Trends in Technical & Scientific Research
ISSN: 2641-8355

Juniper Publishers
key to the Researchers

Mini Review
Volume 3 Issue 3 - March 2019
DOI: 10.19080/TTSR.2019.03.555611

Trends Tech Sci Res

Black Cohosh (*Cimicifuga Racemosa*) as Treatment of Menopause-Related Symptoms: A Mini Review Shoeb Qureshi

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Submission: February 17, 2019; **Published:** March 21, 2019

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Abstract

Black cohosh belongs to the family *Cimicifuga racemosa*. Root and rhizome are the medicinal parts of the herb. Black cohosh is used against the treatment of Menopause symptoms (including vasomotor); Premenstrual Syndrome (PMS); depression (mild); arthritis and migraine. It is often used as an alternative to estrogen-based replacement therapies to treat hot flushes that frequently accompany the transition to menopause.

Keywords: Black cohosh; *Cimicifuga racemose*; Menopause; Chemical constituents; Adverse effects

Introduction

Black cohosh belongs to the family *Cimicifuga racemosa*. Root and rhizome are the medicinal parts of the herb. Black cohosh is used against the treatment of Menopause symptoms (including vasomotor); premenstrual syndrome; depression (mild); arthritis and migraine [1-5]. It is often used as an alternative to estrogen-based replacement therapies to treat hot flushes that frequently accompany the transition to menopause [6,7]. However, definitive clinical data about efficacy have been equivocal [8]. Trials conducted by Pockaj et al. [8] found no evidence that black cohosh reduced hot flashes more than the placebo. As a constituent to Avlimil (a dietary supplement advertised to ameliorate female sexual dysfunction), black cohosh is suggested to have estrogenic, anti-estrogenic, or androgenic potential for relieving menopausal symptoms. Furthermore, DMSO extract of Avlimil was found to increase cell proliferation and cytotoxicity in MCF-7 (*in vitro*) at low and high concentrations, respectively Ju, et al. [9].

Materials and Methods

To accomplish the target on Black cohosh as treatment of menopause related systems and associated adverse effects, peer-reviewed English language articles published during 2 decades were selected from Pub Med, Pub Med Central, Science di rect, Up-to-date, Med Line, comprehensive data base, Cochrane library and the internet (Google, Yahoo).

Chemical constituents

The main constituents of Black cohosh are triterpenoids, phenolic compounds [9], phytoestrogens, isoflavones cimicifugoside, formononetin and salicylic acid [10].

Toxicity

Black cohosh significantly increased the incidence of lung metastases in tumor-bearing animals compared with mice fed the isoflavone-free control diet [6], and is reported to cause liver toxicity and induce micronuclei [11].

Contraindications

Contraindicated in individuals with a history of estrogen-dependent tumors or endometrial cancer. Black cohosh may cause nausea, vomiting, headache, and hypotension at higher dosages. Use with caution in individuals allergic to salicylates; it is not known whether the amount of salicylic acid is likely to affect platelet aggregation or have other effects associated with salicylates. Use with caution in individuals with hypotension or those taking antihypertensive medications.

Use with caution in individuals receiving anticoagulant medications. Monitoring of serum hormone levels is recommended after 6 months of use with black cohosh. Use with caution in in-

dividuals with liver disease due to cases of liver damage [12-14]. Use with caution in patients with seizure disorder [15]. Contra-indicated in pregnancy (based on *in vitro* or animal studies, may stimulate uterine contractions) and lactation [16].

To date, phytoestrogen-containing herbs have not been associated with the negative health effects seen with synthetic estrogen. However, use with caution in individuals on hormone replacement therapy or oral contraceptives, or a history of thromboembolic disease or stroke [17-21].

Theoretical interactions

Oral contraceptives, hormonal replacement therapy, NSAIDs, anticoagulants, antihypertensives, drugs that lower the seizure threshold, hepatoxic drugs; cytochrome P_{450}, 3A4, and 2D6 substrates.

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DOI: 10.19080/TTSR.2019.03.555611

How to cite this article: Shoeb Q, Hania F, Viquar F Q. Black Cohosh (*Cimicifuga Racemosa*) as Treatment of Menopause-Related Symptoms: A Mini Review. Trends Tech Sci Res. 2019; 3(3): 555611. DOI: 10.19080/TTSR.2019.03.555611