

Treatment of Chronic Gastritis with Fascial Injections: A Case Report

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Abstract: Chronic gastritis is a pandemic infection with serious sequelae such as peptic ulcers or gastric cancer. Treatments used for non-bacterial gastritis include proton pump inhibitors and histamine H2 receptor inhibitors. A recent unorthodox approach includes subcutaneous injections into the regional fascia as an option for treating chronic gastritis. This method is mainly designed for low income countries where modern diagnostic and treatment options are too expensive for a large part of the population. Glucopuncture, as applied in this patient, involves the administration of 5% dextrose (or 5% glucose) injections directly into the subcutaneous fascia. This case report describes a 54-year-old man who presented with a three-months history of chronic pain in the gastric area. His complaints diminished after a few sessions. Obviously, rigorous research, including double-blind RCTs, is required to fully ascertain the outcome and safety of glucopuncture for treating chronic gastritis.

Keywords: Chronic gastritis, fascial system, glucopuncture, pain management.

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1 Introduction

Over the last 20 years, the interest in the comprehension of the fascial system (FS) has significantly grown i. The FS constitutes a complex and elaborate network within the human body, consisting of both superficial and deep layers ii iii. From the skin to its deepest plane, one finds (a) the superficial fascia, dividing the subcutaneous tissue into two fibroadipose layers, superficial and deep, and (b) the deep fascia, which envelops all muscles and organs of the body. These days, the main characteristics of the human FS are considered in its three-dimensional continuity iv. Dysfunction of the fascia is typically associated along clinicians with musculoskeletal pain v, but it may also play a role in other ambiguous pain syndromes, including IBS and gastric pain. Glucopuncture, as applied in this patient, involves the administration of 5% dextrose (or 5% glucose) injections directly into the superficial fascia in the pain region as indicated by the patient himself vi.

2. The Importance of Fascia for Regional Pain Syndromes

In the musculoskeletal system, the fascial system (FS) provides support for muscles, tendons and ligaments. It is also important for biomechanics through fasciointegrity vii viii ix. The FS links skeletal muscles, ligaments and bones by forming a body-wide network of multidirectional myofascial continuity. x xi But the FS also encapsulates and connects internal organs, blood vessels and other fragile structures inside thorax, abdomen and pelvis. Most physicians are not aware that the FS 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 subcutaneous fascia, the deep network encapsulates and connects muscles, organs, vessels, etc. (Table 1) xii xiii. Both networks are

not two separate entities but are interconnected. This fascial connection is sometimes described as a bridge between the subcutaneous fascia and the deep fascia, and may be a way to explain our clinical findings over the last decades. More research in this field may confirm our hypothesis.

Table 1: Two Fascia Networks

Superficial Network	Subcutaneous
Deep Network	Muscles, Vessels, Organs

3. Nociceptors in the Fascial Network

The FS is not just a protective packing tissue xiv. It is a richly innervated system. xv xvi Prof Lam from Hong Kong described the FS as the largest sensory organ of the body, containing more than 200 million nerve endings. xvii In this article, we hypothesize that in certain patients, the pain or discomfort that was initially attributed to organ dysfunction may actually stem from the fascia surrounding that organ. Unfortunately, this subject has not received much attention in medical research xviii. As the visceral fascia of the stomach does not end at the edge of that particular organ but continues in a complex and web-like manner, it is clear that the regional FS may lead to vague and complex pain syndromes in the area (referred fascial pain). The intricate nature of this extensively innervated fascial network could elucidate the reason why patients with gallbladder stones experience discomfort in the right shoulder blade, why individuals with gastritis report pain along the dorsal area, or why those with a ureteral stone endure pain in the corresponding groin. The causes of such unusual pain patterns are hard to explain by relying on, for example, peripheral nerve entrapments. It is obvious that more research in this field is urgently required.

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4. Treatment of Referred Fascial Pain with Glucopuncture

Although multiple injections with low concentration of sugar water (SW) are used for decades, the term glucopuncture (GP) was only introduced recently xix. GP describes regional injections with sugar water 5% (S5W) into dermis, fascia, muscles and ligaments. xx xxi xxii xxiii xxiv S5W injections can also be applied perineurally xxv xxvi xxvii xxviii, into joint cavities xxix or in the epidural space. xxx xxxi Typical injectates are glucose 5% in water (G5W) or dextrose 5% in water (D5W) xxxii. Recently, more and more clinicians report interesting clinical outcome after S5W injections into the regional fascia for MSK pain xxxiii xxxiv. But awareness for treating pain which is related to organ dysfunction is still understudied xxxv. This article is an invitation to plan more clinical research in the field of gastric pain.

5. Mechanism of Action

Dextrose and glucose have been speculated to indirectly inhibit capsaicin-sensitive receptors such as transient receptor potential vanilloid-1 (TRPV1) and block the secretion of substance P, which are both pro-nociceptive substances involved in neurogenic inflammation. xxxvi (Table 2)

Table 2: Two major Pain Modulating Effects of GP

1/ TRPV1
2/ Substance P

On top of that, there are nonspecific effects, such as the needle effect, the placebo effect and the volume effect of Glucopuncture. xxxvii

6. Chronic Gastritis

Chronic gastritis is a chronic inflammation of gastric mucosa and can be triggered by multiple factors xxxviii. Currently, the diagnostic strategy for chronic gastritis is aimed to fix gastric mucosal inflammation and reducing gastric cancer. xxxix Fortunately, the prevalence of chronic gastritis has markedly declined in high-income regions during the last three decades. Endoscopy is obviously an effective procedure for diagnosing inflammation, ulcers, or cancer. Endoscopy is indicated in cases of unexplained chest pain, persistent heartburn, unexplained weight loss or bleeding from the upper gastrointestinal tract. It is clear that the diagnostic strategy for chronic gastritis is aimed not just at fixing the presence of gastric mucosal inflammation, but also at gastric cancer risk reduction. Apart from antacids, medication prescribed for non-bacterial gastritis include proton pump inhibitors and histamine H2 receptor inhibitors. Research on alternative therapeutics using food-based products is mainly in preclinical research. There are more than 20 clinical studies evaluating garlic, turmeric, broccoli sprouts, red peppers, and probiotics. xl The existing literature however presents a high risk of bias. A recent unorthodox approach includes subcutaneous sugar water 5% injections into the regional fascia. This method is mainly

designed for low income countries where modern medical treatment options are too expensive for a large part of the population. As the injections are superficial, the method can be applied safely by family physicians without using ultrasound guidance.

7. Clinical Case

A 54-year-old man (°1971) had pain in the stomach for about 5 months. The pain was worse with stress. His general practioner sent him for gastroscopy which showed gastritis. He prescribed him esomeprazole 20mg, which gave partial improvement. But the patient stopped his medication after a few weeks because he had an uncomfortable sensation in the liver region while taking them. When the patient came to the office for a second opinion, he showed his pain region (Fig. 1). He received three subcutaneous injections with G5W into the superficial fascia in his pain region (Fig. 2). A short 27G needle was inserted tangentially at an angle of about 20 to 30 degrees to infiltrate the superficial fascia, and to avoid injecting into the underlying tissues. About 1.5 mL was injected into each spot. No local anesthetics were added to the injectate. He received five glucopuncture sessions every two weeks. After this series of sessions, the majority of his stomach complaints disappeared completely, although he did not take any esomeprazole. He had a minor relapse three months later, where he received the same treatment again with the same clinical outcome. He was also sent for stress management. Follow-up after 12 months revealed no further relapse.

8. Conclusion

Over the last decade, clinicians worldwide came to see that the fascial system interconnects different parts of the body like a three-dimensional spider web. But fascia also contains a lot of nociceptors, which may explain its role in vague pain syndromes. This phenomenon is not only observed in vague musculoskeletal disorders but also in, for example, gastric pain. In this case report, a patient is presented with chronic gastric pain. A series of glucopuncture sessions improved the complaints almost completely. This article is not intended to create an atmosphere of legitimacy and efficacy while the scientific foundation of glucopuncture is still incomplete. The goal of this case presentation is sharing this clinical experience with colleagues worldwide so they can test this hypothesis themselves. Later on, controlled clinical trials may be started to check and confirm the efficacy and safety of glucopuncture in patients with chronic gastritis.

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.



Fig. 1: Pain Region



Fig. 2: SC Injection Sites in the Pain Region

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