

**A COMPREHENSIVE REVIEW OF THE PHARMACOLOGICAL POTENTIAL OF
ARISTOLOCHIA LONGA LINN.*****Sumyyah Hasina Sana**MD Scholar, Regional Research Institute of Unani Medicine, Srinagar, CCRUM, Ministry of AYUSH, Govt. of India,
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ABSTRACT

Zarawand Taweel (*Aristolochia longa* Linn.) is an important medicinal plant in Unani system of medicine. It belongs to the family Aristolochiaceae. Roots are the most important part of the plant for the medicinal purpose. The present article gives an account of updated information on its pharmacological properties. The review reveals that wide numbers of phytochemical constituents have been isolated from the plant which are responsible for its pharmacological properties. This plant is widely used in many diseases and is considered as one of the best antidote as well as drug in promoting uterine contractions.

KEYWORDS: Zarawand Taweel, *Aristolochia longa* Linn., Unani medicine, pharmacological properties.**INTRODUCTION**

Zarawand Taweel (*Aristolochia longa* Linn.) is one of the most known drugs of Unani medicine belonging to family Aristolochiaceae.^[1] The order aristolochiales comprises three families, of which only the Aristolochiaceae is of importance. The aristolochiaceae has seven genera and about 500 species.^[2] The genus name *Aristolochia* derives from Greek words (Aristos) meaning “the best” and “Lochia” meaning “Childbirth”, for the folklore use in promoting uterine contractions. Members occur in the tropics and warm temperate zones, excluding Australia.^[3] ^[4] Most are herbs or climbing shrubs. Oil secreting cells occur throughout the family, often forming transparent dots on the leaves.^[2] Root is whitish, twisted, cylindrical pieces of the size of a finger and nearly tasteless; leaves petiolated; flowers yellowish brown. Its root is having medicinal properties and is used for the treatment of insect bite, Tetanus, epilepsy, intestinal worms, amenorrhea, hepatitis.^[5] Main constituents of this family include alkaloids (aporphine and protoberberine), aristolochic acid, phenolic esters and ethers, volatile oils and flavonoids. Some species show tumour-inhibiting properties.^[2]

Distribution

It is distributed in the tropical and temperate regions, Kashmere, and is widespread throughout the North Africa, Europe and Asia.^[5] ^[6]

Botanical description

The root is spindle-shaped from 5cm to 3 dm in length, about 2 cm in thickness, fleshy, very brittle, greyish externally, brownish-yellow inside, bitter and of strong

disagreeable odour when fresh. Its root is bitter in taste. Leaves are long, branches are thin, flowers are violet coloured.^[7] ^[8]

Scientific classification^[9]

Kingdom- Plantae
Clade- Tracheophytes
Clade- Angiosperms
Clade- Magnoliids
Order- Piperales
Family- Aristolochiaceae
Genus- Aristolochia
Species- A. longa

Description in Unani literature

Zarawand is a Persian word meaning ‘golden utensil’, because of its golden colour. It is called as Masamkola in Indlus, Shajar rustum in west, Waqlasetees and Aristolochia in Greece.^[10]

According to renowned Botanist Dioscoroides (40-90 AD), Zarawand is of three types in which one is long and is called Zarawand Taweel. It acts as a male plant. Another one is round and is called Zarawand Madharaj and acts as a female plant. The third one is similar to the fibre of grape wood (Chob angoor) and it is long as well.^[11]

Khazainul Advia mentions its two types: (i) The root of this plant which is used medicinally is long and thick as of finger or somewhat thin from this. Inside of it is a substance resembling with Shamshad somewhat reddish in color and bitter in taste. The leaves of this plant are

like that of Ashq pechan plant but wider and longer. Branches are of size of a balisht but thinner. Flower is blue coloured but has pungent smell and on it is a thing similar to that of pear flower.

(ii) Red golden and larger from the first one. The branches of this plant are very thin. Compared to the first one its leaves are more round in shape. Rest is similar to first one. These leaves are smaller than that of Hayyul-alam plant. Flowers are like that of Sudaab. Its roots smell good and due to this reason perfumer make perfume from it. Roots of pearlsh saffron color are considered to be the best in quality. The roots not being attacked by microbes should be preferred. Its shelf life is two years. Usually Zarawand Taweel is called as Zarawand.^{[12][13][14][15]}

Vernacular names^{[6][15][16]}

Arab- zarawand taweel; zarawand daraz

English- European Birthwort

Unani-Zikr and Doqleetas

Algeria- Berrostom

Mizaj (temperament)

HOT III Dry II.^[10]

Af AL WA KHAWAS (actions and uses)

It is the antidote for the plant and animal origin poison. It acts as absorbent, detergent, lithotriptic, dissolvent, deobstruent, diuretic, antihelminthic, nervine tonic and emmenagogue; alexipharmic, vermifuge. It is given for melasma, amenorrhea. It acts as a cleanser for lungs and liver. It cleanses phlegm from organs. It is given in headache and other diseases of the brain such as epilepsy, paralysis etc. its liniment is useful for the insect bites. Its 1 gram should be powdered and mixed with alcohol and applied on the wound. Paste of this root is useful for haemorrhoids. Its decoction is used to wash hair and its powder mixed with oil kills lice after its application on skin and hair. The natives give it in dysmenorrhoea. 4 gram of it when taken with alcohol treats epilepsy and tetanus. For the treatment of spleen it is taken with Sikanjbeen. For gynaecological problems, it should be taken with *Piper nigrum*. For the control of lochia it is taken with Murmuki and *Piper nigrum*. In case of splenomegaly it should be applied on spleen with vinegar. It is an important constituent used in a compound formulation called Marham for healing purposes. For uterine abscess it is mixed with Marham. Locally it is applied to ulcers and affections of the gums. Its pharmacological properties are as that of first type; but according to Sheikhul rayees its pharmacological action is less compared to that of former type.^{[12][13][14][15][16]}

Mazarrat (toxicity and adverse effects)

Harmful for liver and spleen.^[13]

Musleh (corrective)

Honey.^[13]

Badal (substitute or alternative)

Narkachoor, Zarawand Madharaj, half weight Anzaroot, Piper nigrum, Sheetraj.^{[13][17]}

Miqdar khurak (dosage)

7 gram to 9 gram.^[13]

Compound formulations^[18-20]

Qurs-i-Luk, Qurs-i-Kibr, Habb-i-Zarawand, Majoon-i-Zarawand, Habb-i-Reward, Dawa al-Luk Kabir, Qurs-i-Luk, Qurs-i-Panjnaksht, Qurs-i-Fuh, Qurs-i-Zarishik Kabir, Qurs-i-Laakh, Qurs-i-Mufatat Sudud, Dawa al-Misk, Tiryaq-i-Arbaa, Majoon-i-Falafala, Majoon Dabeedul ward, Marham-i-Quba, Tiryaq al-Asnan, Anqarooya-i-Kabir, Roghan-i-Aqrab, Qurs-i-Zarawand, Habb-i-Mushil, Majoon Nafa-i-az Sara-i-Balghami, Majoon Kasir al-Riyah, Qurs-i-Kabir etc.

Scientific studies

Phytochemistry

Aqueous extract contains polyphenols, flavonoids (flavonol, flavones, flavonoid glycoside), tannins, cheterosides, carbohydrates and saponins. Flavonoids. Aristolochic acid and its Me ester is strongly abortifacient and acts against adenocarcinoma, HeLa cells in cancer. Roots antiestrogenic. A cytotoxic Lignan Savinin, has been isolated from the roots.^{[1][6]}

Pharmacological studies

Antioxidant and antidiabetic activity: α -glucosidase and β -glucosidase inhibitory activities were investigated using an in vitro model. The ethyl acetate fraction exhibited the highest inhibitory effect.^[21]

Studies have shown that Aristolochia extract produces enhancement of phagocytosis by leucocytes, granulocytes and peritoneal macrophages. This acid exhibits reduction of some of the adverse effects of prednisolone, chloramphenicol and tetracycline in vitro and a reduction in the rate of recurrent herpes in vivo.^[5]

CONCLUSION

Aristolochia longa Linn. root has been used in Unani System of Medicine since long period of time for the treatment of various ailments like poisoning, gynaecological disorders, neurological diseases etc. Traditionally it is used as antidote, emmenagogue, resolvent, diuretic, cleanser, hepatoprotective etc. pharmacological studies have proved its efficacy in various ailments as claimed by the Unani physicians in the past but more studies are required. In modern pharmacology major compounds present in Zarawand Taweel are flavonoids.

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