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> **REVIEW ARTICLE** October 2023

Role of Ahiphena (Papaver sominiferum) in modern and ancient treatment

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ABSTRACT

Opium is botanically known as Papaver someniferum is cultivated in eastern countries and India only under license. Ahiphena cultivation is illegal in many countries due to its narcotic action. It is the source of various pharmaceutical alkaloids including morphine, codein etc. Ahiphena is not mentioned in Brihattrayee texts. Sharangdhara mentioned Ahiphena under Vyavaya Dravya in Raj Nighantu. Ahiphena comes under the class of Upavisha and it is used in various Kalpanas. Morphine is an analgesic opioid and is one of the most potent pain relievers. It has been used for pain relief and other indications for years. Morphine is highly addictive and its use is associated with significant physical and psychological dependence. Most commonly used in pain management, morphine provides major relief to patients afflicted with pain. Clinical situations that benefit greatly by medicating with morphine include management of palliative/end-of-life care, active cancer treatment, and vaso-occlusive pain during sickle cell crisis. Morphine also has off-label uses for painful conditions.

Key words: Ahiphene, Codeine, Morphine

INTRODUCTION

Papaver somniferum, commonly known as the opium poppy^[1] or breadseed poppy,^[2] is a species of flowering plant in the family Papaveraceae. It is the species of plant from which both opium and poppy seeds are derived and is also a valuable ornamental plant grown in gardens. Its native range was east of the Mediterranean Sea, but now is obscured by ancient introductions and cultivation, being naturalized across much of Europe and Asia. This poppy is grown as an agricultural crop on a large scale, for one of three primary purposes. The first is to produce seeds that are

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eaten by humans, commonly known as poppy seed. The second is to produce opium for use mainly by the pharmaceutical industry.^[3] The third is to produce other alkaloids, mainly thebaine and oripavine, that are processed by pharmaceutical companies into drugs such as hydrocodone and oxycodone.^[3] Each of these goals has special breeds that are targeted at one of these businesses, and breeding efforts (including biotechnological ones) are continually underway.^[3-5]

| Properties | Ahiphena properties |
|------------|---|
| Rasa | Tikta, Kashaya |
| Guna | Laghu, Ruksha, Sookshma, Vyavayi |
| Virya | Ushna |
| Vipaka | Katu |
| Doshakarma | Kaphavatahara |
| Karma | Madakari, Grahi, Sukra Sthambhaka |
| Indication | Atisara, Kasa, Darunaka Jvara, Nidranasha |

Table 1: Properties of Ahiphena

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FDA-approved usage of morphine sulfate includes moderate to severe pain that may be acute or chronic. Most commonly used in pain management, morphine provides significant relief to patients afflicted with pain.^[6] Clinical situations that benefit significantly by medicating with morphine include management of palliative/end-of-life care, active cancer treatment, and vaso-occlusive pain during sickle cell crisis. Morphine is widely used off-label for almost any condition that causes pain. In the emergency department, morphine is given for musculoskeletal pain, abdominal pain, chest pain, arthritis, and even headaches when patients fail to respond to first and second-line agents.^[7] Morphine is rarely used for procedural sedation. However, for small procedures, physicians will sometimes combine a low dose of morphine with a low dose of benzodiazepine-like lorazepam.

Patients that are actively having acute coronary syndrome are often given morphine in the emergency setting before going to the cath lab. Morphine to relieve pain during a myocardial infarction (MI) has been in use since the early 1900s. In 2005, an observational study raised some concerns, but there are very few effective alternatives. Morphine is a potent opioid; it decreases pain, which in turn leads to a decrease in the activation of the autonomic nervous system. These are desirable effects when a patient is having an MI. Additionally, morphine has hemodynamic side effects that can be beneficial during an MI.^[8] Morphine can decrease heart rate, blood pressure, and venous return. Morphine can also stimulate local histamine-mediated processes.^[9] In theory, the combination of these can reduce myocardial oxygen demand. Ayurveda not only covers the process of purification/detoxification of physical as well as chemical impurities but also covers the minimization of side effects and improving the potency/therapeutic efficacy of the purified drugs.^[10] Severe toxicity of opium can also be reduced by triturating with ginger juice. This process is repeated 21 times.^{[11],[12]} The synonyms of Ahiphena are Tilabheda, Khastila and Khakhas. Its fruit bark is cold, light, bitter and astringent taste, vitiated Vata Dosha, reduces

Kapha and treats cough, dries bodily tissues, dry in nature, increases intoxication, improves voice, tempting and long consumption leads to impotency.^[13]

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By Dhanwanti Nighantu, Rasa Tarangini, Raja Nighantu, Bhava Prakasha, it is categorized as Upa Visha Dravya (subtoxic group).

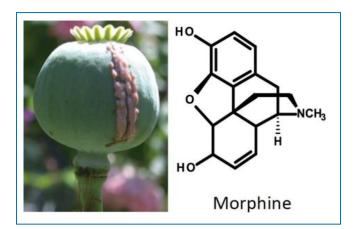
- 1. Jarana (White-colored variety) Acts as a digestive agent
- 2. Marana (Black-colored variety) Can cause death
- 3. *Dharna* (Yellow-colored variety) Acts as a health tonic
- 4. *Sarana* (different colored variety) Eliminates metabolic residues from the body

Aamyik Prayog (Therapeutic uses) of Ahiphena

- Atisara (Diarrhea): Ahiphena mixed with the bark of Kupilu and honey checks all types of diarrhea. (Vaidya Manorma. 6.3)
- Kasa and Jvara (cough and Fever):
 - 1. *Yavanadi Kwatha* (Bhava Prakasha Chikitsa Sthana 1/383)
 - 2. *Khaskhas Niryuha* (Siddha Bhaishjya Mannimala. 4/325-326)
- Darunaka (Dandruff): The seeds pounded with milk and pasted to destroy dandruff. (Sharanghdhara Samhita. 3.11.19)



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DISCUSSION

Ahiphena is having Tikta, Kashaya Rasa and having Laghu, Ruksha, Sukshma Gunas because these properties it is indicated in various disease like Atisara, Jvara, Kasa, Grahani. Ahiphena is having Kaphavata Shamaka. If properly used it is one of the valuable drugs and the most dangerous if misused. It is the best drug having Sthambana action. It is used in different diseased conditions both for internal and external.

CONCLUSION

Maximum formulations containing Ahiphena are indicated for Gastro-intestinal diseases. The petals are bitter, expectorant, sedative and are useful in coughs. The Opium obtained from the fruits is bitter, astringent, sweet, constipating, aphrodisiac, sedative, narcotive, antispasmodic and nervine tonic. So, it is commonly indicated for Atisara, Vajikarana, Respiratory diseases. It is good for internal haemorrhages, decrease secretions, restrain tissue changes and used as analgesic. As folk medicine seeds and leaves are used to treat old cancer and scirrhous tumors. The seed, either as a paste or as an pungent, is said to be useful in tumors and cancerous ulcers. Because of Narcotic action in many countries' cultivation is considered as illegal.

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