

PROPERTIES OF THE DRACOCEPHALUM MOLDAVICA L. IN THE TREATMENT OF EROSION DISEASES

Ratsa V.,

Assistant Department of Internal Medicine Bukovinian State Medical University Chernivtsi, 58002

Orikh M.,

Doctor Regional Communal Noncommercial Enterprise Chernivtsi Regional Clinical

Zub E.,

4th-year student of the 26th group at the BSMU in Chernivtsi, Ukraine

Stan L.,

4th-year student of the 26th group at the BSMU in Chernivtsi, Ukraine

Harasevych O.

4th-year student of the 26th group at the BSMU in Chernivtsi, Ukraine

<https://doi.org/10.5281/zenodo.7878634>

Abstract

The results of the highest content of dry substance, ash, protein, total sugar, fat, ascorbic acid, carotene and potassium have been found in the raw plant material, collected during budding/processing phase.

Keywords: aromatic plants, biochemical characteristics, *Dracocephalum moldavica* L.

Introduction. One of the common introducers in the territory of Ukraine is *Dracocephalum moldavica* L. In translation it's the Moldavian dragonhead, which is used not only in the treatment of diseases of digestive system, as well as cardiovascular pathology [1,2,3,5].

The *Dracocephalum Moldavica* (Lamiaceae Martynov).

This is an annual herbaceous plant originating from East Asia. Usually, it does not grow in the wild in Ukraine. Most of countries processed it as a substitute for lemon balm. Propagated by sowing of seeds to a depth of 0.5-1.0 cm with rows of 60 cm. In Ukraine it is grown as an essential oil and honey plant, sometimes it is wild [4]

Materials and research methods. The study material is the introduction of the Moldavian dragonhead (*Dracocephalum moldavica*), evaluation of its composition and pharmacological properties in the treatment of peptic ulcer of the stomach and duodenum in combination with arterial hypertension.

Results and discussions. The results of studies on determining the biochemical composition of two forms of Moldavian dragonhead have shown that the highest content of dry matter was found in plants during flowering, which is 1.5 times the phase of budding. [7]

Chemical composition. The herb of the plant contains 0.08–0.2% of essential oil, which contains citral (50%), geraniol (30%), nerol (7%), citronellol (4%), thymol (0.2%), Lemon, Sesquiterpen and other active substances [1]

In the laboratory, the imitated distillation of the essential oil of the Moldavian dragonhead isolated from the eponymous raw materials in the laboratory setting [6].

The citral content increases markedly from the budding phase (18.3%) to the physiological ripeness of the seeds (63.0%). In addition, the essential oil contains linalol (0.3–3.29%) and linalylacetate (0.9–3.9%). Citronella (16.9–39.7%) was allocated in seedlings.

The aboveground part contains:

- macronutrients (mg/g) 1. CA - 29.7,

2. Mg - 6.5,

3. Fe - 0.2;

- microelements (mc/g) 1. Mn - 24.8,

2. Cu - 8.86,

3. Zn - 37.6,

4. C - 0.08,

5. IU - 0.54,

6. Cr - 0.4,

7. Al - 146.6,

8. VA - 376.9,

9. V - 1.28,

10. SE - 0.07,

11. Ni - 1.12,

12. SR - 88.5,

13. Pb - 1.09,

14. B - 14.0,

15. I - 0.06;

- concentrates

1. SR

2. BA. [5].

Pharmacological properties and use. The Moldavian dragonhead has sedative, anticonvulsant, analgesic and wound healing properties and is recommended by folk medicine as a substitute for medicinal lemon balm. The main therapeutic indications for the use of dragonhead are cardiovascular diseases (ischemic heart disease, hypertension, tachycardia, etc.); neurological (various neuralgia, mild forms of migraines); respiratory diseases (SARS, pneumonia, etc.); rheumatological diseases (rheumatism, rheumatoid arthritis, etc.); gastrointestinal tract diseases (gastric and duodenal ulcer, gastritis, hepatitis, etc.); diseases caused by injuries (concussion) and in dentistry (dental caries, toothache) [3].

The main properties are the antioxidant and cardioprotective effects of flavonoids isolated from the Moldavian dragonhead (*Dracocephalum moldavica* L.)

The total flavonoids have shown excellent absorbing effects against 1.1-diphenyl-2-picrylhydrazyl, hydroxyl and superoxide anion radical. In ischemia/reper-

fusion, the total amount of flavonoids (5 mcg/ml) improves heart rate and coronary blood flow and the increase in the left ventricle increases pressure, reduces creatine kinase and lactate dehydrogenase in the coronary blood flow. When using this plant, the size of a heart attack / ischemia zone was smaller, and the activity of superoxididiamutase and glutathione disulfide increased and the content of low - dialdehyde decreased. Flavonoids have not only antioxidant and cardioprotective effects, but also obvious protective effects in heart attacks that may be associated with improving myocardial oxidestress [7].

Therapeutic studies have shown that it is advisable to use *Dracocephalum moldavica* L. preparations with high heart rhythm (tachycardia), headache, colds, and joint breaks. Externally, they are used for compresses, rinses - as a painkiller in rheumatism and clogging. People have noticed - even when a tooth hurts, the Moldavian dragonhead helps (the plant is simply chewed, and the pain subsides). Also, it will help those who have poor appetite - the plant improves digestion. You can consume it as tea (1 tsp. of raw materials per 1 glass of boiling water) or as a healing infusion - 1 tbsp. l. On 1 boiling water, insist for 15-20 minutes, cool and drink; 1 tbsp. l. 3-4 times a day for 10-15 minutes before eating. This infusion is also used for compresses, rinses as an analgesic.

The plant has anticonvulsant, sedative, wound healing, analgesic properties. In unconventional medicine, this herb is sometimes used instead of medicinal lemon balm.

The most common therapeutic indications for the use of the Moldavian dragonhead as an internal remedy are neuralgia, tachycardia, initial stages of colds and mild migraine.

Externally, this plant is used for compresses and rinses for rheumatism, clogging and toothache. Crushed young plant leaves are applied to purulent wounds.

This plant is also used to improve appetite and digestion.

For internal use, prepare an infusion of a tablespoon of raw materials and a glass of boiling water. The tool is kept for 15 minutes, cooled and filtered then one can drink it a few minutes before a meal - one tablespoon three times a day.

Conclusions. The use of the Moldavian dragonhead has a positive effect in the treatment of peptic ulcer of the stomach and duodenum in combination with arterial hypertension, reducing the heartbeat, improving vascular blood flow and regulating the accelerated healing of mucosal ulcers, and is a supplement.

References:

1. Bobkova, I.A. 2006. Pharmacognosy: Textbook. Medicine, 2006, 440.
2. Gritsaienko, Z.M. - Karpenko, V.P. 2003. Methods of biological and agrochemical studies of plants and soils. Scientific thought, 2003, 320.
3. Kostyuk, L.A. - Rakhmetov, D.B. 2012. Biochemical features of *Dracocephalum moldavica* in connection with introduction in the conditions of Polesie Ukraine. Ecosystems, their optimization and ohran. 2012, № 7, P. 159–169.
4. Ostapko, V.M. 2006. Information of rarity species of flora of yegh-hazel of Ukraine. Weber, 2006, 296.
5. Rabotyagov, V.D. - Boyko, M.F. 2003. Efirromalyomy and lack-of-law, introduced in the Kherson Region (ecological-biological features and hubs).
6. Tanasenko, F.S. 1985. Efir oils, containers and stored in recesses. Scientific thought, 1985, 264.
7. Jiang, I. - San, K. 2014. Antioxidant and cardioprotective effects of Sumy flavonoids, the depicted from the Moldavian *Moldavica* L. against the isstroy of Ishimia / Reperfusion, which is a reperfection. Cardiovascul Toxicol, 2014, № 14, R. 74-82.