

Traditional Mongolian Medicine for Chronic Functional Constipation in an Older Adult with Cholelithiasis: A Case Report

Altangerel A^{1*}, Oyun D¹, Munkhjargal N¹, Enkhtuya S¹, Amarsanaa J¹, Natsagdorj D¹, Amarjargal TS², Erdenebat A² and Orkhonbayar B³

¹Department of Traditional Medicine, Otoch Manramba University, Ulaanbaatar, Mongolia.

²Mamba Datsan Integrated Hospital, Ulaanbaatar, Mongolia.

³Mamba Datsan Pharmaceutical Factory, Ulaanbaatar, Mongolia.

*Correspondence:

Altangerel A, Department of Traditional Medicine, Otoch Manramba University, Ulaanbaatar, Mongolia.

Received: 07 Jul 2026; Accepted: 12 Aug 2026; Published: 24 Aug 2026

Citation: Altangerel A, Oyun D, Munkhjargal N, et al. Traditional Mongolian Medicine for Chronic Functional Constipation in an Older Adult with Cholelithiasis: A Case Report. Med Clin Case Rep. 2026; 6(3): 1-5.

ABSTRACT

Background: Chronic constipation frequently coexists with gallstones in older adults; however, evidence regarding the effectiveness and safety of Traditional Mongolian Medicine (TMM) remains limited.

Main aim: To evaluate the clinical effectiveness and safety of Traditional Mongolian Medicine using Sershi and Digag-3 for the treatment of chronic constipation in an older adult with gallstones.

Methods: A one-month prospective case study was conducted between March and April 2026. Before and after treatment, constipation severity was assessed using the PAC-SYM questionnaire, the Rome IV diagnostic criteria, and the Bristol Stool Form Scale. Biochemical tests, complete blood count, urinalysis, and abdominal ultrasonography were also performed. Adverse events were evaluated using the Generic Assessment of Side Effects (GASE) questionnaire. A follow-up assessment was conducted by telephone 25 days after treatment completion using the PAC-SYM questionnaire, the Rome IV criteria, and the Bristol Stool Form Scale to determine the persistence of treatment effects.

Results: After 30 days of treatment, the PAC-SYM score decreased from 0.42 to 0.17, and the Bristol Stool Form Scale improved from Type 2 to Type 3. Symptoms meeting the Rome IV diagnostic criteria for chronic constipation were reduced. Biochemical parameters, complete blood count, and urinalysis remained within normal ranges throughout the study, and abdominal ultrasonography demonstrated no change in the gallstones. No treatment-related adverse events were observed.

Conclusion: This case study suggests that TMM using Sershi and Digag-3 may be an effective and safe therapeutic approach for improving symptoms of chronic constipation in older adults with gallstones

Keywords

Chronic constipation, Gallstones, Older adult, Sershi, Digag-3.

pregnant women, older adults, individuals with sedentary lifestyles, and women [2].

Introduction

Chronic functional constipation (CFC) is one of the most common gastrointestinal disorders worldwide and its prevalence increases with advancing age. It affects approximately 16% of the adult population and up to 33.5% of older adults [1]. Nearly one-third of the general population experience constipation at some point during their lifetime, with a higher prevalence among children,

Recent evidence has demonstrated that bile acids play an essential role in regulating colonic secretion and intestinal motility [3]. Upon reaching the colon, bile acids stimulate water and electrolyte secretion while enhancing colonic peristalsis, thereby exerting a physiological laxative effect. Consequently, alterations in bile acid synthesis, composition, and enterohepatic circulation may prolong intestinal transit time and contribute to the pathophysiology of

chronic constipation [4].

Most bile acids are reabsorbed in the terminal ileum and returned to the liver through the enterohepatic circulation, a process regulated by several mediators, including fibroblast growth factor 19 (FGF19) [5]. Conversely, disturbances in bile acid metabolism and impaired bile flow have also been associated with gallstone formation. Traditional Mongolian Medicine (TMM) has long utilized herbal formulations for the management of gastrointestinal disorders, aiming to restore the physiological functions of the liver, gallbladder, stomach, and intestines [6].

Therefore, evaluating the therapeutic effects of Traditional Mongolian Medicine in an older patient with cholelithiasis and chronic functional constipation, using clinical symptoms, validated questionnaires, laboratory investigations, and imaging findings, may provide valuable clinical evidence and contribute to a better understanding of its potential therapeutic role. This case report aimed to evaluate the therapeutic effects of Traditional Mongolian Medicine in an older adult with chronic functional constipation and cholelithiasis.

Objectives

- 1. To evaluate changes in constipation-related clinical symptoms and questionnaire scores following treatment.
- 2. To assess changes in laboratory and ultrasonographic findings before and after treatment.
- 3. To evaluate the safety of treatment by monitoring adverse events.

Methods

A one-month prospective case study was conducted between 4 March and 3 April 2026 at Manba Datsan Traditional Medicine Hospital, Ulaanbaatar, Mongolia.

Written informed consent was obtained from the patient prior to enrolment. The study objectives, treatment procedures, prescribed medications, and follow-up schedule were explained in detail before treatment commenced.

The patient received two registered Traditional Mongolian Medicine formulations, *Sershi* and *Digag-3*, both of which are approved by the Mongolian national drug regulatory authority.

Before treatment, constipation was evaluated using the Rome IV diagnostic criteria, the Bristol Stool Form Scale (BSFS), and

the Patient Assessment of Constipation Symptoms (PAC-SYM) questionnaire. Clinical examination by a Traditional Mongolian Medicine physician, complete blood count, urinalysis, blood biochemistry, and abdominal ultrasonography were also performed.

The patient subsequently received both herbal medications for 30 consecutive days at home.

Following completion of treatment, all clinical assessments, questionnaires, laboratory investigations, and ultrasonographic examinations were repeated and compared with baseline findings. Adverse events were evaluated before and after treatment using the Generic Assessment of Side Effects (GASE) questionnaire. Weekly follow-up interviews were conducted throughout the treatment period, and an additional follow-up assessment was performed 25 days after treatment completion.

Case Presentation

A 76-year-old woman residing in Ulaanbaatar, Mongolia, presented with chronic constipation. She had a history of hypertension controlled with regular antihypertensive medication. She also reported occasional pancreatic discomfort and longstanding constipation, for which she intermittently used herbal laxative tea.

Her constipation had first developed approximately 46 years earlier, when she was around 30 years of age. Cholelithiasis had been diagnosed more than 10 years before presentation.

According to the Traditional Mongolian Medicine examination, pulse diagnosis suggested a mild heat pattern. The patient was diagnosed with hepatic steatosis and multiple small gallstones.

From the perspective of Traditional Mongolian Medicine, the patient's constipation was considered to be associated with the *Tripa (bile) syndrome*. Therefore, *Sershi*, a formulation intended to support hepatobiliary function, and *Digag-3*, a formulation used to moisten the bowel and facilitate defecation, were prescribed. The treatment regimen is summarised in Table 1.

Results

Before treatment, the patient's PAC-SYM score was 0.42, indicating mild constipation symptoms. After 30 days of treatment, the score decreased to 0.17, suggesting a reduction in symptom severity. At the 25-day follow-up, the score was 0.33, indicating that the clinical improvement was largely maintained.

Table 1: Details of the Medicine Treatment Regimen.

Medicine name	Daily dose	Administration time	Directions for use	Traditional indications
Sershi	2 powder packets	1pm	Take two tablets with 100 mL of warm water 30 minutes after lunch.	Traditionally used to regulate Tripa (bile) disorders affecting the stomach and intestines, relieve jaundice, promote metabolic balance, eliminate toxins and thirst, reduce Baekan (phlegm) disorders, alleviate empty heat, and regulate disturbed descending Loong (wind).
Digag-3	2 powder packets	9pm	Boil in 200 mL of water, allow the steam to dissipate, and drink while warm.	Traditionally used to moisten the bowel and relieve constipation. It is also prescribed to assess whether the patient's abdomen is sufficiently robust before purgative therapy.

According to the Bristol Stool Form Scale (BSFS), stool form improved from type 2, which is indicative of constipation, to type 3, representing a normal stool consistency. Based on the Rome IV criteria, the patient fulfilled the diagnostic criteria for chronic functional constipation at baseline; however, these criteria were no longer met following treatment and remained absent at follow-up (Table 2).

Clinical Outcomes

The patient reported that spontaneous bowel movements resumed on the day following initiation of treatment. Throughout the treatment period, bowel movement frequency increased, while the need for excessive straining during defecation decreased. These clinical improvements were sustained at the 25-day follow-up after completion of treatment.

Changes in Blood Biochemical Parameters

The serum biochemical parameters before and after treatment are presented in Table 3. All measured liver biochemical parameters remained within their respective reference ranges throughout the treatment period. No clinically significant abnormalities in liver function were observed following treatment. Although ALT, AST, and ALP showed minor variations, all values remained within the normal reference ranges. Notably, the gamma-glutamyl transferase (GGT) level decreased from 27 U/L to 16 U/L.

Abbreviations

ALT: Alanine aminotransferase, AST: Aspartate aminotransferase, ALP: Alkaline phosphatase, GGT: Gamma-glutamyl transferase.

Changes in Complete Blood Count

No clinically significant abnormalities were observed in the complete blood count following treatment. The mildly elevated MID percentage (9.1%) and reduced mean platelet volume (MPV; 8.2 fL) recorded at baseline returned to values within the normal reference ranges after treatment (Table 4).

Ultrasonographic Findings

Following 30 days of Traditional Mongolian Medicine treatment, abdominal ultrasonography demonstrated no remarkable changes in the size or morphology of the liver, pancreas, spleen, or other abdominal organs. Multiple small gallstones remained unchanged in both size and location, with no evidence of biliary obstruction or other structural abnormalities (Table 5).

Safety Assessment

No adverse events were reported during treatment or throughout the follow-up period according to the Generic Assessment of Side Effects (GASE) questionnaire. The treatment was well tolerated, with no safety concerns identified.

Discussion

The present case demonstrates the potential therapeutic benefits of Traditional Mongolian Medicine in an older adult with chronic functional constipation and cholelithiasis.

In Traditional Mongolian Medicine, **Sershi and Digag-3** are prescribed to regulate the physiological functions of the liver,

Table 2: Changes in Questionnaire Outcomes before and After Treatment.

Outcome Measure	Baseline	After Treatment	Follow-up
PAC-SYM score	0.42 (mild symptoms)	0.17 (improved)	0.33
Bristol Stool Form Scale	Type 2 (constipated stool)	Type 3 (normal stool)	Type 3 (normal stool)
Rome IV criteria	Met the diagnostic criteria for chronic functional constipation	No longer met the diagnostic criteria	No longer met the diagnostic criteria

Table 3: Comparison of Serum Biochemical Parameters before and After Treatment.

Parameter	Reference Range	Before Treatment (4 March 2026)	After Treatment (3 April 2026)	Interpretation
ALT (Alanine aminotransferase)	Female: ≤31 U/L	24	28	Within normal range
AST (Aspartate aminotransferase)	Female: ≤33 U/L	17	27	Within normal range
Alkaline phosphatase (ALP)	42–98 U/L	54	71	Within normal range
Gamma-glutamyl transferase (GGT)	Female: ≤32 U/L	27	16	Within normal range

Table 4: Major Complete Blood Count Parameters Before and After Treatment.

Parameter	Reference Range	Unit	Before Treatment	After Treatment	Interpretation
WBC	4.00–10.00	×10 ³ /μL	7.83	5.10	Within normal range
RBC	3.50–5.50	×10 ⁶ /μL	4.27	4.20	Within normal range
HGB	11.0–16.0	g/dL	13.3	13.2	Within normal range
PLT	162–440	×10 ³ /μL	242	258	Within normal range
MPV	9.0–13.0	fL	8.2 ↓	10.3	Normalized
MID%	3.0–9.0	%	9.1 ↑	5.8	Normalized

Table 5: Comparison of Abdominal Ultrasonographic Findings before and After Treatment.

Parameter	Before Treatment (4 March 2026)	After Treatment (2 April 2026)	Change
Liver size	Approximately 13.5 cm	Approximately 13.5 cm	No change
Liver echotexture and echogenicity	Homogeneous, normal	Homogeneous, normal	No change
Gallbladder	Normal	Normal	No change
Gallstones	Multiple small gallstones	Multiple small gallstones	No change
Pancreas	Normal, homogeneous	Normal, homogeneous	No change
Free intraperitoneal fluid	Absent	Absent	No change

gallbladder, stomach, and intestines. Based on Traditional Mongolian Medicine principles, the coexistence of cholelithiasis, hepatic steatosis, and chronic constipation in this patient was considered compatible with a *Tripa (bile)-related* constipation pattern. Accordingly, **Sershi** was prescribed to support hepatobiliary function, whereas Digag-3 was administered to moisten the bowel and facilitate defecation [6,7].

From the perspective of contemporary medicine, bile acids play a pivotal role in regulating colonic secretion and intestinal motility. Consequently, the observed therapeutic response may be explained, at least in part, by mechanisms involving enhanced bile secretion and improved intestinal secretory and motor functions [3-5]. Although the precise pharmacological mechanisms of these Traditional Mongolian Medicine formulations remain unclear, their clinical effects are biologically plausible in light of current knowledge regarding bile acid physiology.

Following 30 days of treatment, improvements were observed in constipation symptom severity, as reflected by reductions in PAC-SYM scores and improvement in Bristol Stool Form Scale classification. These findings are consistent with previous studies investigating Traditional Mongolian Medicine for constipation management [8].

Importantly, liver biochemical parameters remained within normal limits throughout treatment, and no clinically significant abnormalities were detected in haematological investigations. These findings suggest that the treatment was well tolerated and did not adversely affect hepatobiliary function during the observation period.

Although therapies intended to stimulate bile secretion may theoretically increase the risk of gallstone migration and biliary obstruction in patients with cholelithiasis, no changes in gallstone size or location were detected by abdominal ultrasonography in the present case [9]. Therefore, the observed clinical improvement may have resulted primarily from functional rather than structural effects, particularly through enhancement of intestinal motility and secretion.

Nevertheless, this report describes a single patient and therefore has several important limitations. The absence of a control group, the short duration of follow-up, and the lack of direct measurements of bile acid metabolism preclude any conclusions regarding causality or underlying mechanisms. Larger prospective studies incorporating objective biomarkers of bile acid metabolism

are warranted to validate these preliminary findings.

Conclusion

This case demonstrated that 30 days of Traditional Mongolian Medicine treatment was associated with improvement in chronic functional constipation in an older adult with cholelithiasis.

Constipation symptoms improved, as evidenced by a reduction in the PAC-SYM score from 0.42 to 0.17 and an improvement in Bristol Stool Form Scale classification from type 2 to type 3. These clinical benefits were maintained 25 days after treatment completion.

Laboratory parameters remained within normal limits, and abdominal ultrasonography demonstrated no changes in the size or location of the gallstones, suggesting that the treatment was well tolerated without detectable adverse effects on hepatobiliary function.

No treatment-related adverse events were reported throughout the treatment or follow-up periods.

Although the findings suggest that **Sershi and Digag-3** may represent a potentially beneficial complementary therapeutic approach for chronic functional constipation in older adults with cholelithiasis, conclusions are limited by the single-case design. Further well-designed controlled clinical studies are required to establish their efficacy and safety.

References

1. Forootan M, Bagheri N, Darvishi M. Chronic constipation: A review of literature. *Medicine*. 2018; 97: e10631.
2. Bharucha AE, Pemberton JH, Locke GR. American Gastroenterological Association technical review on constipation. *Gastroenterology*. 2013; 144: 218-238.
3. Stephen JK, Andeacarola LU, Alexandr VL, et al. Contributions of bile acids to gastrointestinal physiology as receptor agonists and modifiers of ion channels. *American Journal of Physiology-Gastrointestinal and Liver Physiology*. 2021; 322.
4. Camilleri M, Gores GJ. Therapeutic targeting of bile acids. *American Journal of Physiology*. 2015; 309: G209-G215.
5. Inagaki T, Choi M, Moschetta A, et al. Fibroblast growth factor 15 functions as an enterohepatic signal to regulate bile acid homeostasis. *Cell Metabolism*. 2005; 2: 217-225.
6. གཡུ་ཐོག་ཡོན་ཏན་མགོན་པོ།, བདུད་རྩི་རྩིང་པོ་ཡན་ལག་རྩེད་པ་གསང་བ་མན་ངག་གི་རྩེད་ཅེས་བྱ་བ་བཞུགས་སོ།

-
7. Natsagdorj D, Molor R. Emiin Kheregleenii Khyanaltn Lavlakh [Reference Manual for Drug Utilization Monitoring]. Ulaanbaatar: Mamba Datsan Pharmaceutical Factory. 2005.
 8. Picon L, Droy-Lefaix MT, Christa L. Traditional herbal remedies for constipation: A systematic review. *Journal of Ethnopharmacology*. 2012; 140: 225-235.
 9. Shaffer EA. Gallstone disease: Epidemiology of gallbladder stone disease. *Best Practice & Research Clinical Gastroenterology*. 2006; 20: 981-996.