

# Professor Shen Shuwen's Insights into the Treatment of Precancerous Lesions of Gastric Cancer based on the Differentiation of "Deficiency, Toxin, Stasis and Depression"

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**Abstract:** *This summary highlights Professor Shen Shuwen's clinical expertise in treating precancerous lesions of gastric cancer based on the principles of "deficiency, toxin, stasis, and depression." It is proposed that the core pathogenesis of precancerous lesions lies in a dual deficiency of Qi and Yin, coupled with the obstruction of toxins and stasis. The disease is characterized by the coexistence of root deficiency and branch excess, where the root deficiency primarily involves the spleen and stomach's Qi and Yin, while the branch excess manifests in Qi stagnation, phlegm-dampness, blood stasis, and toxic pathogens. Treatment emphasizes syndrome differentiation and approaches like strengthening the spleen and nourishing the stomach, detoxifying and resolving stasis, as well as invigorating Qi and nourishing Yin. Additionally, great importance is given to psychological and emotional regulation, leading to significant outcomes in preventing cancer progression.*

**Keywords:** Precancerous lesions of gastric cancer, Renowned physician experience, Shen Shuwen.

## 1. Introduction

Gastric cancer is one of the most common malignant tumors in the digestive system in China. In 1978, the World Health Organization (WHO) classified chronic atrophic gastritis as a precancerous condition of gastric cancer. Based on this, incomplete intestinal metaplasia and/or moderate to severe dysplasia are regarded as precancerous lesions of gastric cancer (PLGC). With the widespread use of gastrointestinal endoscopy, PLGC has been identified as a crucial stage for intervention in the development of gastric cancer, making it a key focus for gastric cancer prevention and treatment [1]. Therefore, active intervention and treatment can effectively reduce the incidence of gastric cancer. Numerous clinical reports indicate that traditional Chinese medicine (TCM) has significant advantages and extensive clinical experience in treating PLGC. It can halt or even reverse the progression of precancerous changes while improving gastric function [2].

Professor Shen Shuwen, a renowned TCM physician in Shaanxi Province and a mentor in the fourth batch of national academic successors of veteran TCM experts, is also the leading expert in the key discipline of spleen and stomach diseases under the National Administration of Traditional Chinese Medicine. With nearly 30 years of research in spleen and stomach diseases, he has rich clinical experience in treating PLGC.

## 2. Etiology

Precancerous lesions of gastric cancer fall under the scope of traditional Chinese medicine categories such as "stomach pi" and "epigastric pain." Their clinical manifestations lack specificity, generally presenting symptoms commonly seen in chronic atrophic gastritis, such as epigastric fullness and pain, bloating, irritability, loss of appetite, and discomfort. The

occurrence and development of precancerous lesions of gastric cancer are associated with multiple factors, including irregular diet, emotional imbalances, external pathogen invasion, and congenital deficiencies.

Irregular eating habits, excessive consumption of spicy or cold foods, can damage the spleen and stomach, leading to gastric mucosal injury. Emotional disturbances, especially prolonged depression or anxiety, disrupt the flow of Qi, exacerbating gastric conditions. Invasion by external pathogens, such as *Helicobacter pylori* infection, is another significant factor contributing to gastric mucosal damage. Additionally, individuals with congenital deficiencies, such as spleen and stomach weakness, are more prone to developing precancerous lesions of gastric cancer.

## 3. Pathogenesis Theory of "Deficiency, Toxin, Stasis, and Depression"

### 3.1 Deficiency: Qi and Yin Deficiency of the Spleen and Stomach as the Foundation

Professor Shen Shuwen posits that the fundamental pathogenesis of precancerous lesions of gastric cancer lies in Qi and Yin deficiency of the spleen and stomach, characterized by a combination of deficiency and excess. Root deficiency refers to Qi and Yin deficiency of the spleen and stomach, which are the basis for postnatal essence and the source of Qi and blood production. Deficiency in Qi and Yin leads to insufficient Qi and blood production, causing dysfunction of the viscera and weakened vital energy. Qi deficiency hinders the circulation of blood, resulting in the generation of blood stasis. Yin deficiency gives rise to virtual heat, damaging the gastric collaterals. As the spleen and stomach are the cornerstone of postnatal essence, their weakness causes insufficient nourishment to the gastric

mucosa, making it more susceptible to pathological changes.

### 3.2 Toxin: The Core of Obstruction by Toxins and Stasis

Professor Shen identifies “obstruction by toxins and stasis” as the central pathogenesis leading to malignant transformation in precancerous lesions of gastric cancer. He highlights that the accumulation of pathological products such as heat toxins and damp toxins, as well as *Helicobacter pylori* infection, are key contributors to gastric mucosal injury. The accumulation of toxic pathogens within the stomach causes Qi and blood stagnation, generating stasis and forming a pathological cycle of toxins and stasis interlocking. This obstructs gastric collaterals and impairs Qi and blood circulation, ultimately leading to pathological changes such as atypical proliferation of gastric mucosa. The obstruction exacerbates gastric damage and worsens the condition.

### 3.3 Stasis: Blood Stasis as a Manifestation

Blood stasis is an important pathological product in precancerous lesions of gastric cancer. Professor Shen points out that the long disease course involves prolonged weakness of the spleen and stomach, along with Qi deficiency, Qi stagnation, phlegm-dampness, and toxin interference, all of which hinder blood circulation and lead to the formation of stasis. Over time, stasis can transform into toxic factors, developing into cancer. Blood stasis obstructs gastric collaterals, resulting in pain and the presence of gastric lumps. Additionally, stasis impairs normal Qi and blood circulation and affects the functional activities of the viscera, further aggravating the condition.

### 3.4 Depression: Emotional Dysregulation as an Inducement

Emotional dysregulation, such as prolonged stress, leads to liver Qi stagnation, causing the liver to adversely affect the stomach, leading to dysfunction and impaired Qi dynamics. Liver Qi stagnation results in Qi stagnation and blood stasis. Qi stagnation eventually transforms into heat, damaging gastric Yin and causing discomfort in the epigastric region. The spleen and stomach serve as the central hub for Qi dynamics, and emotional dysregulation disrupts their function, leading to impaired fluid metabolism, dampness accumulation, blood stasis, and toxic damage to the stomach.

In terms of pathogenesis, Professor Shen proposes the theory of “Deficiency, Toxin, Stasis, and Depression” for PLGC pathogenesis. “Deficiency” refers to spleen and stomach weakness and insufficient Qi and blood production. “Toxin” encompasses the accumulation of heat toxins, damp toxins, and other pathological products. “Stasis” indicates impaired Qi and blood circulation and internal blood stasis. “Depression” involves stagnation of Qi dynamics and disharmony between the liver and stomach. These factors interact, collectively causing pathological changes in the gastric mucosa.

Professor Shen emphasizes that Qi stagnation, obstruction by toxins, and blood stasis damage gastric collaterals, leading to atrophy of gastric mucosal glands and progression toward intestinal metaplasia and/or dysplasia. He identifies

“obstruction by toxins and stasis, and Qi and Yin deficiency” as the key pathogenesis of PLGC, characterized by a combination of root deficiency and branch excess, as well as mutual transformation between deficiency and pathogenic factors during disease progression.

## 4. Treatment Experiences

### 4.1 Differentiating Root and Branch, Deficiency and Excess

PLGC (precancerous lesions of gastric cancer) often develops over time from chronic atrophic gastritis (CAG), but it lacks specific clinical symptoms. Professor Shen Shuwen believes that, during disease progression, the clinical syndrome structure often exhibits an interplay of deficiency of vital energy and excess of pathogenic factors, characterized by a combination of root deficiency and branch excess. This is referred to as “syndrome of deficiency-excess interplay”[3].

Based on clinical experience and research, Professor Shen attributes the condition primarily to spleen and stomach weakness. In patients with PLGC, the disease history is often prolonged, leading to chronic spleen and stomach weakness. Damage to the spleen impairs its functions of transformation and ascending of clear substances, while damage to the stomach affects its receiving and descending functions. Yin injury leads to damaged gastric collaterals and exhaustion of vital energy. Therefore, spleen and stomach weakness, along with Qi and Yin deficiency, form the primary pathological basis of the disease.

Spleen Qi deficiency and stomach Yin insufficiency disrupt normal Qi transformation and the distribution of nutrients, leading to the formation of dampness that, over time, transforms into heat and toxins. As the disease progresses, the accumulation of toxins and stasis obstruct the gastric collaterals, resulting in a vicious cycle of deficiency causing excess and excess exacerbating deficiency. This creates a syndrome of stagnation and impairment, with a tendency toward malignancy. Professor Shen emphasizes that both root (deficiency) and branch (excess) should be addressed in treatment. Root tonification involves distinguishing Qi deficiency (primarily involving the spleen) from Yin deficiency (primarily involving the stomach).

### 4.2 Differentiating Stagnation and Impairment in Deficiency and Excess

PLGC often arises from a prolonged course of CAG. Although pathological changes in gastric epithelial cells occur, PLGC shares similar clinical symptoms with CAG, such as deficiency-excess interplay. The core pathogenesis of PLGC is “stagnation and impairment combined.” Excess syndromes are primarily related to Qi stagnation, damp-heat, and toxic stasis.

Qi stagnation is often associated with the liver and stomach, where liver Qi obstructs the spleen and stomach, presenting symptoms of disharmony between the liver and stomach. Qi stagnation leads to blood stasis and impairs fluid metabolism, resulting in the formation of phlegm and toxins. Blood stagnation further obstructs gastric collaterals, causing

compounded stasis and impairment. Deficiency syndromes predominantly involve Qi and Yin deficiency of the spleen and stomach, with prolonged Yangming channel disease causing heat that consumes Qi and fluids, impairing the spleen and stomach's functions.

In the early stage of the disease, deficiency predominates, often resulting from Qi or Yin deficiency. Qi deficiency mainly involves the spleen, manifesting as middle Yang deficiency and cold stagnation in the stomach. Treatment focuses on warming the middle, tonifying Qi, and harmonizing the spleen and stomach. Yin deficiency often involves the stomach, characterized by Yin fluid consumption due to damp-heat or dryness, which requires nourishing and moistening the stomach.

When the gastric system is impaired, the stomach experiences blockages, and its ascending and descending functions become disrupted. This is a common pathological phenomenon in PLGC (precancerous lesions of gastric cancer). The smooth movement of Qi is fundamental to health, and Qi stagnation represents the most basic pathological change in early gastric cancer. Factors such as improper diet, emotional instability, and external pathogens can all impact health. Emotional distress leads to liver Qi stagnation, while poor dietary habits cause stagnation in the spleen and stomach. Qi stagnation results in the formation of phlegm and blood stasis, which accumulate in the stomach and further disrupt the normal functions of the spleen and stomach. Over time, the dysfunction of the spleen and stomach leads to the retention of pathogenic factors in the stomach, causing further disorder and creating a pathological state characterized by the interplay of deficiency, excess, stagnation, and impairment.

The spleen is responsible for transporting nutrients throughout the body, while the stomach handles the digestion and absorption of food. When the spleen and stomach maintain their normal ascending and descending functions, the body's Qi flows smoothly, ensuring the proper functioning of various physiological activities [4]. Professor Shen Shuwen, in the treatment of PLGC, addresses the pathological mechanism of "combined stagnation and impairment." By clearing gastric blockages and restoring the normal movement of Qi in the spleen and stomach, he aims to alleviate the condition and achieve therapeutic results.

#### 4.2.1 Qi Stagnation

PLGC (precancerous lesions of gastric cancer) is often caused by spleen and stomach weakness. As the central hub of Qi movement, the spleen and stomach, when weakened, lead to obstructed Qi flow and stagnation in the middle burner, resulting in symptoms like bloating and discomfort in the epigastric region. Additionally, emotional distress can cause liver Qi stagnation, which disrupts the normal functioning of the stomach, further intensifying epigastric discomfort. Emotional imbalances often trigger or aggravate these symptoms.

In treatment, Professor Shen Shuwen commonly uses herbs such as Chenpi and Chuanlianzi to soothe the liver, regulate Qi, and alleviate pain, as well as herbs like Xuanfuhua and Sugeng to counteract Qi reversal and harmonize the stomach.

He also frequently employs herbs such as Chaihu and Shengma to elevate spleen Yang, alongside Zhi Shi, Hou Po, and Bing Lang to lower stomach Qi, aiming to restore normal Qi movement. By improving Qi flow in the middle burner, the spleen and stomach regain their functions, gastric mucosa is nourished, and the integrity of the gastric barrier is restored, effectively slowing disease progression and even reversing pathological changes like intestinal metaplasia or atrophy [5].

In his therapeutic approach, Professor Shen emphasizes the importance of addressing both root and branch issues in the syndrome of deficiency and excess interplay and stagnation-impairment combination. By promoting the transformation of stagnation into unobstructed flow, he aims to restore the spleen and stomach's digestive and absorptive functions. His treatment strategy involves individualized prescriptions tailored to the patient's condition.

#### 4.3 Detoxifying, Resolving Stasis, and Tonifying Qi and Yin

*Helicobacter pylori* (Hp) is the main cause of chronic gastritis, and modern medicine considers Hp infection to be a major factor leading to gastric cancer [6]. Hp infection promotes the development of gastric cancer, particularly intestinal-type gastric cancer, progressing from normal gastric mucosa to superficial gastritis, atrophic gastritis, intestinal metaplasia, dysplasia, and eventually gastric cancer [7]. Professor Shen Shuwen believes that PLGC (precancerous lesions of gastric cancer) is essentially characterized by "deficiency as the root and excess as the manifestation," meaning that the fundamental cause is spleen and stomach weakness. During the progression of the disease, there is a transformation between "deficiency causing pathological factors" and "pathological factors causing deficiency." PLGC has a prolonged course, with spleen and stomach weakness as the root cause. Spleen and stomach weakness lead to poor circulation of qi and blood, which result in stasis. Over time, it develops into toxins, and the interaction of toxins and stasis damages the gastric organs. Meanwhile, qi stagnation, dampness, and blood stasis further weaken the spleen and stomach. The combination of toxins and stasis obstructs the gastric network, and this pathological excess damages the gastric mucosa directly, causing intestinal metaplasia.

In clinical practice, Professor Shen observed that patients infected with Hp often exhibit signs of dampness and heat. Hp persists in the stomach over a long period and is difficult to eliminate, and it is regarded as a type of pathogenic toxin [8]. Such toxins possess the nature of dampness and heat: dampness damages qi, and heat depletes yin. Dampness and heat toxins accumulate in the gastric organs, depleting qi and injuring yin, leading to deficiencies in both qi and yin. Damp-heat disrupts the circulation of qi and blood, resulting in stasis. Toxins cause stasis, stasis creates toxins, and their interaction obstructs the gastric network, hindering the flow of qi and blood in the gastric organs, eventually causing pathological changes such as mucosal metaplasia or dysplasia. Therefore, Professor Shen believes that the core pathological mechanism of PLGC is the combination of toxins and stasis accompanied by deficiencies in qi and yin, and treatment should emphasize detoxification, stasis resolution, qi replenishment, and yin nourishment.

In the early stages of the disease, toxins are more prominent than stasis, so the treatment should focus on using bitter and cold medicines to clear heat and dry dampness while resolving toxins and stasis. In the later stages of the disease, stasis is more significant than toxins, so the treatment should prioritize resolving stasis and unblocking networks, with minimal use of bitter and cold medicines. In the middle and later stages, Hp is often not strongly positive (toxin influence has weakened), and the main cause of gastric mucosal damage is stasis and qi stagnation. Therefore, replenishing deficiencies, resolving stasis, and dispersing knots should take precedence over detoxification. For patients with prominent qi and yin deficiencies, treatment should emphasize replenishing deficiencies as the root and focus on nourishing yin while supplementing qi. Commonly used herbs include Tai Zi Shen, American ginseng, and lily, which provide both qi and yin replenishment. Herbs such as Mai Dong and Shi Hu are often paired with Ban Xia, balancing strength and gentleness to nourish yin and harmonize the stomach. Modern research and animal experiments show that Shi Hu has certain anti-cancer properties, as it can inhibit the generation of new blood vessels in endothelial cells, thereby preventing gastric cancer. It is a safe and effective drug for cancer prevention and treatment [9-10].

Additionally, Professor Shen's clinical observations revealed that the severity of "phlegm-stasis stagnation syndrome" in terms of cancer progression is second only to "toxin-stasis obstruction syndrome," which requires clinical attention. Chronic atrophic gastritis with dysplasia or intestinal metaplasia persisting for a long time may lead to recurrent epigastric pain and loss of appetite in some patients. This is caused by phlegm-stasis stagnation, as noted by Ye Tian Shi: "Prolonged recurrent epigastric pain must involve coagulated phlegm and accumulated stasis" (Clinical Guidelines on Medical Cases: Epigastric Pain). Spleen and stomach weakness lead to dysfunction of qi movement. Spleen weakness cannot transform water dampness, generating internal dampness that congeals into phlegm. Phlegm obstructs the meridians, causing poor qi and blood circulation. Qi stagnation, phlegm coagulation, and blood stasis together form phlegm-stasis stagnation syndrome. For treating phlegm-stasis stagnation, Professor Shen often uses herbs such as San Leng, E Zhu, and Ju Hong to unblock qi stagnation, followed by resolving phlegm and stasis.

#### 4.4 Combining Prevention and Treatment to Stop Malignant Transformation

Through a follow-up study of 324 patients with gastric mucosal dysplasia, Professor Shen found that "toxin-stasis obstruction combined with qi and yin deficiency" is the syndrome type with the highest cancer transformation rate. The obstruction of toxins and stasis in the stomach often develops into cancer on the basis of pre-existing qi and yin deficiencies. Therefore, the treatment should focus on detoxification, resolving stasis, and simultaneously replenishing qi and nourishing yin. Professor Shen commonly uses herbs such as Tai Zi Shen, Bai Zhu, and Mai Dong to replenish qi and nourish yin, combined with Ci Wei Pi and Shan Ci Gu to detoxify and resolve stasis. Additionally, herbs like E Zhu are often included to unblock qi stagnation and disperse nodules.

In the text *Su Wen - On Pain Theory*, it is stated, "All diseases arise from qi; anger makes qi ascend... overthinking causes qi to stagnate." Professor Shen observed that many patients with chronic gastric diseases exhibit emotional disturbances. Some patients experience anxiety due to gastric disease, while others have recurrent episodes of chronic gastric disease due to emotional distress. These factors interact with and exacerbate each other, accelerating disease progression. Therefore, in clinical treatment, attention must also be given to the emotional issues of patients. Modern medicine suggests that psychological and emotional factors can suppress the immune system, leading to immune dysfunction and the development of tumors.

For PLGC patients, treatment must address symptoms while also caring for the patient's emotional and psychological state to boost their confidence and encourage active participation in treatment. In summary, traditional Chinese medicine (TCM) treatment of PLGC should adhere to an individualized and dialectical approach, balancing the root cause and symptoms. Anticancer, detoxifying, and nodule-dispersing medications can be introduced into the treatment early to prevent cancer transformation and fully leverage TCM's unique advantages in halting cancer progression.

## 5. Conclusion

Professor Shen Shuwen's approach to the treatment of precancerous lesions of gastric cancer (PLGC) based on the differentiation of "deficiency, toxin, stasis, and depression" embodies the holistic perspective and syndrome differentiation principles of traditional Chinese medicine (TCM). Through comprehensive and targeted treatments, this method effectively alleviates patients' symptoms, reverses pathological changes in the gastric mucosa, and ultimately achieves the goal of gastric cancer prevention. Professor Shen emphasizes that the treatment of PLGC should not only focus on local pathological changes but also prioritize overall regulation of the body. He advocates for individualized treatment and highlights the importance of prevention and supportive care. Additionally, he promotes dietary adjustments, emotional regulation, and other comprehensive measures to enhance treatment efficacy and prevent disease recurrence.

## References

- [1] Chen Wei, Liu Huayi. Experimental Research Progress on Mechanisms of TCM in Preventing and Treating Precancerous Lesions of Gastric Cancer [J]. Journal of Tianjin University of Traditional Chinese Medicine, 2007, 27(1):54-56.
- [2] Wang Xingmin, Du Fujie, Liu Aiguo, et al. Treatment of Precancerous Lesions of Gastric Cancer with Cordyceps Preparations [J]. World Latest Medicine Information, 2017, 17(41):162.
- [3] Shen Shuwen. Clinical Thinking and Experience of Syndrome Differentiation and Treatment of Precancerous Lesions of Gastric Cancer [J]. Modern Digestion & Intervention, 2013, 18(2):96-97.
- [4] Wang Jiehong, Shen Shuwen, Liu Li, et al. Application of Spleen-Stomach Qi Ascending and Descending

- Theory in Chronic Atrophic Gastritis [J]. Information on Traditional Chinese Medicine, 2014, 31(3):33-34.
- [5] Zhu Yuling, Bai Yuning, Yao Naili. Understanding Gastric Mucosal Barrier Damage and Its Treatment Ideas in Precancerous Lesions from “Spleen Deficiency, Collateral Obstruction, and Toxic Damage” [J]. Journal of Traditional Chinese Medicine, 2013, 54(10): 817-820.
- [6] Uemura N, Okamoto S, Yamamoto S, et al. Helicobacter pylori Infection and the Development of Gastric Cancer [J]. New England Journal of Medicine, 2001, 345(11): 784-789.
- [7] Bi Hanxin, Shi Yongquan. Related Factors of Gastric Cancer after Helicobacter pylori Eradication [J]. Journal of Modern Oncology, 2021, 29(8):1438-144.
- [8] Shen Shuwen. Clinical Thinking and Experience of Syndrome Differentiation and Treatment of Precancerous Lesions of Gastric Cancer [J]. Modern Digestion & Intervention, 2013, 18(2):96-97.
- [9] Xu Wanqi, Wang Yibo, Sun Zhirong. Analysis of Research on Antitumor Activity of Plants of the Genus Dendrobium [J]. Chinese Journal of Modern Applied Pharmacy, 2017, 34(1):130-134.
- [10] Zhao Yi, Zhang Qiyun, Liu Yan, et al. Mechanism Study of Dendrobium Officinale Extract in Regulating S1P and Related Genes for Gastric Cancer Prevention [J]. China Journal of Traditional Chinese Medicine and Pharmacy, 2017, 32(5):1910-1914.