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CLINICAL STUDY ON THE SAFETY AND EFFICACY OF GUT RESET CAPSULES IN ALLEVIATING THE GASTRO-ESOPHAGEAL REFLUX (GER)

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ABSTRACT

Background: Glabridin, a major flavonoid, displayed anti-ulcer and anti-inflammatory activity, which is beneficial in restoring normal physiological functioning of the stomach and reducing GER symptoms. **Methods**: A randomized double-blind, placebo-controlled trial was conducted with 50 patients aged 18-60 years to evaluate the safety and efficacy of Capsules in reducing gastro-esophageal reflux (GER)- related symptoms (**GUT RESET**-25 subjects, Placebo-25 subjects). **Results:** For 60-day trial durations, while evaluating on Days 15, 30, 45 and 60, study outcomes efficacy of GUT RESET Capsules in the severity of gastroesophageal symptoms such as burning in the chest, backwash (regurgitation) of food or sour liquid, upper abdominal or chest pain, difficulty swallowing (dysphagia), a lump in your throat, an ongoing cough, and vocal cord inflammation (laryngitis).It was safe to use laboratory parameters- LFT, RFT, CBC and other adverse events to evaluate quality of life. **Conclusion:** This study reveals that GUT RESET Capsules had a substantial effect on reducing the intensity and frequency of GER symptoms measured by the GSAS scale during a 60-day period. The safety evaluation reaffirms GUT RESET Capsules favorable safety profile, with no adverse events and key laboratory and vital sign values remaining within acceptable levels. As a result, studies should have well-defined goals and clinical efficacy.

KEYWORDS: Clinical study, Glabridin, Symptoms, GER.

INTRODUCTION

Gastroesophageal reflux disease (GERD) is when the contents of your stomach persistently move back up into your esophagus. These contents sometimes contain excessive acid and may cause irritation and pain.[1] When you eat, food passes from the throat to the stomach through the esophagus. A ring of muscle fibers in the lower esophagus prevents swallowed food from moving back up. These muscle fibers are called the lower esophageal sphincter (LES).When this ring of muscle does not close all the way, stomach contents can leak back into the esophagus. This is called reflux or gastroesophageal reflux. Reflux may cause symptoms. Harsh stomach acids can also damage the lining of the esophagus.[2] GER (Gastro-esophageal Reflux) symptoms prevail amongst 20% of the Western culture population. Sedentary lifestyle meaning; a lifestyle with a lot of sitting and lying down, with very little to no exercise, is one of the major factors leading to experiences of GER symptoms. As a matter of course, ill-suited and improper food consumption habituation contribute crucially to manifestation of these GER symptoms leading to Gastro-Esophageal Reflux Disease (GERD). Many people experience acid reflux now and then. However, when acid reflux happens repeatedly over time, it can cause GERD.[3] It shows symptoms such as heartburn and regurgitation. GERD may develop when your lower esophageal sphincter becomes weak or relaxes when it shouldn't.[4]

Glycyrrhiza glabra L., synonym *Glycyrrhiza glabra var*, belongs to the family Fabaceae, a medicinally important plant and commonly known as known as Liquorice. Rhizomes and roots are the most important medicinal parts of licorice that have been reported to be used alone or with other herbs for the treatment of many digestive system disorders (e.g., stomach ulcers, hyperdipsia, flatulence and colic), respiratory tract disorders, such as coughs, asthma, tonsillitis and sore throat). It contains several chemical constituents such as saponins, flavonoids, isoflavonoids, stilbenoids and coumarins. Triterpenoid saponins (4–20%) include mostly glycyrrhizin, a mixture of potassiumand calcium salts of 18β-glycyrrhizic acid also called glycyrrhizic or glycyrrhizinic acid. The root also possess other triterpenes included liquiritic acid, glycyrretol, glabrolide, isoglaborlide and liquorice acid. Flavonoids and chalcones isolated from *Glycyrrhiza glabra* L., included liquiritin, liquiritigenin, hamnoliquiritin, neoliquiritin, chalconesisoliquiritin, isoliquiritigenin, neoisoliquiritin, licuraside, glabrolide, licoflavonol. Isoflavanoids includes glabridin, galbrene, glabrone,

shinpterocarpin, licoisoflavones A and B, formononetin and glyzarin. The principal constituents in coumarins are liqcoumarin and umbelliferone.[5]

Glabridin (4-[(3*R*)-8, 8-dimethyl-3, 4-dihydro-2*H*-pyrano [2, 3-*f*] chromen-3-yl] benzene-1, 3-diol, C20H20O4) (Figure 1), a natural occurring prenylated isoflavan, accounting for 0.08–0.35% of the roots dry weight in *Glycyrrhiza glabra* L.[6] Recent studies have shown that glabridin has a wide range of pharmacological effects, including antioxidant, antimicrobial, anti-inflammatory and anti-gastric ulcer activities, as well as inhibitory effects on the formation of melanin and low density lipoprotein.[7]

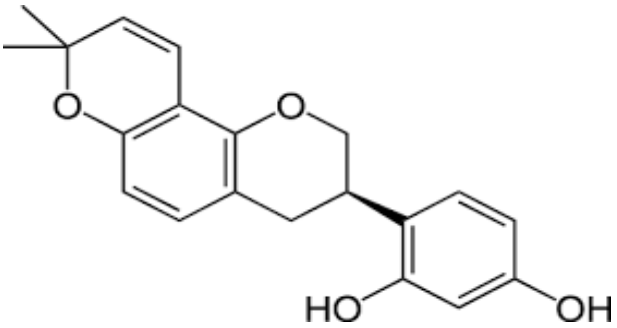

Figure 1: Glabridin.

Glabridin is an isoflavonoid component found in roots extract of *Glycyrrhiza glabra*. This is very renowned for its varied number of pharmacological activities. One amongst those is found to be Anti-ulcer and Anti-inflammatory activity which is helpful in restoring the normal physiological activity of stomach and reduce the symptoms related to GER. Most importantly, the cold potency and unctuous nature of Liquorice is responsible in pacifying various symptoms of GER.

Hence, GUT RESET Capsules containing Glabridin has been formulated for testing against GER related symptoms in subjects through a double-blind, placebo-controlled clinical study. Presently the main aim of the present study is to evaluate the efficacy of GUT RESET Capsules in reducing the symptoms of gastro-esophageal reflux (GER) through a double-blind, randomized placebo-controlled clinical study along with its safety while administration in human subjects.

MATERIAL AND METHOD

This was a randomized, double-blind, placebo-controlled trial to evaluate the safety and efficacy of GUT RESET Capsules in alleviating the Gastro-esophageal Reflux (GER) -

related symptoms. A total of 50 subjects complaining of GER and its related symptoms were enrolled into the study for a duration of 60 days. Participants with informed consent as per Declaration of Helsinki, will be implemented in this clinical investigation before protocol specified procedures or interventions are carried out. The conduct research organization of the study was TriGuna Private Limited (Karnataka), Sponsored by Herbal Creations and Investigation was performed in Rajalakshmi Hospital, Karnataka, India.

Study Objectives

The study objectives includes the primary and secondary parameters:

Primary

- To assess the efficacy of GUT RESET Capsules in reducing the symptoms of GER amongst the patients, through severity score as assessed by Gastroesophageal Reflux Disease Symptom Assessment Scale (GSAS) in comparison to those receiving placebo.
- To evaluate the efficacy of GUT RESET Capsules in reducing the Dyspepsia symptoms using 7-point Likert scale.
- To evaluate safety and tolerability of GUT RESET Capsules during its consumption during the treatment period.

Secondary

- To assess the response to treatment by the patients receiving GUT RESET Capsules.
- To evaluate the frequency of occurrences of GER-related symptoms as assessed by GSAS.
- To establish the proportion of heartburn-free days and that of regurgitation-free days.
- To evaluate proportion of patients with complete resolution and relief of heartburn.
- To assess Quality-of-life score (Global Assessment Questionnaire). Proportion of Adverse Drug Reactions (ADRs).

Study Design

This is a double-blind, randomized study to evaluate efficacy and safety of GUT RESET Capsules in subjects diagnosed and suffering from GER. The subject population was divided into 2 groups with sample size of total 50 subjects-

Group 1: Treatment group: Subjects with gastro-esophageal reflux (GER) will be administered with GUT RESET Capsules.

Group 2: Control group: Subjects with gastro- esophageal reflux (GER) will be administered with Placebo.

Procedure for Test Product use

All subjects enrolled into the study will be randomized to consume either GUT RESET Capsules or placebo for up to 60 days.

Study Procedure

- All eligible subjects will undergo clinical evaluation by a general physician. They will be assessed for their eligibility criteria for participation in the study based on inclusion and exclusion criteria. Objective assessments will be performed for the subjects in both Group 1 & 2. Safety will be assessed throughout the study by monitoring adverse events and serious adverse events.
- The subjects enrolled will be administered with GUT RESET Capsules or placebo during the study period.

Visit Schedule

Study visit are as follows:

- Visit 1/Day -2 to 0- ICF and Screening procedures such as clinical symptoms, Hematological and serological investigations, Urinalysis, UPT.
- Visit 2/Day-1-Enrollment – Assessment using Gastroesophageal Reflux Disease Symptom Assessment Scale (GSAS), Quality of life Questionnaire.
- Follow-up/Visit 3/Day 15 – Telephonic – Assessment of clinical symptoms, Gastroesophageal Reflux Disease Symptom Assessment Scale (GSAS), 7-point Likert scale.
- Follow-up Visit 4/Day 30 - Telephonic – Assessment of clinical symptoms, Gastroesophageal Reflux Disease Symptom Assessment Scale (GSAS), 7-point Likert scale.
- Follow-up Visit 5/Day 45 - Telephonic – Assessment of clinical symptoms, Gastroesophageal Reflux Disease Symptom Assessment Scale (GSAS), 7-point Likert scale.
- Visit 6/Day 60 EOS In-person visit – Repeat of all screening procedures such as Hematological Investigations, Serological Investigations, Urinalysis and UPT including assessments of Clinical symptoms, Gastroesophageal Reflux Disease Symptom Assessment Scale (GSAS), 7-point Likert scale & Quality of life Questionnaire.

Sample Size

For clinical validation 50 subjects are to be enrolled and randomized into Group 1 & 2. Total Number of Subjects: 50 subjects (completed). The potential subjects will be screened as per the inclusion and exclusion criteria only after obtaining written informed consent from the subjects and visits were planned.

Inclusion Criteria

Every subject should fulfill the following eligibility criteria to participate in the study.

- Apparently healthy adults of any gender 18 - 60 years of age, willing to provide consent affected by symptoms of GER.
- History of GER-related symptoms for at least 1 month prior to study inclusion and otherwise healthy.
- Not participated in any other interventional trials in the last 1 month before trial recruitment.
- Willing to discontinue medications like H2 Receptor antagonists, Antacids, Pro-kinetics and supplements that have been prescribed for the GER related symptoms and not on any of these agents in the last 10 days before randomization.
- Presence of symptoms of at least 2 days in the week preceding randomization.

Exclusion Criteria

- Presence of any of the following red flag symptoms such as Iron deficiency anemia, weight loss, persistent vomiting, GI bleed, epigastric mass
- Women of reproductive age who are pregnant / lactating / not willing for adequate contraception.
- History of allergy to any medications including alternate system of medications
- History of uncontrolled diabetes (Random Blood Sugar > 200mg %)
- Inability to follow the protocol or expressed inability to complete all follow-ups.
- Abnormalities in the liver function tests (defined as total bilirubin >1mg% or SGOT / SGPT > 3 times the upper limit of normal)
- Abnormal renal function test (Creatinine > 1.4mg %)
- Congestive cardiac failure and other medical conditions which the investigator feels will affect the pharmacokinetic parameters of the study drug.
- History of erosive esophagitis, Barrett's esophagus, tumor pathologies, atypical pathology without heartburn and ulcer.

- Presence of HIV, HbsAG or HCV positive and any other medical/ surgical condition the investigator feels may cause harm to the participant.

Participant Selection and Enrollment

The study participant will be identified by the study investigator at the selected study site and screened for study protocol eligibility criteria after receiving voluntary consent from the study participant.

The participant found eligible, meeting all inclusion & none exclusion criteria, is enrolled into the study by the investigator.

Screening for Eligible Participants

- **Demographics:** The date of birth (age), gender, weight, will be recorded.
- **Treatments/Concomitant Medication:** If any allergy or any adverse event occurs due to the use of study product all the treatment and concomitant medication will be recorded and updated on the subject's source documents.
- **Physical Examination & Vitals:** General physical examination followed with measurement of vitals such as body temperature, pulse rate and blood pressure will be recorded.
- **Blood Investigations & Urinalysis:** Subject's blood will be assessed for various Biochemical tests which includes serological and hematological along with Urinalysis & UPT (only for female subjects of childbearing potential) during the screening indicating the subject's eligibility criteria to take part in the study. These investigations will also be conducted at the end of the study fulfilling assessment criteria to estimate the efficacy of the investigational product.
- **Objective and Subjective assessments:** Participants of the study will also be assessed through Gastroesophageal Reflux Disease Symptom Assessment Scale (GSAS) and 7-point Likert scale.

Compliance Monitoring

The subjects are advised to use the test product as per the directions to use. At the follow up visit, the subject's compliance to product usage will be confirmed and any instances of non-compliance will be reported and recorded in the CRF.

Method for Assigning Subjects to Treatment Group Participant Enrolment

The study participant will be identified by the study investigator at the selected study site.

Volunteers with 18-60 years will be enrolled into the study. Subjects fulfilling the inclusion and exclusion criteria will be enrolled and randomized into two groups. All corresponding assessments will be performed by the investigator for the respective group before enrolment.

Withdrawal Criteria

The study subjects will be given complete liberty to withdraw from the study at any point in time. In such conditions, the investigator will discuss the reasons for withdrawal with the subjects and should assess the primary cause for the subject's withdrawal and document in the Case Report Form (CRF).

Subjects will be withdrawn from the study under the following conditions:

- In case during the study, the subject develops any systemic condition that in the opinion of the investigator/ sponsor, renders the subject ineligible for further participation in the study.
- Subjects with major protocol violation will be withdrawn.
- In case the subject suffers an injury or illness that requires systemic or surgical treatment.
- Any other condition or circumstance as per the discretion of the investigator.
- If the subject experience any serious adverse event that renders them incapable of further participation in the study As far as possible the subjects should undergo all end of study visit assessments and they will have the right to withdraw from the study at any time, without prejudice to their medical care. The Investigator may also withdraw the subject at any time if this is in the subject's best interest.

Dropout/Lost To Follow Up

"Lost to follow up", is considered when the subject is not contactable and will not come to the follow-up visit. All the subjects who met all inclusion-exclusion criteria, without any major protocol violation will be included in as per protocol subset population. The safety analysis will be performed on the data of all subjects enrolled into the study, who have used the product at least once during the study period.

Instruction for Administration

Treatment Group: One capsule of 400mg GUT RESET Capsules to be taken once daily in the morning after breakfast, continuously for 60 days.

Placebo Group: One capsule of 250mg Microcrystalline cellulose to be taken once daily in the morning after breakfast, continuously for 60 days.

Clinical Evaluation

Clinical evaluation was performed based on below parameter for the study:

- Clinical Symptoms
- Gastroesophageal Reflux Disease Symptom Assessment Scale (GSAS)
- 7-point Likert scale for dyspepsia
- Quality of Life Score
- Hematological Investigations: Complete Blood Count (CBC)
- Serological Investigations: Renal Function Test (RFT), Liver Function Test (LFT), Lipid Profile
- Urinalysis
- UPT (only for female of child-bearing potential)

Safety and Adverse Events

An adverse event (AE) is any untoward medical occurrence in a patient or clinical investigation subject, administered a pharmaceutical product and which does not necessarily have a causal relationship with this treatment.

An AE can therefore be any unfavorable and unintended sign (including an abnormal laboratory finding), symptom, or disease temporarily associated with the use of a medicinal (investigational) product, whether related to the medical (investigational) product.

Examples of adverse events include but are not limited to: Clinically significant symptoms and signs; Changes in physical examination findings; Hypersensitivity.

Data Collection

The study case report form (CRF) is the primary data collection instrument for the study. All data requested on the CRF must be recorded. All missing data must be explained. If a space on the CRF is left blank because the procedure was not done or the question was not asked, write "N/D". If the item is not applicable to the individual case, write "N/A". All entries should be printed legibly in black ink. If any entry error has been made, to correct such an error, draw a single straight line through the incorrect entry and enter the correct data above it. All such changes must be initialed and dated by the study team member who has entered the data. Data once recorded must not be erased with an eraser or concealed with white ink. For clarification of illegible or uncertain entries, print the clarification above the item, then initial and date it.

Statistical Analysis Plan

- All the data captured in the case report form will be collected and ensured for completeness and medical plausibility. Collected data will be subjected to Statistical analysis. Application of various statistical tests depends on availability of the quality and complete data, care for which should be taken during data collection.
- The final analysis will be done at the end of the study.
- There will be reporting & descriptive analysis of withdrawal, drop out & protocol deviation cases. The missing, unused & spurious data will be identified & appropriately taken care of during the final analysis.
- Statistical analysis of the final data will be done using‘t’ test and/ ANOVA but not limited to these only.

RESULT

Background information on the subjects. A total of 50 subjects were included in the study. After randomization, each group had 25 subjects. On Day 60, 50 subjects had completed the study.

Study Endpoints & Outcome

The primary and secondary endpoint are:

Primary Endpoint

- Establish the efficacy of GUT RESET Capsules in decreasing the GER symptoms on comparison with the placebo through GSAS. Justify the efficacy of GUT RESET Capsules in decreasing the dyspepsia symptoms on comparison with the placebo through 7-point Likert scale.
- Establish the safety and tolerability of GUT RESET Capsules in patients participating in the study.

Secondary Endpoint

- The number of treatment responders (Daily diary response of no symptoms on 6 days of the last 7 days of the study before follow-up with / without 1-day symptoms of heartburn or regurgitation).
- Reduction in frequency of occurrences of GER symptoms in patients receiving GUT RESET Capsules when compared with placebo assessed through GSAS.
- Significant reduction in heartburn and regurgitation symptoms towards the end of the

study. Understand and establish the number of patients with complete resolution of heartburn. Change in Quality-of-life score (Global Assessment Questionnaire).

Assessment of Severity of Gastroesophageal Symptom Assessment Scale (GSAS) from Baseline to End of Study

The study shows the assessment of the severity of Gastroesophageal Symptom Assessment Scale (GSAS) from baseline to end. The assessment determines the symptoms showing the change of the severity and percentage of the severity as mention in Table 1. Over the period of time Group 2 Placebo show as no changes in severity of Gastroesophageal Symptom whereas Group 1 GUT RESET show good effect in severity of Gastroesophageal Symptom. The GUT RESET Capsules show the 75% difference in severity of burning sensation in chest, approx. 66% difference in backwash (regurgitation) of food or sour liquid, upper abdominal or chest pain, sensation of a lump in your throat and an ongoing cough whereas there is no effect in inflammation of the vocal cord (Laryngitis). The improvement in severity of symptoms in the GUT RESET group have shown to reduce over the period of 60 days (Table 2).

Table 1: Assessment of Severity of Gastroesophageal Symptom Assessment Scale (GSAS) from Baseline to End of Study. (Tabular Representation)

Symptom	Change in Severity [Median (IQR)]			Percentage Difference in Severity [%]		
	Group 1 GUT RESET	Group 2- PLACEBO	P value	Group 1 GUT RESET	Group 2- PLACEBO	P value
Burning Sensation in chest	3 (1)	0 (1.5)	<0.001	75 %	0	0.001
Backwash (regurgitation) of food or sour liquid	2 (1)	0 (1)	<0.001	66 %	0	0.001
Upper abdominal or chest pain	2 (1)	0 (2)	<0.001	66.67 %	0	0.001
Trouble swallowing (dysphagia)	1 (2)	0 (0.5)	0.01	41.66 %	0	0.01
Sensation of a lump in your throat	2 (1)	0 (1)	<0.001	66.67 %	0	0.001
An ongoing cough	2 (1)	0 (1)	<0.001	66.67 %	0	0.001
Inflammation of the vocal cord (laryngitis)	0.5 (1.75)	0 (0.5)	0.006	0	0	0.005

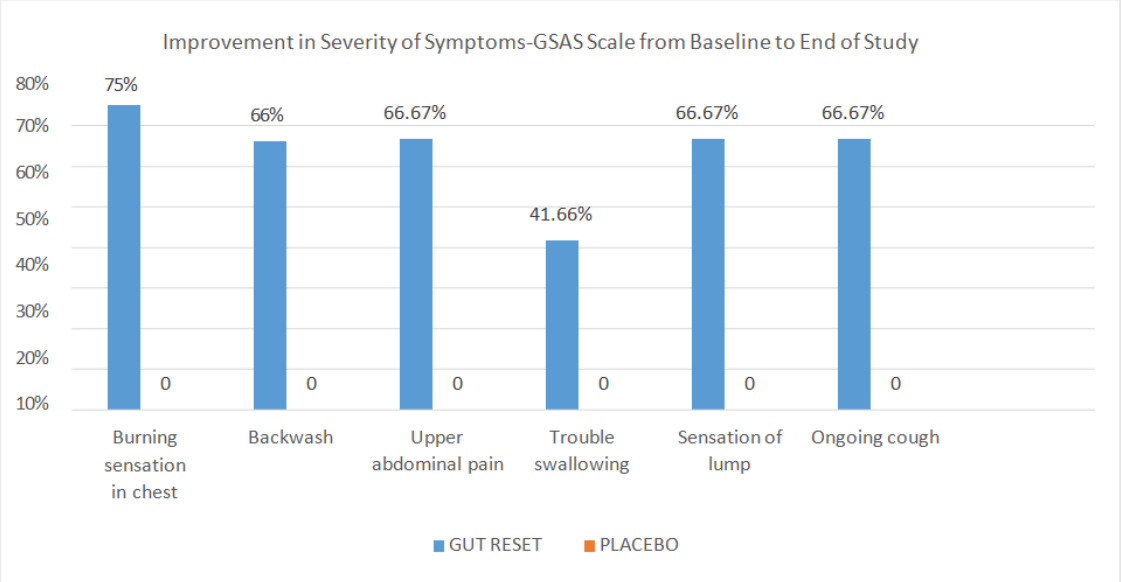

Table 2: Assessment of Severity of Gastroesophageal Symptom Assessment Scale (GSAS) from Baseline to End of Study. (Graphical Representation)

Assessment of Frequency of Gastroesophageal Symptom Assessment Scale (GSAS) from Baseline to End of Study

The study shows the assessment of the frequency of Gastroesophageal Symptom Assessment Scale (GSAS) from baseline to end. The assessment determines the symptoms showing the change of the frequency and percentage of the severity as mention in Table 3. Over the period of time Group 2 Placebo show as no changes in frequency of Gastroesophageal Symptom whereas Group 1 GUT RESET show good effect in frequency of Gastroesophageal Symptom. The GUT RESET Capsules show the 75% difference in frequency of burning sensation in chest, approx. 66% difference in backwash (regurgitation) of food or sour liquid, upper abdominal or chest pain, sensation of a lump in your throat and an ongoing cough whereas there is no effect in inflammation of the vocal cord (Laryngitis). The frequency of symptoms completely resolved in the GUT RESET group by the end of 60 days (Table 4).

Table 3: Assessment of Severity of Gastroesophageal Symptom Assessment Scale (GSAS) from Baseline to End of Study. (Tabular Representation)

Symptom	Change in Frequency [Median (IQR)]			Percentage Difference in Frequency [%]		
	Group 1 GUT RESET	Group 2-PLACEBO	P value	Group 1 GUT RESET	Group 2-PLACEBO	P value
Burning Sensation in chest	4 (0)	0 (2)	<0.001	100 %	0	0.001
Backwash	3 (1)	0 (2)	<0.001	100 %	0	0.001

(regurgitation) of food or sour liquid						
Upper abdominal or chest pain	3 (1)	0 (1.5)	<0.001	100 %	0	0.001
Trouble swallowing (dysphagia)	2.5 (3)	0 (1)	0.004	100 %	25%	0.001
Sensation of a lump in your throat	2.5 (1)	1 (2)	<0.001	100 %	50%	0.001
An ongoing cough	3 (1)	0 (1)	<0.001	100 %	0	0.001
Inflammation of the vocal cord (laryngitis)	0 (2)	0 (0)	0.012	0	0	0.012

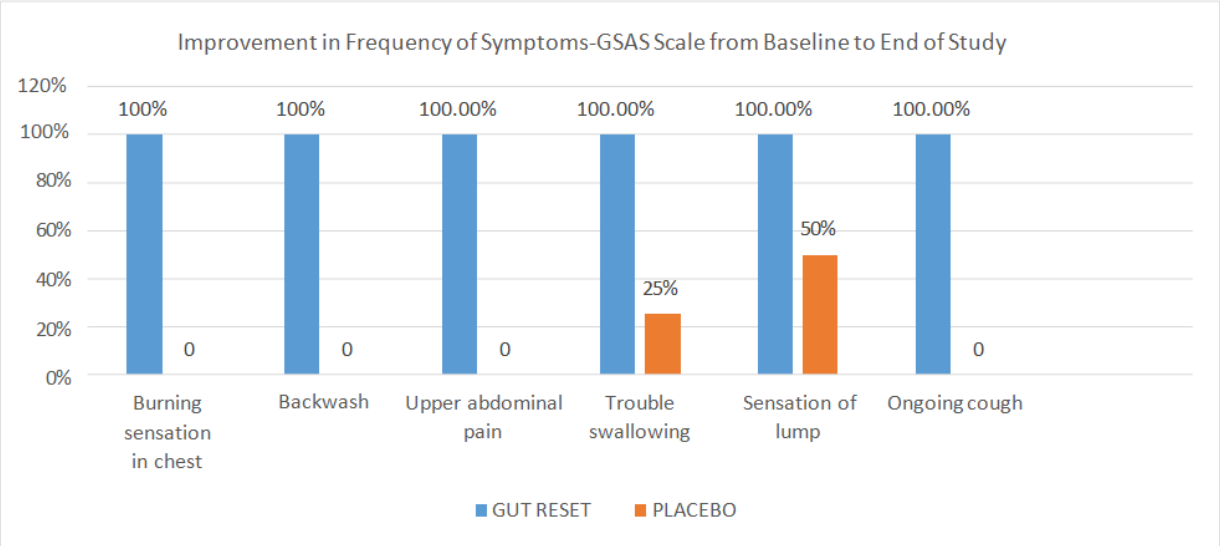

Table 4: Assessment of Severity of Gastroesophageal Symptom Assessment Scale (GSAS) from Baseline to End of Study. (Graphical Representation)

Inter Group Comparison of Improvement in Dyspepsia Symptoms During Follow up

The inter group comparison of improvement in dyspepsia symptoms during follow up include the percentage difference in frequency as the GUT RESET group shows the 20% of relief in upper abdominal fullness and reduction in belching whereas approx. 16.67% difference in frequency of reduction in bloating, early satiety, reduction in nausea, reduction in regurgitation (backwash), reduction in burning sensation if chest (heartburn) and improvement in appetite. The no effect is seen in reduction in upper abdominal pain and decrease in vomiting as shown in Table 5. The GUT RESET Capsules reflected improvement in dyspepsia symptoms during inter group comparison (Table 6).

Table 5: Inter Group Comparison of Improvement in Dyspepsia Symptoms during Follow up. (Tabular Representation)

Symptom	Percentage Difference in Frequency [%]		
	Group 1 GUT RESET	Group 2- PLACEBO	P value
Relief in upper abdominal fullness	20 %	0	0.07
Reduction in upper abdominal pain	0	0	0.03
Reduction in Belching	20 %	0	0.04
Reduction in Bloating	16.67 %	0	0.04
Relief from Early satiety	16.67 %	0	0.03
Reduction in Nausea	16.67 %	0	0.002
Decrease in Vomiting	0	0	0.004
Reduction in Regurgitation (backwash)	16.67 %	-50 %	0.007
Reduction in burning sensation if chest (heartburn)	16.67 %	-50 %	0.035
Improvement in Appetite	16.67 %	-50 %	0.004

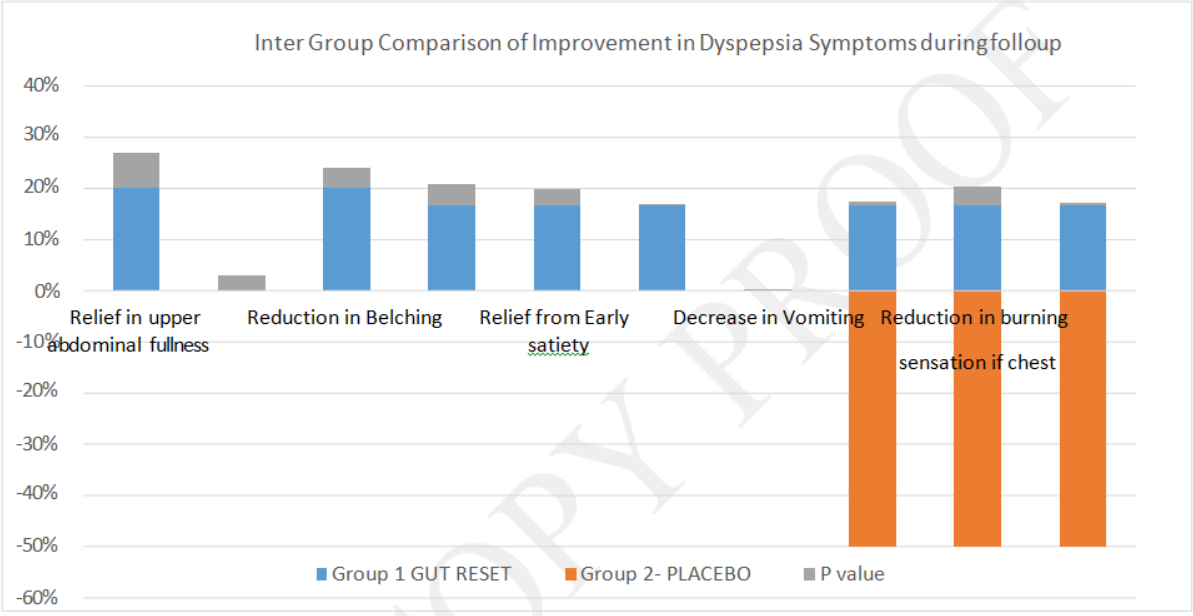

Table 6: Inter Group Comparison of Improvement in Dyspepsia Symptoms during Follow up. (Graphical Representation)

Resolution of Clinical Symptoms by End of Study

Resolution of clinical symptoms by the end of study indicates the GUT RESET group shows 100% absence in trouble swallowing (Dysphagia), sensation of a lump in your throat, an ongoing cough, inflammation of the vocal cord, new or worsening asthma, 95.83% reliefs in upper abdominal/ chest pain, 91.67% a burning sensation in your chest and 70.83 % in backwashes as shown in Table 7. At the end of the study there is resolution of clinical symptoms shows the significances of the GUT RESET Capsules (Table 8).

Table 7: Resolution of Clinical Symptoms by End of Study. (Tabular Representation)

Symptoms	GUT RESET		PLACEBO		p value
	Absent (%)	Present (%)	Absent (%)	Present (%)	
Upper Abdominal/ Chest Pain	95.83 %	4.17 %	12 %	88 %	0.001
Trouble Swallowing (Dysphagia)	100 %	0	72 %	28 %	0.005
Sensation of a lump in your Throat	100 %	0	28 %	72 %	0.001
An Ongoing Cough	100 %	0	8 %	92 %	0.001
Inflammation of the Vocal Cord	100 %	0	60 %	28 %	0.001
New or Worsening Asthma	100 %	0	96 %	4 %	0.32
A Burning sensation in your chest	91.67 %	8.33%	0	100 %	0.001
Backwash	70.83 %	29.17%	0	100 %	0.001

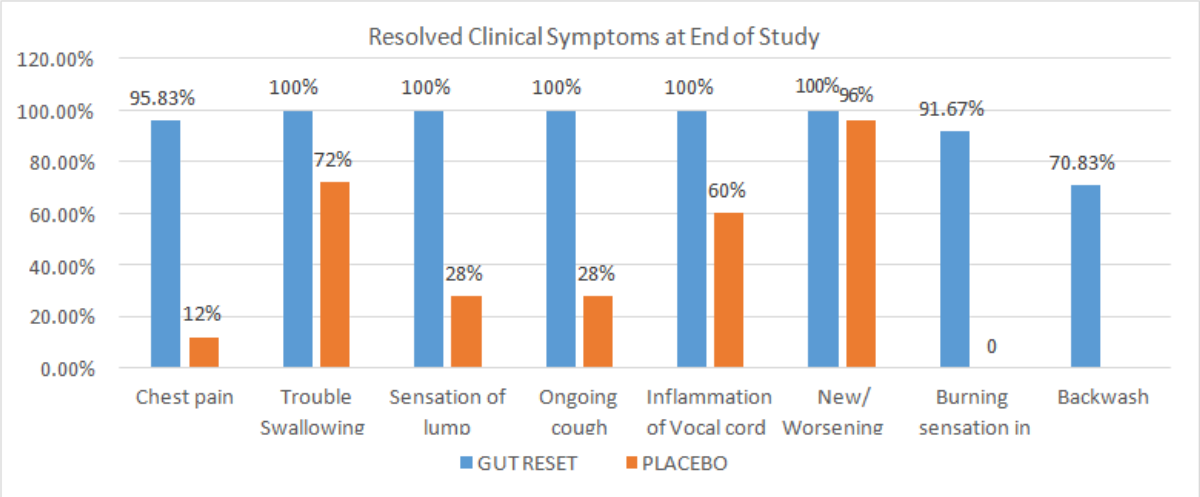

Table 8: Resolution of Clinical Symptoms by End of Study. (Graphical Representation)

CONCLUSION

GUT RESET Capsules showed significant effect on the reduction of the severity and frequency of GER symptoms measured using GSAS scale over the period of 60 days. The Capsules showed reduction in dyspepsia symptoms when compared to placebo which was measured using 7-point Likert scale. The difference in the severity and frequency of various symptoms namely burning sensation in chest, backwash of food, and upper abdominal or chest pain and dysphagia, sensation of lump in the throat, ongoing cough and inflammation of vocal cord from baseline to the end of study was higher in the GUT RESET group when compared to placebo. This difference was found to be statistically highly significant. The safety evaluation reinforces the favorable safety profile of GUT RESET Capsules, with the absence of adverse events and the maintenance of key laboratory and vital signs parameters within acceptable ranges.

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