

## Case Report

# Efficacy of traditional Chinese herbal medicine in the treatment of gastrointestinal polyps and chronic gastritis: A case report

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### Abstract

**Background:** The rate of gastrointestinal adenomatous polyps, often regarded as precancerous lesions, developing into cancer is 40 – 70 %. Endoscopic resection has been the preferred method for treating gastric polyps since the late 1960s. Surgical removal of polyps continues to play an important role in the treatment of polyps; however, the efficacy of such treatment cannot be guaranteed, and polyps may recur.

**Case presentation:** Here, we report a 44-year-old man suffering from gastrointestinal polyps who refused surgical treatment and instead was treated with traditional Chinese herbal medicine (TCHM) for approximately 1 year. The patient was diagnosed with “qi deficiency and dampness syndrome” based on traditional Chinese medicine theory and was treated with the TCHM “strengthen qi and remove dampness formula”, referred to as the shen-ling-bai-zhu powder/decoction.

**Conclusion:** This case suggests that TCHM may play an important role in the treatment of gastrointestinal polyps. Relevant data are, however, limited and a randomized controlled trial is needed to confirm TCHM efficacy in a larger population.

**Keywords:** Case study, Gastrointestinal polyps, Traditional Chinese herbal medicine, Shen-ling-bai-zhu powder

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## INTRODUCTION

Gastric polyps constitute a common lesion of the gastric mucosal epithelium. These lesions can be divided into adenomatous polyps, hamartoma polyps, inflammatory polyps, and hyperplastic polyps according to their histological characteristics [1]. Gastric polyps are often regarded as precancerous lesions, and the rate of adenomatous polyp development into cancer is 40 – 70 % [2]. Gastric polyps develop as a result of chronic gastritis, *Helicobacter pylori* (Hp) infection, bile reflux of the stomach following

by-pass surgery as well as genetic and environmental factors [3].

Many clinical manifestations of polyps such as abdominal discomfort, nausea, vomiting, and gastrointestinal bleeding (due to mucosal erosion or ulcers), can only be observed when complications occur [4]. Since the late 1960s, gastric polyps have been resected endoscopically. This has become the preferred method of treatment. Surgical removal of polyps plays an important role in the treatment of polyps

[2,4]; however, its efficacy cannot be guaranteed. Moreover the polyps can recur.

In recent years, traditional Chinese herbal medicine (TCHM) has gradually been demonstrated to be effective for the symptoms of gastric diseases, such as functional dyspepsia [5,6] and diarrhea [7,8]. Data pertaining to TCHM treatment of gastrointestinal polyposis are however rare. Here, we report the case of a patient who suffered from gastric polyps and was treated for approximately one year by the administration of shen-ling-bai-zhu (SLBZ) powder/decoction.

## CASE PRESENTATION

A 44-year-old man presented at the Chengdu University of Traditional Chinese Medicine Teaching Hospital on the 3rd of April, 2013 with a one year, history of weakness and associated loss of weight. There was an exacerbation of symptoms two weeks prior to presentation. He was feeble and weak with no obvious predisposing factor. He admitted to having lost 10 kg body weight during the past year. There was associated dizziness, flustering, hunger, and hot flashes. There was no history of cough, hemoptysis, insomnia, urinary frequency or urgency, dysuria. His past medical history included chronic hepatitis lasting more than 10 years, a rectal polyp resection 1 year previously, and 6 months of chronic gastritis. The patient was a technician employed by a pilot group in Chengdu city, Sichuan Province, and had not come in contact with dogs, cats, or birds. He had not traveled outside the city for a long time. There was no history of recent sexual contacts or recreational drug use. He was an occasional alcohol drinker and never smoked.

Nothing remarkable was detected on a physical examination. His oxygen saturation was 98% on ambient air, heart rate was 92 beats per minute,

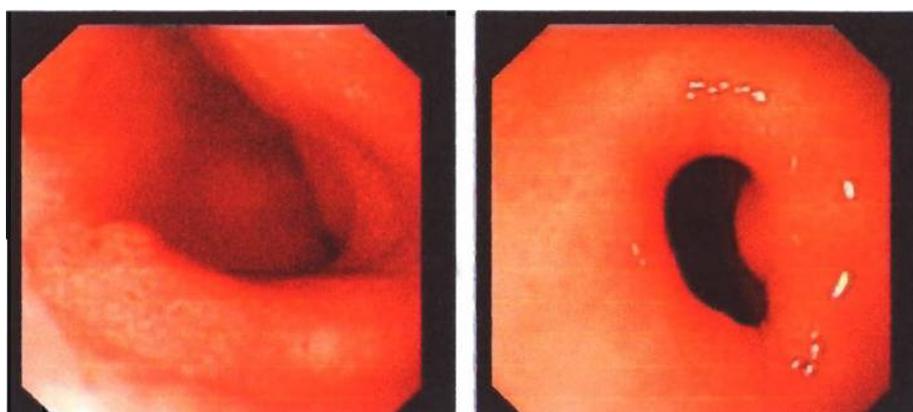
blood pressure was 123/81 mmHg, blood glucose level was 6.3mmol/l 4 hours after eating, and respiratory rate was 19 breaths per minute.

A chest radiograph showed no abnormalities. However, gastroscopy revealed two 2–4mm polypoid bodies near the pylorus, duodenal bulb and at the greater curvature, respectively (Figure 1). Histological examination of the polypoid bodies showed chronic inflammation of the mucous membranes of the polyps in the duodenal bulb area. The <sup>14</sup>C-urea breath test was positive for Hp. The endoscopic findings of chronic atrophic gastritis and multiple duodenal bulb polyps respectively are shown in Figure 1.

## Syndrome differentiation

The patient refused a gastrointestinal polypectomy and rather asked for TCHM therapy. According to the traditional Chinese medicine (TCM) principle of the five zang organs, one of the main physiological functions of the spleen is to govern transportation and transformation, such as digestion, absorption, and transmission of nutrients. The function of the spleen is dependent on the condition of spleen qi. Digestion, absorption, and transmission are normal when spleen qi is abundant. A deficiency in spleen qi may lead to symptoms, such as anorexia, abdominal distention, diarrhoea, lassitude, loss of weight, and malnutrition. Moreover, a serious deficiency of spleen qi may result in retention of water and fluid, as both transportation and transformation are decreased.

Retention of water and fluid often manifests as phlegmatic hygrois condensation and gradually develops into polyps or nodule in the body (namely accumulation of dampness due to spleen qi deficiency). This manifest vocal nodules, intestinal polyps, and nasal polyps.



**Figure 1:** Initial endoscopic results. (a) Duodenal bulband (b) polyp in the pyloric area.

The patient presented with a pale and/or white and thick greasy coating on his tongue with teeth marks on both sides of the tongue. In addition, there was a soggy or slippery pulse as a result of qi deficiency and dampness syndrome.

SLBZ powder/decoction (SLBZP) is a TCHM formula that strengthens spleen qi and removes dampness in line with the TCM monograph *taiping huimin and agent pharmacopoeia* discovered during the Song dynasty of ancient China. This formula has been widely used to protect intestinal mucosal barrier function, improve chronic diseases, such as dampness accumulation due to spleen qi deficiency syndrome, and restore gastrointestinal dysfunction [9]. In addition, SLBZP was effective as an adjuvant therapy in a chemotherapy-induced animal model of hepatocellular carcinoma, it may act by inhibiting tumor growth inducers [10]. The apparent therapeutic principle of SLBZP is to strengthen qi and remove dampness.

The patient had a reddish tongue covered with a thin-white coating and a smooth pulse. We administered SLBZP after confirming the syndrome based on TCM theory. The SLBZP was taken at a dose of 100 ml three times per day. According to TCM theory, raw or cold foods, oily food and fishy foods are forbidden during treatment. In addition, some difficult-to-digest foods and other stimulating foods should be avoided while taking any kind of TCM. The composition of the SLBZP is shown in Table 1. All herbs were purchased from Si Chuan Neatus Traditional Chinese Medicine, Inc (Sichuan, China).

## RESULTS

After 5 days of consuming the SLBZP, the patient's symptoms of palpitations, tiredness, and weakness improved significantly, with no adverse drug reaction recorded except for sore throat, morning nausea accompanied by vomiting of clear water, and anorexia.

After 8 months of intermittent use of the SLBZP lasting till December 14, 2013, the patient informed us that his nausea and vomiting had disappeared and the associated weakness had reduced. Repeat gastroscopy showed several small 2 – 4 mm smooth polyps scattered near the pyloric duodenal bulb. Because the <sup>14</sup>C-urea breath test was negative for Hp, we advised the patient to continue taking the SLBZP.

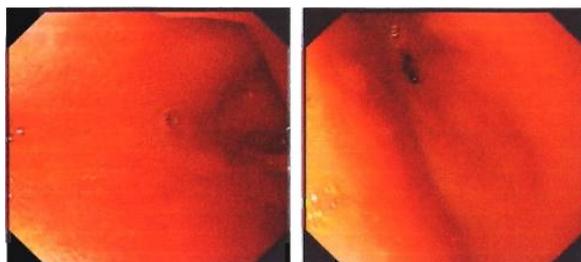
At the third follow-up in June 11, 2014, the weakness had subsided. Gastroscopy revealed neither ulcer, folded nodules nor polyps in the stomach. The gastric mucosa appeared and displayed the usual normal red and white color (Figure 2). The polyp in duodenal bulb and pyloric area had disappeared. No negative symptom was reported.

## DISCUSSION

The patient was diagnosed with “qi deficiency and dampness syndrome” based on TCM theory and was treated with the TCHM “strengthen qi and remove dampness formula”. The gastrointestinal polyps in this patient were treated successfully, and the associated symptoms disappeared without complications during the follow-up.

**Table 1:** Composition of the Traditional Chinese Herbal Medicine shen-ling-bai-zhu powder/decoction

Chinese name	Common name	Botanical name	%
Ren shen	Ginseng	<i>Radix Ginseng</i>	8.7
Fu ling	Poria cocos	<i>Poria</i>	4.3
Chao Bai zhu	Rhizoma <i>Atractylodis Macrocephalae</i>	<i>(Rhizoma Atractylodis Macrocephalae) (baked)</i>	8.7
Bai bian dou	Whitehyacinth Bean	<i>Semen Dolichoris Album</i>	8.7
Chen pi	Pericarpium citri reticulatae	<i>Pericarpium Citri Reticulatae</i>	4.3
Sha ren	Fructus amomi	<i>Fructus Amomi</i>	4.3
Shan yao	Chinese yam	<i>Rhizoma Dioscoreae</i>	8.7
Yi ren	Semen Coicis	<i>Coicis semen</i>	8.7
Jie geng	Platycodon grandiflorum	<i>Radix Platycodi</i>	4.3
Gan jiang	Rhizoma zingiberis	<i>Rhizoma Zingiberis</i>	8.7
Shen qu	Chinese drug Shenqu	<i>Massa Dermentata Medicinalis</i>	4.3
Shan zha	Fructus crataegi	<i>Fructus Crataegi</i>	8.7
Ban xia	Pinellia ternata	<i>Rhizoma Pinelliae</i>	4.3
Jin ying zi	Fructus Rosae Laevigatae	<i>Rosa Laevigata Michx</i>	4.3
Sang piao xiao	Mantis Egg-case	<i>Ootheca Mantidis</i>	4.3
Zhi Gan cao	Glycyrrhiza	<i>Radix Glycyrrhizae praeparatae</i>	4.3



**Figure 2:** The endoscopic results in the patient after taking traditional Chinese medicine for approximately 14 months

Although limited data was obtained regarding the drug formula, its various components have been reported and confirmed by pharmacological research [10].

The main drug components of the formula boost the body's immune system and promote restoration from the diseased state. The Radix Ginseng, Poria, baked Rhizoma Atractylodis Macrocephalae, Semen Dolichoris Album, and Coicis semen present in the SLBZP enhance immunity [11]. Baked Rhizoma Atractylodis Macrocephalae protects the gastric mucosa and enhances intestinal motility [12]. Poria and Coicis semen have anti-inflammatory and anti-tumor effects. Coicis semen promotes T lymphocyte proliferation [13]. Semen Dolichoris Album enhances T lymphocyte activity and has antibacterial and antiviral activities [14]. Radix Glycyrrhizae praeparatae protects the gastric mucosa. Nevertheless, no direct experimental evidence is available at present to explain the efficacy of the SLBZ ingredients on stomach and intestinal polyps. We advocate drug trials to identify the potential mechanism of the SLBZ and more rigorous randomized controlled trials to confirm its clinical effects on gastrointestinal polyps in the future.

## CONCLUSION

We present a case report of gastrointestinal polyps treated with TCHM. The patient was diagnosed with "qi deficiency and dampness syndrome" based on TCM theory and was treated with the TCHM "strengthen qi and remove dampness formula" SLBZP. The gastrointestinal polyps and associated symptoms disappeared after approximately 1 year of TCHM therapy without any complications during the follow-up. This case suggests that TCHM could play an important role in the treatment of gastrointestinal polyps. It may be a better choice for the patients who refuse surgery or cannot be surgically operated on, because the Chinese traditional medicine treatment of chronic gastritis

and gastrointestinal polyps method is simple and less painful. Relevant data are however limited, and randomized controlled trials are still needed to confirm its efficacy in a larger population.

## DECLARATIONS

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### Conflict of Interest

No conflict of interest associated with this work.

### Contribution of Authors

The authors declare that this work was done by the authors named in this article and all liabilities pertaining to claims relating to the content of this article will be borne by them.

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## REFERENCES

1. Park DY, Lauwers GY. Gastric polyps: classification and management. *Arch Pathol Lab Med* 2008; 132: 633-640.
2. Kim YH, Kim NG, Lim JG, Park C, Kim H. Chromosomal Alterations in Paired Gastric Adenomas and Carcinomas. *Am J Pathol* 2001; 158: 655-662.
3. Carmack SW, Genta RM, Schuler CM, Saboorian MH. The current spectrum of gastric polyps: a 1-year national study of over 120,000 patients. *Am J Gastroenterol* 2009; 104: 1524-1532.
4. Goddard AF, Badreldin R, Pritchard DM, Walker MM, Warren B. The management of gastric polyps. *Gut* 2010; 59: 1270-1276.
5. Qin F, Huang X, Ren P. Chinese herbal medicine modified xiaoyao san for functional dyspepsia: Meta-analysis of randomized controlled trials. *J Gastroenterol Hepatol* 2009; 24: 1320-1325.

6. Xiao Y, Liu Yy, Yu Kq, Ouyang Mz, Luo R, Zhao Xs. Chinese herbal medicine liu jun zi tang and xiang sha liu jun zi tang for functional dyspepsia: meta-analysis of randomized controlled trials. *Evid Based Complement Alternat Med* 2012; 2012.
7. Singhuber J, Zhu M, Prinz S, Kopp B. Aconitum in traditional Chinese medicine: A valuable drug or an unpredictable risk? *J Ethnopharmacol* 2009; 126: 18-30.
8. Gu Y, Zhang Y, Shi X, Li X, Hong J, Chen J, Gu W, Lu X, Xu G, Ning G. Effect of traditional Chinese medicine berberine on type 2 diabetes based on comprehensive metabonomics. *Talanta* 2010; 81: 766-772.
9. Tian L. Shen-ling-bai-zhu decoction scattered flavored rhubarb protect the intestinal mucosal barrier function of experimental research. *Med J Liaoning* 2011; 01: 9-11.
10. Xi S, Peng Y, Minuk GY, Shi M, Fu B, Yang J, Li Q, Gong Y, Yue L, Li L et al. The combination effects of Shen-Ling-Bai-Zhu on promoting apoptosis of transplanted H22 hepatocellular carcinoma in mice receiving chemotherapy. *J Ethnopharmacol* 2016; 190: 1-12.
11. Jia Taiyuan BHS. Dangshen for J774 rat effect of the activity of macrophage cell. *Lishizhen Med Mater Med Res* 2010; 11: 769-770.
12. Wangruina. The pharmacological effects and the comprehensive development and utilization of medicinal atractylodes. *Anhui Ag Sci* 2010; 38: 5610-5611, 5627.
13. Wu Y, Yuan Y. Advance in studies on chemical components and pharmacological effect of Semen Coicis. *West Pharm J* 2010; 25: 111-113.
14. Lu J, Cai J, Dai Y. Research progress of Semen Dolichoris Album. *Hubei J TCM* 2013; 35: 77-79.