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## Investigating the Effect of using Mentha pulegium Powder in Controlling Non-Bacterial Diarrhea in Adults

Masoomeh Davoodi<sup>1</sup>, Arash khalili<sup>2</sup>, Mohammad Shafie Talebianpour<sup>3</sup>,  
Afiyeh Naderi Dareshori<sup>4</sup>, Karim Kheradmand<sup>5</sup> and Soamyeh Bashti<sup>6\*</sup>

<sup>1</sup>Instructor, Department of Medical Surgical Nursing, School Of Nursing And Midwifery, Yasuj University of Medical Sciences, Yasuj, Iran

<sup>2</sup>Instructor, Department Of Pediatric Nursing, School Of Nursing And Midwifery, Hamadan University of Medical Sciences, Hamadan, Iran

<sup>3</sup>MSN Student, School Of Nursing And Midwifery, Yasuj University of Medical Sciences, Yasuj, Iran

<sup>4</sup>Instructor, Department Of pediatric Nursing, Gachsaran Shahid Rajaei Hospital, Yasuj University of Medical Sciences, Yasuj, Iran

<sup>5</sup>Department of Physiology, Faculty of Scinces, Kazerun Branch, Islamic Azad University, Kazerun, Iran

<sup>6</sup>Instructor, Department Of Critical Care Nursing, Gachsaran Shahid Rajaei Hospital, Yasuj University of Medical Sciences, Yasuj, Iran

\*Corresponding Email: [somayebashti@yahoo.com](mailto:somayebashti@yahoo.com)

### ABSTRACT

Diarrhea is the second leading cause of morbidity in developing countries and many factors are responsible for it including infectious and non-infectious. This study aimed to investigating the effect of using Mentha pulegium powder in controlling non-bacterial diarrhea in adults referring to clinics of Yasouj was done. In this randomized clinical trial of a blind, random sampling for block allocation. Number of samples 20 samples in the control group and sample size was 20 samples. In addition to drug therapy, patients in the experimental group with 60 grams of Mentha pulegium powder over 2 days (every day three times and each time 10 g) were treated. The collected data analyzed by SPSS version 16 and descriptive statistics and chi-square test was used. The minimum term specified in diarrheal cases in the experimental group according to his statement given time 1 day and maximum was 6 days. After taking the drug and Mentha pulegium, powder in the experimental group was 70 percent claimed fully was recovered. 85 percent of those with Mentha pulegium powder used for treatment and recovery time were under 10, and recovery 15% between 24-10 hours long. There was statistically significant relationship between Mentha pulegium powder and stop the diarrhea time ( $p = 0.005$ ). Mentha pulegium powder along with medication can greatly contribute to the cessation of nonbacterial diarrhea. Thus, given the trend toward traditional medicine recommended policy powder used in the treatment of non-bacterial diarrhea.

**Key words:** Mentha Pulegium powder, non-bacterial diarrhea, drug therapy

### INTRODUCTION

Leaf Mentha pulegium plant with the scientific name of Mentha pulegium is that it contains essential oils [1]. Mentha pulegium is an herbaceous perennial plant has almost cylindrical legs appeared to 10-15 centimeter height into the wild in wet prairies and margin streams of water (even water). The leaves are oval and pointed with fine

teeth or devoid of it. All parts of the plant will smell the strong odor, but the smell in principle, there is no basis that lives in the water. It provides flowers for groups of leaves along the stem axis during the months of July to October appeared. Bright flower color or is willing to purple [2,3]. Spoiler effect, solvent, cloud zero is expectorant and antiseptic. In medical science it specifically to meet whooping cough, asthma, hysteria, emphysema, gout and as a binding rule is used. With its use, it calmed cough and mucus out easy. In addition, it has a stimulating effect on bile secretion as well as facilitating digestion. In external use, transdermal patches are used to fix; additionally, because the effect is to repel insects, oil dispersion in space, it is the animals away. It also plays a role in the treatment of bed wetting in children and in relieving cold symptoms [3,4]. On the other hand, diarrhea is the second most common disease of childhood and the leading cause of morbidity and mortality in the third world countries. Many factors, including infectious and non-infectious diarrhea are involved. The major route of transmission from person to person-through fecal to oral, in direct contact with each other or with the help of food and water [5,6]. The daily excretion of feces more than 10 gr / kh called diarrhea (daily stool weight 100 to 300 grams and in Western societies to 200 grams are listed) [7].

Non-inflammatory diarrhea was less severe; non-blood patient suffering from watery diarrhea, the patient had no fever and no severe abdominal pain. White blood cells or blood in stool samples is also no secret. This form of diarrhea caused by rotavirus, norovirus, staphylococcus aureus, Bacillus cereus, Clostridium perfringens, Cryptosporidium parvum and Giardia lamblia caused. Many of these patients will require only supportive therapy. Severe diarrhea and inflammatory disease, which is the patient bloody diarrhea severe abdominal pain and suffering fever. As well as a large number of white blood cells in stool specimens found. Inflammatory diarrhea caused by invading pathogens such as Campylobacter, Shigella, Salmonella, Clostridium difficile, toxin-producing Escherichia and Entamoeba histolytica is created. The number of patients with inflammatory diarrhea depending on the type of pathogen benefit of treatment with antimicrobial drugs [8,9]. The diarrhea treatment is include: opioids and their derivatives:

Opioids long time to pass through the small intestine and to increase the capacity of the intestine, contact and absorption are long.

Loperamide: Loperamide anti-secretory effects as well. This Coreldraw calmodulin-binding protein inhibits calcium and chloride ion secretion to control. Diphenoxylate: 2.5 milligram tablets in the pharmaceutical market of Iran and syrup 2.5 ml 0.5 mg is available in the pharmaceutical market in the world. A small amount of atropine 0.025 mg on this product is available which also help to reduce the risks of drug abuse it. [10,11] Due to the effects of diarrhea and creates problems for different people and This study aimed to investigating the effect of using Mentha pulegium powder in controlling non-bacterial diarrhea in adults referring to clinics of Yasouj was done.

## MATERIALS AND METHODS

This study was a descriptive-analytical study and population included patients with a diagnosis of non-bacterial diarrhea referring to internal medicine clinic in Yasouj. In this randomized clinical trial of a blind, random sampling for block allocation. Blind clinical trial study and a randomized block allocation method for the sampling and patients with diarrhea, they sent samples to the laboratory and non-infectious diarrhea diagnosed (based on laboratory findings include the lack of pus and blood in the stool) and are willing to cooperate, for example, were entered into the study. Number of samples was 20 samples in the control group and 20 samples in the experimental group. In order to use Mentha pulegium, Mentha pulegium first collected and then dried in the shade for 2 days (to prevent the loss of some of its properties) and crushed in a mortar and then samples were given. Mentha pulegium in the surrounding villages of Yasouj (Nargah villages) is the water has been prepared in good condition. The control group patients were treated by doctor in addition to drug therapy, but patients in the experimental group with 60 grams of dried Mentha pulegium over 2 days (every day three times and each time 10 g) were treated. Samples must use Mentha pulegium powder without mixing with other substance and only with a glass of water (about 250 ml of water) are half to one hour before each meal. How to improve the design based on the frequency and consistency of fecal matter based on the patient's disposal. Data were collected in addition to the demographic characteristics, including duration of diarrhea, control of diarrhea at home, used by the person, the duration of diarrhea, less time in hours and days, food consumed with Mentha pulegium, Mentha pulegium powder consumption, and improve the consistency of the stool. After data collection to analysis, descriptive and inferential statistical methods were used. The analysis of demographic data, descriptive statistics (such as the relative frequency and average) is used and inferential statistics and chi-square test by Spss software version 16 was used. Ethical

considerations, including obtaining permission from the ethics committee of medical science, obtain a written letter of introduction from University of medical science, informed consent to participate in research units research and ensure the confidentiality of the information received was fully met.

## RESULTS

In this study, the mean age of 29.5 years, the minimum period specified in diarrheal cases in the experimental group, according to his statement given time: 1 day to 6 days. After taking the drug and Mentha pulegium in the experimental group were 70 percent claimed to fully recover. 85 percent of those with Mentha pulegium powder used for treatment recovery were less than 10 hours and 15% between 24-10 hours long recovery process. So chi-square test showed that there was a statistically significant relationship between Mentha pulegium powder and halting diarrhea, ( $p = 0.005$ ). In 5% of the experimental group that received the drug and Mentha pulegium powder constipation was observed after 2 days and in 95 percent of people participated in the project other complications were observed. How to improve the design based on the frequency and consistency of fecal matter on the basis of the patient's disposal. In the experimental group, patients according to frequency and consistency of fecal material excreted rapidly declined after the stated hours by person-to-side stiffness is gone.

## DISCUSSION AND CONCLUSION

In Farajzadeh et al [12] study found that Mentha pulegium relaxes the smooth muscles of the intestine and thus have a positive impact in reducing the symptoms of diarrhea. Abojadeh et al [13] demonstrated that Mentha pulegium has anti-inflammatory effects and anti-fungal and fungal diseases and inflammatory bowel top of this drug can be used. The findings of the study Rezai et al showed that in 2009 in the city of Yasouj that those who had consumed Pune fecal volume and better than the control group, which suggests positive effects of Mentha pulegium powder [10]. Therefore, due to the effects of dried Mentha pulegium, dried Mentha pulegium, it seems that approximately factor "is effective in treating infectious diarrhea. Because as stated in the findings of the study and the experimental group after using the drug in combination with Mentha pulegium powder recovery time is faster than the control group. One of the effective drugs in the treatment of diarrhea, yogurt (Lactobacillus) is just as the majority of indigenous people (Kohkiloueh and Boirahmad province) also when using our use of dried pennyroyal (Mentha pulegium powder poured on us, and then they use).

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