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Berberis vulgaris as an antihypertensive drug; berbamine and oxycontin antihypertensive active ingredients

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Core tip

Berberis vulgaris L., is a shrub in the Berberidaceae family and genus *Berberis*. Active ingredients of barberry plant contains berberine, jatrorrhizine, colombamine, palmatine, oxycontin, berbamine, malic acid, tartaric acid and pectin. Berbamine and oxycontin are active ingredients with blood pressure-lowering effects which with concentrated and determined the exact dose can be used in cases of high blood pressure as natural remedies.

Berberis vulgaris L., is a shrub in the Berberidaceae family and genus *Berberis*. It is a deciduous shrub growing up to 4 m high with red oval fruit. The leaves are small and oval shape, 2–5 cm long and 1–2 cm broad, with a serrated margin (1). Barberry in traditional medicine used to lowering blood pressure, relieve sputum bad breath, gum disease treatment, tooth pain and some eye diseases, arthritis, biliary problems, diarrhea, fever, swelling of the spleen, inflammation of the tongue, impetigo, back pain, eliminate roundworm, heart problems, painful menstruation, liver problems, hemorrhoids, herpes virus, diabetes, and decreasing blood cholesterol (2). Among all the effects listed in the resources of traditional medicine in Iran, much emphasis has on blood pressure-lowering effect. Active ingredients of barberry plant contains berberine, jatrorrhizine, colombamine, palmatine, oxycontin, berbamine, malic acid, tartaric acid and pectin (3). The berbamine is one of the important active ingredients which acts through the block methylated calcium channels and decreased blood pressure (4,5). The oxycontin, other active ingredients of the plant also act as a sympatholytic factor, adrenaline antagonist and vasodilatation (6). Results of clinical studies demonstrate and confirm the antihypertensive effect of barberry plant is applied through the active ingredient berbamine and oxycontin .Berbamine and oxycontin are active ingredients with blood pressure-lowering effects which with concentrated and determined the exact dose can be used in cases of high blood pressure as natural remedies.

Authors' contribution

All authors contributed equally to the manuscript.

Conflicts of interest

The authors declared no competing interests.

Ethical considerations

Ethical issues (including plagiarism, data fabrication, double publication) have been completely observed by the authors.

References

1. Imenshahidi M, Qaredashi R, Hashemzaei M, Hosseinzadeh H. Inhibitory effect of berberis vulgaris aqueous extract on acquisition and reinstatement effects of morphine in conditioned place preferences (CPP) in mice. Jundishapur J Nat Pharm Prod. 2014;9: e16145.
2. Zargari A. Medicinal plants, Volume 3. 6th ed. Tehran: Tehran University publications;1997:926.
3. Ikram M. A review on the chemical and pharmacological aspects genus berberis. Plant Media. 1975;28:353-8.
4. Naidovich LP, Trutheva EA, Talkachev ON, Vasileva VD. Chemical compossition of indigenous species of the berberine berberidaceae family. Interrelation Chem Struc Pharmacol active. 1976;25:33-8.
5. Pan J, Yin F, Shen C, Lu C, Han G. Active constituents of the root of berberis poiretti. Tianvan Chanwu Yanjiu Yu Kaifa. 1989;1:23- 6.
6. Buckingham J. Dictionary of Natural Products, Supplement 1 (Dictionary of Natural Products, Vol 8). 1st ed. Chapman and Hall/CRC; 1995.