



A Review on therapeutic value of Karunjeeragam (*Nigella sativa*)

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Abstract

Karunjeeragam (*Nigella sativa*) is widely used medical plant throughout the world. The seeds and oil of the plant play an important role in various medical ailments. It has been widely used in skin diseases, digestive, diuretics, liver tonics, etc., It is one of the most important therapeutic plant because of the presence of alkaloids such as thymoquinone, carvacrol, etc., Pharmacological activity karunjeeragam Anti-diabetic, Anti-inflammatory, Anti-microbial and Anti-cancer. *Nigella sativa* is most popular medicinal herb which is used in siddha system. Hence major research studies about this plant goes on. Here is an review of the characteristic chemical composition and pharmacological activities of the plant.

Keywords: *Nigella sativa*, Phytochemical, Pharmacological activity, Medicinal aspect.

Introduction

Medical plants are widely used in siddha system of medicine. It has been used for curing various diseases from our siddhars. Siddhars provide many medicine preparation to cure various diseases with the herbal plants to us. These medical plants play a major role in curing various diseases nowadays. And also it has no side effects. Hence people are very willing to take herbal formulations.

Classification:

Kingdom : Plantae
Subkingdom : Tracheobionta
Super division : Spermatophyta
Phylum : Magnoliophyta
Class : Magnoliopsida
Order : Ranunculales
Family : Ranunculaceae
Genus : *Nigella*
Species : *sativa*

Common names: Black cumin, Black caraway, Nutmeg flower, Fennel flower, Damscena, Devil-in-the-bush, Roman coriander.

Morphology

Nigella sativa is an annual flowering plant in the family Ranunculaceae. It grows to 20-30cm (7.9 – 11.8 inch) tall with finely divided linear (but not thread like) leaves. The flowers are coloured in pale blue and white with five to ten petals. The fruit is large & inflated capsule composed of 3 to 7 united follicles, each containing numerous seeds which are used as spice.

Actions:

Carminative, Diuretic, Emmenagogue, Halactagogue, Anthelmintic, Stomachic, Parasiticide, Emollient.

Chemical composition

The most important compounds that present in *Nigella sativa* are as follows:

Thymoquinone (30 – 48%)
p-cymene (7 – 15%)
carvacrol (6 – 12%)
4-terpineol (2 – 7%)
t-anethol (1 – 4%)
sesquiterpene longifolene (1 – 8%)
thymol, -pinene, thymohydroquinone, dithymoquinone, etc.,

***Nigella sativa* seed contains:** Alpha-hederin, Saponin (potential anti cancer agent).

Nigella sativa oil contains

Linoleic acid (50-60%)
Oleic acid (20%)
Palmitic acid (30%)
Eicodadienoic acid (3%)
Trans-anethole & also other minor constituents
Dihomolinoleic acid (3%)

Aromatics include: Thymoquinone, -thujene, Thymol, -pinene, -pinene.

Sterol includes: -Sitosterols (44%), Stigmasterol (20%).

Alkaloids (seeds):

Isoquinoline alkaloids : Nigellidine, Nigellimine, N-Oxide

Pyrazol alkaloids : Nigellidine, Nigellimine

Nutrition facts includes: Protein 16g, Dietary fiber 40g, Total carbohydrate 52g, Total fat 15g (Saturated 0.5g, Poly unsaturated 1.7g, Mono unsaturated 10g), Cholesterol 0mg, Sodium 88mg, Potassium 1,694mg.

It contains Vitamin A, Vitamin C, Vitamin D, Vitamin B6, Calcium, cobalamin, Iron, Magnesium, Zinc, Copper.

Pharmacological Activity:

Nigella sativa is reported to have Anti-arthritis, Anti-inflammatory, Anti-diabetic, Anti-fungal, Anti-hypertensive, Anti-bacterial, Anti-cancer, Gastro-protective, Hepatoprotective, Contraceptive and Anti-fertility, Bronchodilator, Immunomodulatory, Anti-microbial, Spasmolytic, Analgesic and Anti-oxidant properties.

Discussion

Nigella sativa is most popular medicinal herb which is used in Siddha system. If the seeds treated with Amenorrhea. Amenorrhea, follicle remains in patients ovary and later it becomes cysts which settle in surface of ovary thus it increases androgen level. Antibacterial activity of *Nigella sativa* against clinical isolates of methicillin resistant *Staphylococcus aureus* was investigated in 2008 by Hannan et al. Antibacterial activity of *Nigella sativa* against triple therapy in eradication of *Helicobacter pylori* in patients with non ulcer dyspepsia was carried out. It showed that *Nigella sativa* seeds possess clinically useful Anti *Helicobacter pylori* activity. Antifungal-Methanolic extracts of *Nigella sativa* have strongest antifungal effect followed by chloroform extracts against different strains of *Candida albicans*. Anti-diabetic effect -lipoic acid present in the *Nigella sativa* seeds reduce the blood glucose level. Anti-inflammatory activity of *Nigella sativa* & thymoquinone shows to inhibit inflammatory cytokines such as interleukin 1 & 6. It has shown anti potential osteoporotic agent. Anti-arthritis activity of the seed oil contains thymoquinone, effective in reducing inflammation & arthritis. It decreases the levels of TNF- & interleukin-1. It involves in reducing morning stiffness, swelling in RA. Skin disorders-In acne *Nigella sativa* oil 10% reduces the count of papules & pustules after 2 months of regular use. The mechanism behind its action is, the

thymoquinone. it has antimicrobial & anti-inflammatory action. In vitiligoThe pigment cells when exposed to the thymoquinone extract, it respond by dispersion of melanin leading to skin darkening.

Conclusion

Nigella sativa is most popular medicinal herb which is used in siddha system. Medical plants play a major role in curing various diseases nowadays. And also it has no side effects.

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References

- Dr.K.N.Kuppusami muthliyar & Dr.K.S.Uthamarayan, Siddha Vaithya thiratu, Dept. of Indian medicine and Homeopathy, Chennai-106.
- Risvan MY, Suresh and Balagurusamy K, Siddha Elixirand Aetiology of Polycystic Ovarian Syndrome, Adv Tech Biol Med 2017, Vol 5(4):259.
- Aruljothi R, Thiruthani M, (2019). An Efficacy of Siddha Medicine Linga Chenduram Against Pelvic Inflammatory Disease - A Review. Int.J.Curr.Res.Chem.Pharm.Sci.5(3):9-11.
- Aruljothi R, Thiruthani M, (2018) Novel Standardization and characterization of Linga Chenduram, DOI: 10.20959/wjpps20191-12895.
- Aruljothi R, Thiruthani M, (2019) Scientific validation of standardization of the Linga Chenduram through the siddha and modern techniques, DOI: ejpmr,2019,6(1), 401-403.
- Arunachalam K, Thiruthani M. Functional groups identification through FTIR Characterization of siddha poly herbal formulation Muppirandai chooranam. Int.J.Curr.Res.Chem.Pharm.Sci, 2017: 4(2):1-4.

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