for the past year. The patient described his pain as abdominal distention and fullness, which did not radiate and worsened after eating large meals and improved with rest. He also reported associated fatigue.

He has undergone extensive evaluation 3 months prior. This included EDG and colonoscopy without abnormalities. CT scan of the abdomen and pelvis showed only fatty infiltrate of his liver. Nuclear medicine gastric emptying scan showed abnormally delayed gastric emptying, with only 32% emptied at 90 minutes and an elevated gastric emptying (T ½) of 119 minutes (normal between 50-90 minutes) and the patient was diagnosed with idiopathic gastroparesis.

The patient did not take any medications. On review of systems, he noted significant fatigue after exertion and lightheadedness. He lived with his wife, with whom he has a good relationship. He denied a family history of gastrointestinal issues. He slept about 6-8 hours per day but characterized his sleep as poor due to his symptoms. He denied any current stressors aside from his health concerns, however, he reported a stressful childhood.

Since the diagnosis of gastroparesis, the patient ate small meals 4 to 5 times per day. He also limited fat and fiber intake. He has once daily loose bowel movements.

On the initial physical exam, his vital signs were within normal limits. His posture was poor, with tight neck and shoulder muscles. Hyperirritable trigger points were noted on his trapezius muscles, low back, and abdomen (Figure 1a). A picture of his tongue is shown (Figure 1b).

The tongue diagnosis is central to a comprehensive East West Medicine treatment plan. In addition to his diagnosis of idiopathic gastroparesis, from a Traditional Chinese Medicine perspective, the patient also has a diagnosis of 'Liver qi stagnation with Spleen qi deficiency which helps guide acupuncture point selection and treatment.

An integrative treatment plan was initiated, which included a trial of trigger point injection (TPI) therapy, acupuncture, and lifestyle modifications. The patient was recommended to continue small meals and limit carbohydrates and fat as recom-

mended by gastroenterologist. In addition, we made additional dietary recommendations including limited salad consumption and to increase warm liquids and cooked foods, which may be easier on digestion. We encouraged daily mindfulness and meditation practice for a minimum of 10 minutes using an online smartphone app. A transcutaneous electrical nerve stimulator was recommended to be used on acupuncture points ST-36, REN-6, REN-12, and ST-25.

The patient returned to our clinic every two weeks for a total of 11 sessions. During each visit, about 4 trigger points in the low back and trapezius muscle groups were injectioned with 1% lidocaine. These trigger points coincided with acupuncture points GB 21 and UB 23 and were aimed at area of myofascial tender points. Acupuncture was also performed at each visit at the following points: YINTANG, LI-4, LV-3, SP-6, ST-36, ST 25, REN 6, REN 12, and P6.

By the 3rd visit, the patient reported about 30% improvement in pain. He also reported following lifestyle change recommendations. By the eleventh visit, he reported complete resolution of his abdominal pain. Given improvement in his symptoms, the repeat gastric emptying study was cancelled as it would not change clinical management. His clinical course is displayed in Figure 2.

Discussion

Idiopathic gastroparesis is a syndrome characterized by delayed emptying of the stomach in the absence of mechanical obstruction.¹ Although patients with idiopathic gastroparesis experience similar symptoms as diabetic gastroparesis, abdominal pain occurs more often in idiopathic gastroparesis. Gastroparesis affects more women than men.¹ Although the pathophysiology is not fully elucidated it is thought to involve autonomic nervous system abnormalities, visceral hypersensitivity, and possible vagal neuropathy.²

Idiopathic gastroparesis is highly associated with functional abdominal syndromes, fibromyalgia, and irritable bowel syndrome. It is also associated with stress, past trauma, and psychiatric conditions.³ Up to 18% of gastroparesis patients suffer from severe depression and 31% suffer from severe anxiety. Over 50% of patients with idiopathic gastroparesis have report history of physical or sexual abuse. Psychological

stress may also exacerbate symptoms.³ The autonomic nervous system (ANS) is part of the systemic stress response, and it has been shown that minor imbalances of the ANS are associated with functional gastrointestinal disorders.

The symptoms of gastroparesis can significantly impact daily function and quality of life and may result in frequent ER visits and hospitalizations.¹ First-line treatments are dietary and lifestyle modifications. Dietary modifications include limiting fatty food, which may slow down gastric emptying, limiting non-digestible fiber, avoiding carbonated drinks, and avoiding alcohol and tobacco use. Mindfulness-based therapy (MBT) has been shown to be helpful in patients with idiopathic gastroparesis. MBT encourages patients to cultivate a "nonjudgmental acceptance and awareness of moment-to-moment experiences." In one study, a 2-hour session of MBT per week for 8 weeks led to a decrease in visceral sensitivity. Moreover, the non-reactivity practiced by MBT was associated with a decrease in pain catastrophizing, which ultimately helps patient's ability to process the pain.⁴

If patient fails to respond to lifestyle modifications, targeted pharmacologic treatments are used, including antiemetic agents for nausea, prokinetic therapies to enhance gastric emptying such as metoclopramide and domperidone, and psychotropic medications like tricyclic antidepressant to modulate symptoms. However, these pharmacologic treatments are often limited by severe side effects, such as tachyphylaxis, tardive dyskinesia, and CNS side effects.⁵ Although they are prescribed for some patients with idiopathic gastroparesis, these medications are more widely studied for use in diabetic gastroparesis.

Some recent studies demonstrated the role of acupuncture in the treatment of gastroparesis symptoms in diabetics and non-diabetics.⁶ Acupuncture has been shown to improve epigastric symptoms and gastric emptying by soft tissue stimulation—leading to modulation of autonomic balance, gastrointestinal motility, and visceral hypersensitivity.⁷

Acupuncture also improves gastric symptoms by normalizing gastric dysrhythmia via the autonomic nervous system, thereby restoring the balance between the parasympathetic and sympathetic nerves.⁶ A 2018 case report showed how acupuncture successfully in treated severe gastric dysmotility (SGDD).⁸

Manual acupuncture at the stomach meridian (ST-36) provided significant relief from persistent nausea and vomiting, and the patient was weaned off parenteral nutrition soon after starting acupuncture.⁹ Acupuncture point ST-36 is used as it leads to increased activity of the sacral parasympathetic pathway and reduced visceral hypersensitivity.⁷ Additionally, many studies showed electroacupuncture (EA) at ST-36 increases the regularity of gastric slow waves via the vagal and opioid pathways, in both healthy and diabetic patients. This suggest the potential therapeutic effect of acupoint stimulation for patients with idiopathic gastroparesis.²

Due to the association of idiopathic gastroparesis with IBS,³ many acupuncture points utilized for idiopathic gastroparesis have been extrapolated from the IBS literature. In a randomized, sham-placebo controlled study on IBS patients, direct needling of 4 acupoints on the abdomen (ST-25, REN-6, REN-12) was associated with a significant improvement in daily abdominal pain/discomfort, intestinal gas, bloating and stool consistency. These points were utilized in our patient.

As the pathophysiology of idiopathic gastroparesis may be related to autonomic nervous system abnormalities, we utilized soft tissue manipulation via trigger point injections to address the rebalancing of the sympathetic and parasympathetic nervous system. In a study on patients with soft tissue dysfunction (such as neck tension), low parasympathetic tone associated with myofascial pain was observed.⁷ The study showed that balancing the parasympathetic tone through needle manipulation at GB-21 and physical massage helped improve myofascial dysfunction. As the patients improved with the needling of active trigger points, the authors suggested a probable correlation between myofascial pain and autonomic imbalance. For this reason, we utilized trigger points at the neck and shoulders as well as lower back to address the myofascial component that may contribute to our patient's gastroparesis.

This case report describes the successful management of a patient with idiopathic gastroparesis using an integrative East West treatment plan with acupuncture, trigger point injections, and lifestyle modifications. We believe improvement was not due to any one of these modalities in isolation, but the integrative approach to care resulted in the patient's symptomatic improvement.

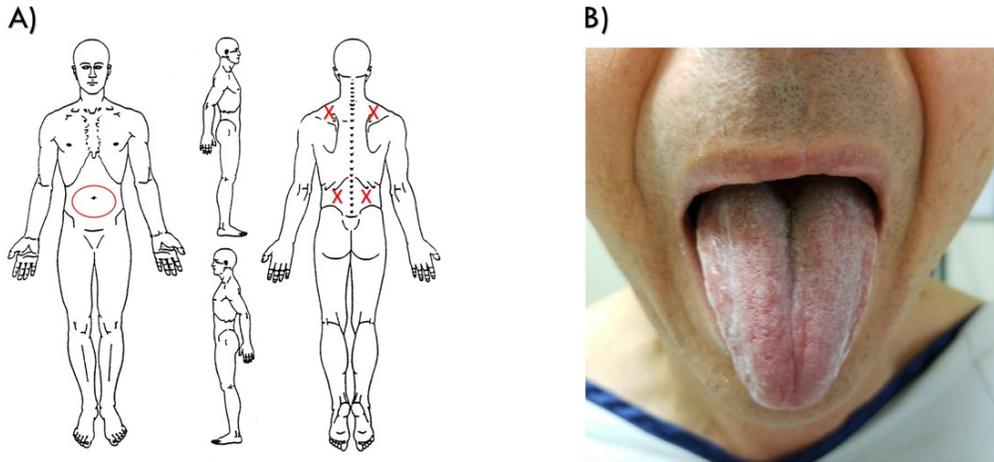


Figure 1:
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Figure 2: A tabular representation of the patient’s clinical course is displayed.

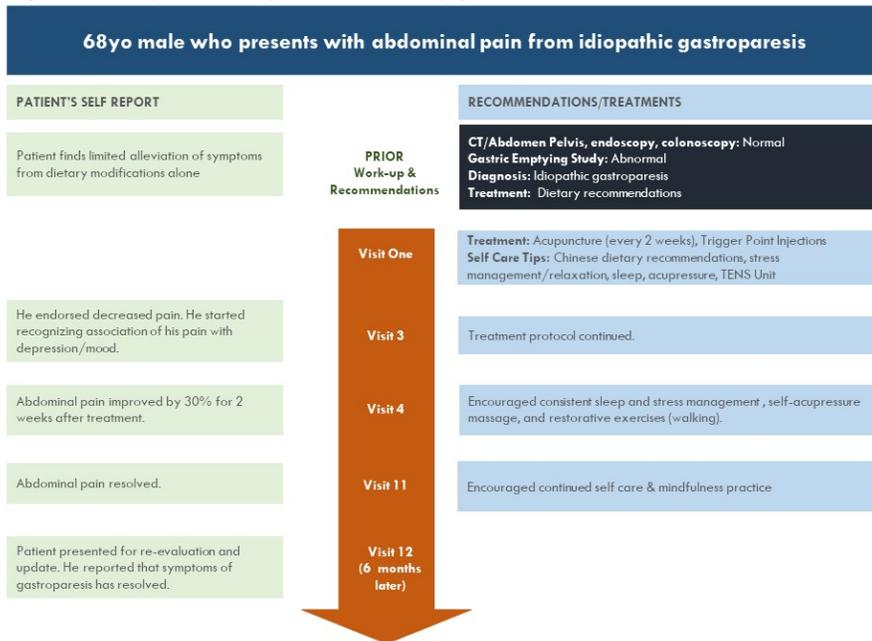


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