

Research Article

# Colic Phytotherapy in Iranian Ethnobotany: An Overview of the Effectiveness of the Most Important Native Medicinal Plants of Iran on Colic Disease

Mehrdad Karimi<sup>1</sup>, Mahnaz Mardani<sup>2\*</sup>, Leila Mahmoodnia<sup>3</sup>

<sup>1</sup>Department of Surgery, Shahrekord University of Medical Sciences, Shahrekord, Iran.

<sup>2</sup>Nutritional Health Research Center, Health and Nutrition Department, Lorestan University of Medical Sciences, Khorramabad, Iran.

<sup>3</sup>Department of Internal Medicine, Shahrekord University of Medical Sciences, Shahrekord, Iran.

Available Online: 25<sup>th</sup> January, 2017

---

## ABSTRACT

Colon disorders and diseases are of the significant gastrointestinal problems. Medicinal plants have a wide range of health effects. Medicinal herbs are used in the treatment of various diseases. Many native medicinal plants of Iran have anti-colic effects. Thus, in this review, the medicinal plants of Iranian ethnobotanical resources with anti-colic effects were reported. In this review study, a search for articles by the keywords colic, ethnobotanical, and medicinal plants was done. A search on the databases, such as Scopus, ISI, SID, MegaIran, and a number of other databases was performed. Based on the review results of ethnobotanical sources, it was revealed that the medicinal herbs of chamomile, lote, yarrow, dill, *Tanacetum parthenium*, *Sisymbrium irio*, plantain, *Damascus rose*, licorice, garden sage, oregano, etc. are of the most important anti-colic medicinal plants.

**Keywords:** digestion, colic, medicinal plants, Iranian ethnobotany.

---

## INTRODUCTION

Colon disorders and diseases are of the significant gastrointestinal problems<sup>1-3</sup>. Colic happens for psychosocial, gastrointestinal, and biological reasons<sup>4</sup>. There are different types of colic, such as infantile colic, ulcerative colic, etc. Ulcerative colitis is a chronic disease, in the pathogenesis of which inflammatory mediators and oxidative stress play an important role<sup>5-6</sup>. Medicinal plants have a wide range of health effects and are used in the treatment of various diseases<sup>7-25</sup>. Many native medicinal plants of Iran have anti-colic effects. Therefore, in this review, the medicinal plants of Iranian ethnobotanical resources with anti-colic effects were reported.

## METHODOLOGY

In this review study, a search for articles by the keywords colic, ethnobotanical, and medicinal plants was done. A search on the databases, such as Scopus, ISI, SID, Mega Iran, and a number of other databases was performed.

## RESULTS

31 herbs from different parts of Iran are traditionally used to treat diseases. The anti-colic medicinal plants of different parts of Iran, along with their additional information, are marked in Table 1.

## DISCUSSION

The study of medicinal plants can provide a good research background for the control of colic symptoms since having

bioactive and effective pharmaceuticals and having been used for its treatment since long time ago. The causes of colic especially the baby colic is not clear. Mostly it begins at a few weeks old babies up to 3-4 months ones, and sometimes older. Some believe that it occurs in babies with immature digestive tract, a developing brain/neurological system or allergies. Some suggest that colic children are easily overstimulated. Of course, it is important to check in to rule out any other potential issues. The natural remedies that were introduced here may help reduce or eliminate the symptoms. It should be note that before implementing any of these remedies, it is better to be checked with a pediatrician first. It has been recommended that if these approaches were not effective, other approaches such as medicinal plants might be used. Medicinal plants have been used since ancient times and their safety have been shown more than synthetic drugs<sup>33,34</sup>. Medicinal plants have been shown to be effective in various diseases such as inflammatory disease<sup>35,36</sup>, and infectious diseases<sup>37,38</sup>. It should be noted that infection in gastrointestinal tract is mostly due to *Helicobacter pylori*<sup>39,40</sup> which act by various mechanisms<sup>41</sup>. Colic may also is due ti infection or inflammation. Therefore, medicinal plants may also act by these mechanisms, too. Consequently, effective natural drugs can be produced for colic control in case of proving their effectiveness after performing a pharmacological study on them.

Table 1: The native anti-colic medicinal plants of Iran presented in their Persian names, scientific names, and family names, together with their parts used and areas where they are found.

Raw	Scientific name	Family name	Persian name	Therapeutic use	Region
1.	<i>Tanacetum parthenium</i> (L.) Schultz-Bip.	Asteraceae	Babouneh gavi	Colic	Babol <sup>26</sup>
2.	<i>Taxus baccata</i> L.	Taxaceae	Sorkhdar	Colic	Arasbaran <sup>26</sup>
3.	<i>Ziziphus nummularia</i>	Ramnaceae	Konar	Colic	Ilam <sup>27</sup>
4.	<i>Achillea eriophora</i>	Asteraceae	Bomadaran Jonoubi	Colic	Kerman <sup>28</sup>
5.	<i>Anethum graveolens</i>	Apiaceae	Shevid	Colic	Kerman <sup>28</sup>
6.	<i>Artemisia aucheri</i>	Asteraceae	Dermaneh	Colic	Kerman <sup>28</sup>
7.	<i>Dendrostellera lessertii</i>	Thymelaeaceae	Mokhalaseh	Colic	Kerman <sup>28</sup>
8.	<i>Descurainia Sophia</i>	Brassicaceae	Khakeshir	Colic	Kerman <sup>28</sup>
9.	<i>Fumaria parviflora</i>	Fumariaceae	Shahtareh	Colic	Kerman <sup>28</sup>
10.	<i>Plantago amplexicaulis</i>	Plantaginaceae	Barhang	Colic	Kerman <sup>28</sup>
11.	<i>Plantago lanceolata</i>	Plantaginaceae	sagheaghoush		
12.	<i>Rosa damascene</i>	Rosaceae	Barhang neizei	Colic	Kerman <sup>28</sup>
13.	<i>Teucrium polium</i>	Lamiaceae	Gole mohammadi	Colic	Kerman <sup>28</sup>
14.	<i>Zataria multiflora</i>	Lamiaceae	Maryam nokhodi	Colic	Kerman <sup>28</sup>
15.	<i>Foeniculum vulgare</i> Miller.	Apiaceae	Avishan shirazi	Colic	Kerman <sup>28</sup>
16.	<i>Heracleum persicum</i> Desf.ex Fischer	Apiaceae	Razianeh	Colic	Khuzistan <sup>29</sup>
17.	<i>Prangus ferulacea</i>	Apiaceae	Golpar	Colic	Khuzistan <sup>29</sup>
18.	<i>Ornithogalum persicum</i>	Asparagaceae	Jashir	Colic	Khuzistan <sup>29</sup>
19.	<i>Artemisia annua</i> L.	Asteraceae	Berenjasef	Colic	Khuzistan <sup>29</sup>
20.	<i>Zataria multiflora</i> Boiss.	Lamiaceae	Gandjarou	Colic	Khuzistan <sup>29</sup>
21.	<i>Glycyrrhiza glabra</i> L.	Papilionacea	Avishan shirazi	Colic	Khuzistan <sup>29</sup>
22.	<i>Ranunculus arvensis</i> L.	Ranunculaceae	Shirinbian	Colic	Khuzistan <sup>29</sup>
23.	<i>Melica persica</i>	Poaceae	Gole zard	Colic	Khuzistan <sup>29</sup>
24.	<i>Mentha persica</i> Benth.	Lamiaceae	Badranjbouyeh kouhi	Colic	Shomal <sup>30</sup>
25.	<i>Anethum graveolens</i> L.	Apiaceae	Poune	Colic	Shomal <sup>30</sup>
26.	<i>Mentha longifolia</i> L.	Apiaceae	Shevid	Colic	Marivan <sup>31</sup>
27.	<i>Mentha longifolia</i> L.	Lamiaceae	Pouneh	Colic	Marivan <sup>31</sup>
28.	<i>Origanum vulgare</i> L.	Lamiaceae	Marzanjoush	Colic	Marivan <sup>31</sup>
29.	<i>Salvia bracteata</i>	Lamiaceae	Maryamgoli bargedar	Colic	Marivan <sup>31</sup>
30.	<i>Stachys spectabilis</i>	Lamiaceae	Sonbolei tamashaei	Colic	Marivan <sup>31</sup>
31.	<i>Achillea wilhelmsii</i> C. Koch	Asteraceae	Bomadaran	Colic	Natanz kashan <sup>32</sup>
31.	<i>Launaea acanthodes</i>	Asteraceae	Charkkeh	Colic	Natanz kashan <sup>32</sup>

## REFERENCES

- Belluzzi A, Boschi S, Brignola C, Munarini A, Cariani G, Miglio F. Polyunsaturated fatty acids and inflammatory bowel disease. *Am J Clin Nutr.* 2000; 71: 339-342.
- Siguel EN, Lerman RH. Prevalence of essential fatty acid deficiency in patients with chronic gastrointestinal disorders. *Metabolism.* 1996; 45: 12-23.
- MacLean CH, Mojica WA, Newberry SJ, Pencharz J, Garland RH, Tu W, et al. Systematic review of the effects of n-3 fatty acids in inflammatory bowel disease. *Am J Clin Nutr.* 2005; 82: 611-619.
- Rintala RJ, Pakarinen M. Other disorders of the anus and rectum, anorectal function. In: Grosfeld JL, O'Neill JA, Fonkalsrud EW, Coran. AG, editors. *Pediatric surgery.* 6th ed. Philadelphia: Mosby; 2006. p. 1590-99.
- Hanauer SB. Inflammatory bowel disease: epidemiology, pathogenesis, and therapeutic opportunities. *Inflamm Bow Dis.* 2006; 12: 3-9.
- Pravda J. Radical induction theory of ulcerative colitis. *World J Gastroenterol.* 2005; 28: 2371-2384.
- Raeisi E, Shahbazi-Gahrouei D, Heidarian E. Pineapple extract as an efficient anticancer agent in treating human cancer cells. *Front Cancers.* 2016; 1(1):e03.
- Mohammadparast V. Antioxidant efficacy of Hibiscus esculentus. *Front Biomed.* 2016; 1(1):04.
- Nasri H. Herbal drugs and new concepts on its use. *J Prev Epidemiol.* 2016; 1(1):01.
- Nasri H, Abedi-Gheshlaghi Z, Rafeian-Kopaei M. Curcumin and kidney protection; current findings and new concepts. *Acta Persica Pathophysiol.* 2016; 1(1):01.

11. Khodadadi S, Rafieian-Kopaei M. Herbs, health and hazards; a nephrology viewpoint on current concepts and new trends. *Ann Res Antioxid*. 2016; 1(1):05.
12. Rafieian-Kopaei M, Baradaran A. Plants antioxidants: From laboratory to clinic. *J Nephropathol*. 2013; 2(2): 152-153.
13. Hajian S. Positive effect of antioxidants on immune system. *Immunopathol Persa*. 2015;1(1):02.
14. Nasri H. Impact of garlic extract on platelet function and structure. *Ann Res Platelets*. 2016; 1(1):01.
15. Dehghan Shahreza F. Hibiscus esculentus and diabetes mellitus. *J Nephrofarmacol*. 2016; 5(2):104-105.
16. Kafeshani M. Ginger, micro-inflammation and kidney disease. *J Renal Endocrinol*. 2015; 1:04.
17. Amiri M. Type 2 diabetes mellitus; an international challenge. *Ann Res Dial*. 2016;1(1):04.
18. Amiri M, Hosseini SM. Diabetes mellitus type 1; is it a global challenge? *Acta Epidemioendocrinol*. 2016; 1(1): 02.
19. Baradaran A. Concepts towards endothelial dysfunction in diabetes mellitus. *Angiol Persica Acta*. 2016; 1(1): 02.
20. Rafieian-Kopaei M. Medicinal plants for renal injury prevention. *J Renal Inj Prev*. 2013 Jun 1; 2(2):63-5.
21. Ghafari M, Taheri Z, Hajivandi A, Amiri M. Parathyroid carcinoma; facts and views. *J Parathyroid Dis* 2015; 3(2): 37-40.
22. Nasri H. Improving the nephrotoxicity of cyclosporine; the role of herbal drugs. *Toxicol Persa*. 2016;1(1):05.
23. Bahmani M, Asadi-Samani M. Native medicinal plants of Iran effective on peptic ulcer. *J Inj Inflamm*. 2016; 1(1):05.
24. Nasri P. Mitochondria as a biomarker for cancer therapy. *Front Biomark*. 2016; 1(1):01.
25. Nasri H. World diabetes day; 2016. *Aria J Front Biochem*. 2016; 1(1):01.
26. Zolfaghari B, M Sadeghi , I Tiri , M Yousefali Tabar. Collection, Identification, and Evaluation of the Traditional Applications of Some Plants of Babol. 2012, 3(1): 113-124.
27. Ghasemi Pirbalouti A, Momeni M, Bahmani M. Ethnobotanical study of medicinal plants used by Kurd tribe in Dehloran and Abdanan Districts, Ilam Province, Iran. *African J Tradition, Complement and Altern Med* 2013; 10(2): 368-385.
28. Sharififar F, Koohpayeh A, Motaghi MM, Amirhosravi A, Puormohseni Nasab E, Khodashenas M. Study the ethnobotany of medicinal plants in Sirjan, Kerman province, Iran. *J Herb drugs* 2010; 1(3): 19-28.
29. Khodayari H, Amani SH, Amiri H. Ethnobotanical study of North east of Khuzistan province. *Med Plants Ecophytochemistry J* 2013; 8; 2(4): 12-26.
30. Alavi SZ, Rabiei E, Saeedi-Goraghani HR, Ghordouei-Millan GH. Alternative and Traditional uses of medicinal plants of North of Iran. *J Herbal Drugs* 2011; 2(2): 113-120.
31. Tabad MA, N Jalilian. Ethnobotanical Study of Medicinal Plants in Zarivar Region (Marivan), Iran. *JMP* 2015, 2(54): 55-75.
32. Abbasi SH, Afsharzadeh S, Mohajeri A. Ethnobotanical study of medicinal plants in Natanz region (Kashan), Iran. *J Herbal Drugs* 2012; 3(3): 157-166.
33. Sewell RDE, Rafieian-Kopaei M. The history and ups and downs of herbal medicine usage. *J Herbmed Pharmacol*. 2014; 3(1): 1-3.
34. Rafieian-Kopaei M. Medicinal plants and the human needs. *J Herbmed Pharmacol*. 2012; 1(1):1-2.
35. Nasri H, Shirzad H. Toxicity and safety of medicinal plants. *J Herbmed Pharmacol*. 2013; 2(2): 21-22.
36. Asgary S, Sahebkar A, Afshani M, Keshvari M, Haghooyjavanmard Sh, Mahmoud Rafieian-Kopaei M. Clinical evaluation of blood pressure lowering, endothelial function improving, hypolipidemic and anti-inflammatory effects of pomegranate juice in hypertensive subjects. *Phytother. Res*. 2013; DOI: 10.1002/ptr.4977.
37. Bahmani M, Karamati SA, Hassanzadazar H, Forouzan SH, Rafieian-Kopaei M, Kazemi-Ghoshchi B, Asadzadeh J, Kheiri AGh, Ehsan Bahmani E. Ethnobotanic study of medicinal plants in Urmia city: identification and traditional using of antiparasites plants. *Asian Pac J Trop Dis* 2014; 4(Suppl 2): 906-910.
38. Rahimian GA, Rabiei Z, Tahmasebi B, Rafieian-Kopaei M, Ganji F, Rahimian R. Comparing the Combined Effect of Garlic and Mint Extract with Metronidazole in Helicobacter Pylori Treatment. *Iranian Journal of Pharmaceutical Sciences*. 2013;9(3):63-70.
39. Salimzadeh L, Bagheri N, Zamanzad B, Azadegan-Dehkordi F, Rahimian G, Hashemzadeh-Chaleshtori M, et al. Frequency of virulence factors in Helicobacter pylori-infected patients with gastritis. *Microbial pathogenesis*. 2015;80:67-72.
40. Razavi A, Bagheri N, Azadegan-Dehkordi F, Shirzad M, Rahimian G, Rafieian-Kopaei M, et al. Comparative Immune Response in Children and Adults with H. pylori Infection. *Journal of Immunology Research*. 2015;2015:315957.
41. Bagheri N, Azadegan-Dehkordi F, Shirzad M, Zamanzad B, Rahimian G, Taghikhani A, et al. Mucosal interleukin-21 mRNA expression level is high in patients with Helicobacter pylori and is associated with the severity of gastritis. *Centr Eur Immunol*. 2015;40:61-7.