



Treatment of Irritable Bowel Syndrome with Glucopuncture: A Clinical Case

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Abstract: - The fascial system constitutes a complex and highly intricate network within the body, consisting of both superficial and deep layers. While fascial dysfunction is commonly linked to musculoskeletal discomfort, it may also play a role in other nonspecific pain conditions, such as irritable bowel syndrome (IBS). In the approach discussed here, glucopuncture (GP) involves the injection of a 5% glucose (or 5% dextrose) solution directly into the superficial fascia to alleviate discomfort in nonspecific pain syndromes. This article describes a case where a patient underwent patient-directed GP as a treatment for IBS. It is crucial to ensure that other conditions, such as colorectal cancer, are excluded beforehand. This case emphasizes the potential of patient-directed GP as an affordable technique for managing nonspecific abdominal pain. However, further studies are essential to thoroughly evaluate the effectiveness and safety of GP for addressing such vague pain conditions.

Keywords: Glucopuncture, Fascia, Irritable Bowel Syndrome.

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1. Irritable Bowel Syndrome

Irritable bowel syndrome (IBS) is a functional disorder affecting the gastrointestinal system, characterized by abdominal discomfort accompanied by changes in stool consistency and bowel movement frequency. The underlying mechanisms of IBS are not fully understood and may involve disruptions in the gut microbiome as well as abnormalities in mucosal function.

2. Diagnosis of IBS

The diagnosis of IBS has traditionally been based on the identification of symptoms such as functional diarrhea, functional constipation, persistent functional abdominal discomfort, or bloating. When uncertainty arises, a colonoscopy is performed to exclude the possibility of colon cancer.

3. Treatment of IBS

Treatment of IBS includes dietary changes, stress management, probiotics, antispasmodics and neuromodulators. ^{1 2} . However, this clinical case introduces a novel method that focuses on the regional superficial fascia.

4. The Importance of Fascia for Regional Pain Syndromes

The fascial system (FS) in the musculoskeletal system provides support for muscles, tendons and ligaments. The FS links skeletal muscles and bones by forming a body-wide network of

multidirectional myofascial continuity. ³ Additionally, the FS surrounds and interconnects internal organs, blood vessels, and other delicate structures located within the thorax, abdomen, and pelvis. The fascial system itself consists of a complex network of several multidirectional sheets of connective tissue. The first network is found just below the skin and is referred to as the superficial layer, the second one is the so-called deep network which encapsulates and connects muscles, organs, blood vessels, etc. (Table 1) ^{4 5}. These two layers are not independent but are intricately interconnected, which may account for the clinical outcomes observed when interventions target only the superficial layer.

Superficial Network	Subdermal
Deep Network	Muscles, Organs

Table 1: Two Fascia Networks

5. Nociceptors in the Fascial System

The FS is a highly innervated system. ^{6 7 8} The FS is often described as the largest sensory organ containing 250 million nerve endings. ⁹ Fascial tissue is abundant in proprioceptors and nociceptors. In some cases, pain that is attributed to organ dysfunction may actually originate from the fascia surrounding that organ. It is hypothesized that nociceptors within the visceral fascial layers become activated in response to regional infections, irritation, or inflammation. Since the visceral fascia in areas like the abdomen does not terminate at the boundary of a single organ

but instead extends in a complex, web-like structure across multiple organs, the regional FS can contribute to diffuse and intricate pain syndromes in the abdominal region. Additionally, these pain patterns are often referred to distant areas, which may initially appear unrelated. The complexity of this richly innervated fascial network may explain phenomena such as gallbladder stone-related pain being felt in the right shoulder blade, gastritis-associated discomfort manifesting in the dorsal back, or ureteral stones causing pain in the ipsilateral groin. It is evident that further research in this area is urgently needed.

6. Treatment of Fascial Pain with Glucopuncture

GP is a term introduced in 2020 to describe regional injections with low concentrations of sugar water 5% (S5W) into dermis, fascia, muscles and ligaments. 10 11 12 13 14 15 S5W injections can also be applied perineurally 16 17 18 19, into joint cavities 20 or in the epidural space. 21 22 Typical injectates are glucose 5% in water (G5W) or dextrose 5% in water (D5W) 23. Recently, more and more clinicians report interesting clinical outcome after S5W injections into the regional fascia for MSK pain 24 25. This article is an invitation to do more clinical research in the field of abdominal pain.

7. Mechanism of Action

It has been proposed that dextrose or glucose may indirectly suppress capsaicin-sensitive receptors, such as transient receptor potential vanilloid-1 (TRPV1), and inhibit the release of substance P—both of which are pro-nociceptive agents involved in neurogenic inflammation (Table 2). Additionally, the effects of glucopuncture are thought to be influenced by factors such as the mechanical impact of the needle, the placebo effect, and the volumetric effect of the injections.

1/ TRPV1

2/ Substance P

Table 2: Two major Pain Modulating Effects of GP

8. Clinical Case

A 60-year-old woman had pain in the abdominal area for about 12 months. The pain was worse after eating raw vegetables. She did not support alcohol or coffee. She said she tried several types of medication from her general practitioner, without any clinical improvement. The patient showed her pain region with both hands (Fig. 1). She received several subcutaneous injections with G5W into the superficial fascia in the pain region, as indicated by the patient (Fig. 2). Each time, a short 27G needle is inserted tangentially at an angle of about 10 to 30 degrees to reach the superficial fascia (and to avoid injecting into the underlying tissues). She received the first session on May 6 and a second session on May 13. After these two glucopuncture sessions, the majority of her complaints disappeared completely, although she did not change her lifestyle nor her diet over those two weeks. It was postulated that this sudden improvement could be related to the subcutaneous injections into the superficial fascia. Follow-up at three months revealed a minor relapse, which was treated with one similar session to attain long-term results (6 months).

9. Conclusion

In the past ten years, medical professionals globally have recognized that the fascial system connects various parts of the body in a three-dimensional web-like structure. Additionally, fascia is rich in nociceptors, which might explain its significant role in diffuse pain syndromes, not only in musculoskeletal conditions but also in cases like abdominal pain. This publication presents a patient with chronic abdominal issues. After a few GP sessions, the patient's symptoms improved almost entirely. Although not detectable via MRI or ultrasound, we propose that the fascial system could be a key factor in patients with nonspecific abdominal pain (in the absence of any serious underlying pathology). This article does not aim to assert the efficacy, safety, and legitimacy of glucopuncture, as its scientific basis is still developing. The purpose is to share this clinical observation with peers worldwide, encouraging them to test this hypothesis and conduct controlled clinical trials to validate the effectiveness, safety, and legitimacy of glucopuncture in contemporary medicine.

Statement of Informed Consent

Informed consent was obtained from the participant included in this case study.

Statement of Ethical Approval

Ethical approval was not required because the present article is not a research work on human subjects but only a description of a specific treatment, as requested by the patient herself.

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Fig. 1: Pain Region



Fig. 2: SC Injection Sites in the Pain Region