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Therapeutic effects and safety of Chinese herbal formula Tongxie Yaofang versus placebo for diarrhea-predominant irritable bowel syndrome

Submission date
22/03/2021

Registration date
23/03/2021

Last Edited
28/01/2025

Recruitment status
No longer recruiting

Overall study status
Completed

Condition category
Digestive System

[X] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Irritable Bowel Syndrome (IBS) is a bowel disease that causes abdominal pain associated with bowel movements or changes in bowel habits. IBS can be categorized into four subtypes, diarrhea-predominant irritable bowel syndrome (IBS-D) is one of them and accounts for about 40% of all IBS patients. IBS-D significantly reduces the quality of life of patients and affects the patient's daily activities. No specific therapeutic drugs have been found. Chinese herbal formula Tongxie Yaofang was first recorded in the Dan Xi Xin Fa. It belongs to the formulation of Chinese medicine and consists of four Chinese herbal medicine: Baizhu, Baishao, Chenpi and Fangfeng. Some previous clinical studies have reported that Tongxie Yaofang has potential benefits in the treatment of IBS, but the quality of these studies is not high. The aim of this study is to evaluate the effects and safety of Tongxie Yaofang in the treatment of IBS-D.

Who can participate?
Patients aged 18 to 65 years with diarrhea-predominant irritable bowel syndrome

What does the study involve?
Participants are randomly allocated into two groups. One group receives Tongxie Yaofang for 8 weeks, and the control group receives a placebo (dummy drug) of Tongxie Yaofang for 8 weeks. The dosage given is 3.7 g of granules two times per day. The patients will be followed up for 3 months after the treatment to assess IBS symptom severity.

What are the possible benefits and risks of participating?
If successful, the medication has the potential to preserve and enhance the benefits of rehabilitation for patients with diarrhea-predominant irritable bowel syndrome. This may reduce hospital admissions and improve the patient’s quality of life.
The tested medication may cause adverse events during the treatment.

Where is the study run from?
Fangshan Hospital of Beijing University of Chinese Medicine, Beijing (China)

When is the study starting and how long is it expected to run for?
July 2020 to December 2022

Who is funding the study?
National Natural Science Foundation (China)

Who is the main contact?
1. Jian-ping Liu (scientific)
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Scientific

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Additional identifiers

EudraCT/CTIS number

Nil known

IRAS number

ClinicalTrials.gov number
Nil known

Secondary identifying numbers
Nil known

Study information

Scientific Title
Chinese herbal formula Tongxie Yaofang for diarrhea-predominant irritable bowel syndrome: a randomized, double-blind, placebo-controlled clinical trial

Study objectives
Compared with placebo, Tongxie Yaofang may be effective and safe for diarrhea-predominant irritable bowel syndrome.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 04/02/2021, Medical Ethics Committee, Fangshan Hospital of Beijing University of Chinese Medicine (#151, Cheng-Guan-Nan Street, Fangshan District, Beijing, China; +86 (0)10-89321886; fsyyll@sina.com), ref: FZY LK-2021-002

Study design
Randomized double-blind placebo-controlled clinical trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Hospital

Study type(s)
Treatment

Participant information sheet
No participant information sheet available

Health condition(s) or problem(s) studied
Diarrhea-predominant irritable bowel syndrome

Interventions

Current intervention as of 05/07/2021:
Participants are randomized into two groups using SAS software to generate a sequence of random numbers. One group receives Tongxie Yaofang, and the control group receives a placebo. The dosage given is 3.7 g of granules two times per day. The course of treatment is 8 weeks, and the patients will be followed up for 3 months after the treatment.

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Previous intervention:
Participants are randomized into two groups using SAS software to generate a sequence of random numbers. One group receives Tongxie Yaofang, and the control group receives a placebo. The dosage given is 18.75 g of granules two times per day. The course of treatment is 8 weeks, and the patients will be followed up for 3 months after the treatment.

Intervention Type
Drug

Phase
Phase II

Drug/device/biological/vaccine name(s)
Tongxie Yaofang

Primary outcome measure
Current primary outcome measure as of 02/03/2022:
1. The degree of IBS symptom severity, measured using the scale of irritable bowel syndromes symptom severity score (IBS-SSS) at baseline, 4 weeks ± 3 days (duration of treatment), 8 weeks ± 3 days (end of treatment), 3 months ± 3 days (end of follow-up)

Previous primary outcome measure:
1. The degree of IBS symptom severity, measured using the scale of irritable bowel syndromes symptom severity score (IBS-SSS) at baseline, 4 weeks ± 3 days (duration of treatment), 8 weeks ± 3 days (end of treatment), 3 months ± 3 days (end of follow-up)
2. Stool frequency: the average daily number of voluntary defecations recorded in the week before each timepoint at baseline, 4 weeks ± 3 days (duration of treatment), 8 weeks ± 3 days (end of treatment), 3 months ± 3 days (end of follow-up)
3. Stool consistency measured using the Bristol stool scale at baseline, 4 weeks ± 3 days (duration of treatment), 8 weeks ± 3 days (end of treatment), 3 months ± 3 days (end of follow-up)

Secondary outcome measures
Current secondary outcome measures as of 02/03/2022:
1. Stool frequency: the average daily number of voluntary defecations recorded in the week before each timepoint at baseline, 4 weeks ± 3 days (duration of treatment), 8 weeks ± 3 days (end of treatment), 3 months ± 3 days (end of follow-up)
2. Stool consistency measured using the Bristol stool scale at baseline, 4 weeks ± 3 days (duration of treatment), 8 weeks ± 3 days (end of treatment), 3 months ± 3 days (end of follow-up)
3. Quality of life measured using the scale of IBS-quality of life (IBS-QOL) at baseline, 8 weeks ± 3 days (end of treatment)
4. Anxiety measured using the self-rating anxiety scale (SAS) at baseline, 8 weeks ± 3 days (end of treatment)

5. Depression measured using the self-rating depression scale (SDS) at baseline, 8 weeks ± 3 days (end of treatment)
6. Safety assessed by:
4.1. Routine examination (blood routine, urine routine, stool routine + occult blood (OB)) at baseline, 8 weeks ± 3 days (end of treatment)
6.2. Biochemical indexes including liver function (aspartate aminotransferase (AST) and alanine aminotransferase (ALT)), kidney function (blood urea nitrogen (BUN), creatinine) measured at baseline, 8 weeks ± 3 days (end of treatment)
6.3. Heart electrical activity measured using electrocardiogram at baseline, 8 weeks ± 3 days (end of treatment)
6.4. Adverse events, such as rash, constipation, or other special symptoms, recorded at any time during the treatment by the patient: Incidence of adverse events = (number of adverse events / total cases) × 100%
6.5. Severe adverse events, such as loss of function or disability, life-threatening or even death, recorded at any time during the treatment by the researchers: incidence of severe adverse events = (number of severe adverse events / total cases) × 100%

Previous secondary outcome measures:
1. Quality of life measured using the scale of IBS-quality of life (IBS-QOL) at baseline, 8 weeks ± 3 days (end of treatment)
2. Anxiety measured using the self-rating anxiety scale (SAS) at baseline, 8 weeks ± 3 days (end of treatment)
3. Depression measured using the self-rating depression scale (SDS) at baseline, 8 weeks ± 3 days (end of treatment)
4. Safety assessed by:
4.1. Routine examination (blood routine, urine routine, stool routine + occult blood (OB)) at baseline, 8 weeks ± 3 days (end of treatment)
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4.3. Heart electrical activity measured using electrocardiogram at baseline, 8 weeks ± 3 days (end of treatment)
4.4. Adverse events, such as rash, constipation, or other special symptoms, recorded at any time during the treatment by the patient: Incidence of adverse events = (number of adverse events / total cases) × 100%
4.5. Severe adverse events, such as loss of function or disability, life-threatening or even death, recorded at any time during the treatment by the researchers: incidence of severe adverse events = (number of severe adverse events / total cases) × 100%

Overall study start date
31/07/2020

Completion date
31/12/2022

Eligibility

Key inclusion criteria
Current inclusion criteria as of 05/07/2021:
1. Aged 18 to 65 years, male or female
2. Those who meet IBS-D Rome IV diagnostic criteria

3. Those who meet Liver Depression and Spleen Deficiency Syndrome (Ganyu Pixu Zheng) from the diagnostic criteria for TCM syndromes
4. IBS-SSS score ≥75
5. The patient did not take any drugs related to the treatment of the disease at least 1 week before entering the study and did not participate in other ongoing studies
6. Patients who have had a colonoscopy within 1 year and had an examination report
7. Accept the trial voluntarily and sign the informed consent form. The informed consent process complies with Good Clinical Practice (GCP)
8. Long-term residence in the place where the treatment is given

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3. Those who meet Liver Depression and Spleen Deficiency Syndrome (Ganyu Pixu Zheng) from the diagnostic criteria for TCM syndromes
4. IBS-SSS score ≥75
5. The patient did not take any drugs related to the treatment of the disease at least one week before entering the study and did not participate in other ongoing studies
6. Patients who had a colonoscopy at a 3A (Tertiary) hospital within 1 year and had an examination report
7. Accept the trial voluntarily and sign the informed consent form. The informed consent process complies with Good Clinical Practice (GCP)
8. Long-term residence in the place where the treatment is given

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Upper age limit
65 Years

Sex
Both

Target number of participants
96

Key exclusion criteria
Current exclusion criteria as of 05/07/2021:
1. Irritable bowel syndrome with predominant irregular bowel habits
2. Patients with severe tumors or organic lesions in the heart, liver, or kidney
3. Patients with severe mental illness or language disorders that affect communication
4. Patients with severe tumors or organic lesions in gastrointestinal tract, such as pancreatitis, history of colon or rectal cancer, intestinal tuberculosis, ulcerative colitis or Crohn's disease

5. Patients with metabolic diseases affecting gastrointestinal motility, such as hyperthyroidism
6. Those who with an allergic constitution or allergic to the composition of the studied medication
7. Patients with a history of gastrointestinal surgery
8. Pregnant or lactating women, and women planning to have a child or fertility treatment

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Previous exclusion criteria:
1. Irritable bowel syndrome with predominant irregular bowel habits
2. Patients with tumors or organic lesions in the heart, liver, kidney, etc
3. Patients with mental illness
4. Patients with tumors or organic lesions in gastrointestinal tract, such as pancreatitis, intestinal polyps (excluding those with polypectomy for more than half a month), intestinal diverticulum, history of colon or rectal cancer, history of inflammatory bowel disease, intestinal tuberculosis, etc
5. Patients with metabolic diseases that affect the dynamics of the digestive tract, e.g., thyroid disease, diabetes, etc
6. Those who with allergic constitution or allergic to the composition of the studied drug
7. Patients with a history of abdominal or pelvic surgery, such as cholecystectomy
8. In light of the investigator's judgment, the patient has a situation that reduces the likelihood of enrollment or complicates enrollment, e.g., frequent changes in the work environment and other situations that are prone to loss of follow-up

Date of first enrolment
01/11/2021

Date of final enrolment
01/04/2022

Locations

Countries of recruitment
China

Study participating centre
Fangshan Hospital of Beijing University of Chinese Medicine
#151, Cheng-Guan-Nan Street
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Sponsor information

Organisation
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Sponsor type
Government

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ROR
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Funder(s)

Funder type
Government

Funder Name
National Natural Science Foundation of China (No. 81830115)

Alternative Name(s)
Chinese National Science Foundation, Natural Science Foundation of China, National Science Foundation of China, NNSF of China, NSF of China, , National Nature Science Foundation of China, Guójiā Zìrán Kēxué Jījīn Wěiyuánhuì, NSFC, NNSF, NNSFC

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
China

Results and Publications

Publication and dissemination plan

Planned publication in a high-impact peer-reviewed journal, approximately December 2023. Additional documents (such as study protocol, statistical analysis plan etc) may be available.

Intention to publish date
31/12/2023

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are/will be available upon request from Shi-Bing Liang (zyi20126185@163.com).

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		21/03/2022	08/04/2024	Yes	No
Results article		27/01/2025	28/01/2025	Yes	No