The effects of Gingemyr[®] on gastroesophageal reflux and slow digestion. An observational study.

Abstract

Gastroesophageal reflux is a common oesophageal disorder characterized by troublesome symptoms associated with increased oesophageal acid exposure. Food supplements are often used to treat symptoms of gastroesophageal reflux. This observational study looked at the effects of an oral formulation in the form of a ginger and myrrh-based gummy on some symptoms related to gastrointestinal acid reflux and slow digestion. Ginger and myrrh were used due to their anti-inflammatory and prokinetic properties. The gummies were administered to 15 individuals (6 males and 9 females) for 10 days. The following parameters were acquired by interview after 10 days of taking the gummies: improvement in symptoms; undesirable effects; use in place of the usual medication already taken; taste and consistency of the product. Despite the relatively small number of participants, it can be stated that this formulation is relatively acceptable and pleasant, with good efficacy in reducing gastroenterological symptoms.

Keywords: Ginger, myrrh, gastro-intestinal acid reflux, slow digestion, gummy

Leandro Ivaldi 1

Rosalì Amelotti²

Maria Cristina Marzano 2*

¹ Digestive Endoscopy Clinic, Ceva (CN), Italy 3331668006

² Revalma Inc Srl Società Benefit – Casale Monferrato (AL), Italy

*Corresponding author: Maria Cristina Marzano

c.marzano@revalma.com

Introduction

Unhealthy diets high in fat, sugar, salt, and cholesterol are often the cause of gastroesophageal reflux disease (GERD) – a prevalent condition characterized by troublesome symptoms and oesophageal inflammation caused by the reflux of stomach contents and slow digestion.

The pathophysiology of GERD is multifactorial, involving transient lower oesophageal sphincter relaxations, impaired oesophageal motility, delayed gastric emptying, and increased intra-abdominal pressure. Management includes both pharmacological and non-pharmacological approaches.

Pharmacological treatments primarily consist of proton pump inhibitors (PPIs), histamine-2 receptor antagonists (H2RAs) and antacids, which aim to reduce gastric acid secretion or neutralize acidity to alleviate symptoms and prevent complications. While PPIs are considered the most effective treatment, concerns regarding long-term use have led to increased interest in alternative therapies.

Non-pharmacological and natural treatments for GERD include dietary modifications, lifestyle changes and herbal remedies. Avoiding trigger foods such as fatty foods, caffeine, chocolate, and alcohol, maintaining a healthy weight, elevating the head of the bed, and adopting proper meal timing can significantly reduce symptoms. Additionally, herbal remedies such as liquorice root, chamomile and ginger have been explored for their potential gastroprotective effects.

Exploring non-pharmacological options can lead to better treatment strategies due to the potential side effects associated with drug therapy. In this context, ginger and myrrh can be useful. Ginger contains more than 400 chemical compounds, but researchers estimate that gingerol compounds are mostly responsible for ginger's health benefits ^[1]. Ginger helps to reduce nausea and vomiting, particularly during pregnancy, and stimulates digestive enzymes, which are also partly responsible for the transit time of food through the gastrointestinal tract, preventing the formation of intestinal gas and stomach pain from poor digestion ^[2,3,4].

Myrrh, thanks to its chemical compounds like curzerene, furanoeudesma-1,3-diene and lindestrene, has an analgesic and anti-inflammatory role that could be useful in the treatment of gut health ^[5,6].

This study analyzed the effect of an orally dissolvable preparation of ginger and myrrh in the form of gummies as a possible solution to the symptoms of GERD and slow digestion or as an adjuvant therapy to reduce the use of pharmacological treatments.

Material and methods

Tested product

Gingemyr[®], contains 8.34 mg of ginger (titrated at 20% in gingerols) and 50 mg of Rodemyr[®], a highly standardized myrrh extract (titrated at >4% in total furanodienes of which 30% in furanoeudesma 1,3 diene) obtained by hydroethanolic extraction. Gingemyr[®] is allergen-free and processed in accordance with the current regulations established by the Ministry of Health regarding residual solvents, microbiology and heavy metals. The extract can be used not only as a Traditional Herbal Drug in accordance with current regulations, whose claims can be found in the ESCOP (European Scientific Cooperative in Phytotherapy) monograph, but also in cosmetic products with antiseptic and/or soothing properties, in medical devices for gynaecological and dental use (as they have anti-microbial effects) and in a wide range of food supplements with an analgesic and anti-inflammatory role.

The product was notified to the Italian Health Authorities in 2024 and is number 193911 in the list of nutritional supplements.

Study population, criteria and trial

This was an observational, open, pilot study to verify the digestive properties of Gingemyr[®]. Gingemyr[®] gummies were administered to 15 individuals (6 males and 9 females) with symptoms related to gastro-intestinal problems: 'gastrointestinal acid reflux' after a main meal (lunch/dinner) (8 participants) or 'slow digestion' after a main meal (lunch/dinner) (7 participants).

The following parameters, acquired by interview after 10 days of taking the gummies, were taken into account: improvement in symptoms; undesirable effects; use in place of the usual medication; taste and consistency of the product.

The inclusion criteria were individuals aged between 18 and 60 with symptoms related to gastrointestinal diseases, in particular to gastrointestinal acid reflux and slow digestion. Exclusion criteria included: aged below 18 or over 60; the presence of a neurological disorder; heart, vascular, lung or kidney disease, or a severe metabolic disorder; muscle pain of iatrogenic origin; a past or current history of cancer; presence of any type of immunosuppression; and refusal to sign the informed consent and/or the privacy form.

Statistical analysis

Data were analyzed using descriptive statistics and exploratory comparisons (after versus before) to evaluate the relationships between the treatment and the main clinical outcome (symptom of gastric reflux). The following numerical values were assigned to evaluate the symptomatic trend in enrolled participants: 0 = symptom present; 1 = symptom partially present; 2 = symptom absent. Statistical significance was set at *p*<0.05 (95%). The analysis was per-

formed by applying Wilcoxon signed-rank test, using JMP 14 statistical software for MacOS.

Results

Regarding an improvement in symptoms, according to the inclusion criteria at enrolment (T=0), all participants had symptoms. At the end of treatment (T=10 days) 10 participants reported no symptoms, 3 reported a partial improvement in symptoms, and 2 participants reported no difference in symptoms. As shown in **Table 1**, the measured effect was significant (p=0.00079), indicating a clear improvement of symptoms.

Five participants reported side effects: 1 'stomach-ache' (resolved spontaneously after day 3) and 4 'mouth-burning', persisting for more than half an hour.



Table 1. Observed results in improvement of symptoms of gastrointestinal acid reflux and slow digestion in participants (n=15) after 10 days.

For the question "would you use it instead of the drug you already habitually take" 8 participants were in favour, 2 absolutely against and 5 partly against. Of the participants who were not in favour, 2 gave the reason that it did not 'cover' the night; three gave the reason that they frequently had to take additional antacids and two reported 'poor efficacy'.

Regarding 'taste' (**Table 2**), 6 participants reported that the taste was 'acceptable'; 7 reported the taste as 'pleasant'; 1 said the taste was 'good' and 1 reported it to be 'unpleasant'. Two participants additionally reported that the gummies were too 'pungent' in the mouth and 7 described them as being too spicy, but almost all participants found the gummies more palatable after a few days' intake.



Similar results were also gathered regarding the 'consistency' of the product (**Table 3**): 2 participants found the consistency 'unpleasant'; 3 found it 'acceptable'; 7 found it 'pleasant' and 3 reported it to be 'good'. Some reasons given were that the gummies melt too slowly (1 participant); that they melt well (3 participants) and that they are 'too soft' (1 participant).



Table 3. Results on consistency of Gingemyr[®] as observedby participants (n=15).

Discussion

Our study aimed to verify the digestive properties of Gingemyr[®] when administered twice a day to individuals suffering from gastrointestinal reflux and slow digestion. According to the obtained results, the product demonstrated its effectiveness as a digestive aid. No significant differences were observed in terms of the age and sex of the treated subjects and similar effects were obtained when the product was administered to participants suffering from symptoms of "gastrointestinal acid reflux" or "slow digestion".

Limitations include the low number of participants and the consideration of only two symptoms. Nevertheless, we believe that the results confirm the positive digestive effects of Gingemyr[®] and give a clear contribution to our understanding of the possible medical role played by botanicals in human pathology. Moreover, this study confirms the relevant role played by a particular chemical profile and standardization process in manufacturing a product showing clinical efficacy.

Conclusion

Despite the relatively small number of participants and the fact that Gingemyr[®] are not yet available for direct sale, it can be stated that this formulation is relatively acceptable and pleasant, with good efficacy in reducing gastroenterological symptoms.

Conflict of Interest

The authors declare that they have no conflict of interest.

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