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Jadwar (*Delphinium denudatum*): A potent Drug for Various Ailments

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ABSTRACT

Jadwar, root of *Delphinium denudatum* is an important central Nervous system active drug of Unani System of Medicine. The generic name of Jadwar is derived from a Greek word, which means Dolphin, as the nectary resembles the figure of Dolphin. The word Jadwar is Arabic form of Persian Zadwar, which means the great purifier or Antidote. In India Jadwar was named as Nirbisi due to its antidotal properties. In various classical texts, it has been mentioned to be sedative, analgesic, brain and nervine tonic and is recommended for various brain and nervine disorders like epilepsy, tremors, hysteria, atony, numbness, paralysis, morphine dependence. Jadwar is adultered with the root of Beesh (Aconite), a poisonous herb root that may cause death. Ethanolic extract showed antibacterial activity against Corynebacterium diphtheriae, Proteus vulgaris, Salmonella typhi and Klebsilla pneumoniae.

Keywords: Jadwar, *Delphinium denudatum*, Unani Medicine

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INTRODUCTION

The generic name of Jadwar is derived from a Greek word which means Dolphin. The word Jadwar is Arabic form of Persian Zadwar, which means the great purifier or antidote. The Persian name Mah Parveen(Moon and pleaides) is probably given to this plant as it blossoms in the beginning of summer when the pleaides rise. In Indian Jadwar was named as Nirbisi due to its antidotal properties. Nir means to oppose or to remove and Bisi means Bis or Vish (Poison).Bis of Nirbisi is also used for Bish or aconite, as Jadwar is the antidote for aconite poisoning. Antila, Balootal arz, Jadwar, Mahpervin, Zadwar, Jadwar, Nirbishi, Nirbisi are some of its vernacular names. Jadwar (Delphinium denudatum) commonly occurs on the grassy slopes in western temperate Himalayas, from Kumaon to Kashmir at an altitude of 2,438.4-3,657.6 m. It also occurs in Punjab, Sirmoor and Lahore.

The rhizome is backish brown, externally marked by longitudinal wrinkles and bears numerous small circular scars that are the remains of lateral roots.

Phytochemistry

Presence of alkaloids like delpho-curarine, staphisagrine, delphinine, condelphine, isotalatizidine, denudatine, delnudine, delnuline and diterpenoid alkaloid $C_{25}H_{39}NO_6$ .have been reported. Sterols and fatty acids have been detected in Jadwar roots. Oil content (1.47%) obtained from Jadwar root yielded, unsaponifiable matter (17.75%) and saponifiable matter (82.25%). Sugar protein phenol starch, iron , zinc, calcium, magnesium and potassium are also present in Jadwar root.

Therapeutic Activity

In classical books of Unani medicine, Jadwar is referred as antipyretic, antiseptic, detergent, diuretic, exhilarant, resolvent, anti inflammatory, demulcent, sedative, analgesic, aphrodisiac, antidote, cardiotonic, general tonic, brain and nervine tonic and tonic for viscera, teeth stomach, vision and principal organs. Jadwar has been recommended for the treatment of paralysis, epilepsy, facial palsy, insanity, mania, hysteria, atony, migraine, numbness, tremors, infantile convulsions, aconite poisoning, snake bite, scorpion sting, opium addiction arthritis, cardiac weakness, palpitation, rheumatism, all kinds of pain leucoderma and for improving skin complexion.

Important Unani Formulations

Khameera Gaozaban Ambari Jadwar ood saleeb wala, Habb-e-Jawar and Jawahar Mohra, Marham-e-Jadwar, Zimad-e-Warm-e-Lozatain are some of the formulations of Unani system of

Medicine.

Adulterants And Varieties Of Jadwar

Jadwar is adulterated with the root of Beesh (aconite), a poisonous herb root that may cause death. Some roots, similar to Jadwar in appearance, are sold as adulterants. Some researcher has mentioned four types of Jadwar, viz white, violet, black and yellow. The people of Khata call yellow type karbi and violet type Barbi. The rest two types i.e. black and white are of Indian origin. The best variety called Jadwar Khatai is violet in colour and larger in size.

Other researcher has reported following five varieties of Jadwar

(1) Externally black, internally reddish violet, scorpioid in shape, taste, sweet first and bitter afterwards is called Jadwar Khatai as it grows in the hills of Khata.

(2) Yellowish black on both inside and outside, scorpioid in shape, and bitter in taste is inferior to Jadwar Khatai.

(3) Black on both sides, inside and outside. On rubbing it leaves a blue tint. It is bitter in taste and inferior to second variety. The second and third varieties come from Tibet, Nepal, Morong and Rangpore.

(4) Black in colour, olive sized and bitter in taste is found in Deccan hills, and

(5) Black in colour, 20-30 cm long, soft and very bitter in taste, called Antila is found in spain. It often grows in the vicinity of Beesh (Aconite), and has an inhibitory effect on the growth of Beesh. It also mitigates the toxicity of Beesh.

Ancient Unani texts distinguished Jadwar tubers from Beesh as both grow together. Beesh is smaller, reddish and its taste is first sweetish, but soon becomes acrid, accompanied with a tingling sensation and numbnees. If Jadwar is taken afterwards, this sensation disappears. Strong beesh may also produce inflammation, even blisters on the tongue while Jadwar is free from such adverse effects. Jadwar is bitterer than Beesh. False drug is rough, uneven and shriveled externally due to boiling in some colored substances, while the genuine jadwar is smooth and clear externally. The false drug is slightly acrid instead of being intensely bitter. Insects on account of its bitter principle seldom attack jadwar.

Temperament

Hot 2^o, Dry 2^o

Substitute

Fawania (Ood Saleeb)

Dose

500 mg to 1 gram

Pharmacological Activity

Ethanolic extract showed antibacterial activity against Corynebacterium diphtheria, Proterus vulgaris, Salmonella typhi and Klepsiella pneumonia. Organic solvent extracts also showed antimicrobial properties. Antifungal activity was determined by agar tube diffusion method against human pathogenic fungi.

Alchoholic and aqueous extract inhibited the experimental convulsions in rats. Oily fraction of the aqueous extract showed better anticonvulsive effect than aqueous extract against pentyl enetetrazole and bicuculline induced maximal electroshock test in hippocampus.

Jawahar Mohra, a compound Unani preparation, containing Delphinium denudatum has shown anti-stress activity of non specific type against diverse stressor probably due to adaptogenic activity of the preparation. Delphinium denudatum extract showed significant reduction in counted signs as well as checked signs of morphine withdrawal in morphine. The alcoholic extract attenuated the withdrawal symptoms of moderately morphine dependent rats.

Aqueous extract was reported to have hepato protective activity on experimental carbon tetrachloride induced liver damage in rats.

CONCLUSION

The scientific analysis of Jadwar (Delphinium denudatum) proves many of the activities mentioned in Unani literature. Further investigations are needed to find out the mechanism of action, active principle and utility of jadwar in clinical practice. Since the preliminary investigations show promising results against neurological disorders, this aspect need to be thoroughly investigated so that it can be established a standard drug.

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