A review on Danti & its utility in various diseases

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ABSTRACT
In Kalpa Sthan of Charak Samhita detailed description of Pharmacokinetics of drugs, dosage forms and weights and measures are mentioned. Drugs useful for vaman and virechan are discussed with their synonyms, varieties, pharmacological actions, and various modes of application in different dosage forms. Baliospermum montanum is an important medicinal plant, found in southern- Western Ghats of India. It is commonly known as danti. The plant is a stout monoecious under shrub with many shoots from the base. In this article we have tried to cover a literature review on Danti and its utility in various diseases also in panchakarma procedures.

Keywords: Danti, Virechan, Baliospermum montanum, panchakarma

INTRODUCTION
Baliospermum montanum (Willd.) Muell-Arg (Euphorbiaceae) is a leafy monoecious undershrub distributed throughout the greater parts of India, Burma and Malaya. The various parts of the plant (leaves, roots, seeds and seed oil) are widely used by various tribal communities and forest dwellers for the treatment of variety of ailments. The roots of the plant are ascribed to possess medicinal virtues in Ayurvedic system of medicine and used in preparation of important Ayurvedic formulations. The plant is documented to possess beneficial effects as digestive, anthelmintic, diuretic, diaphoretic, rubefacient, febrifuge and tonic. It believed to be useful in asthma, bronchitis, leprosy, jaundice, wounds, constipation, anemia, leucoderma and fever.
LITERATURE REVIEW:

**Dravya Details**
- **Sanskrit Names:** Danti
- **English Name:**
- **Hindu Name:** danti, hakum, hakun, dante, dantt, jangli jamalghota
- **Synonyms:** Laghudanti, Vishodhini, Ruksa, Rochani,

**Botanical Classification:**
- **Kingdom:** Plantae
- **Order:** Malpighiales
- **Family:** Euphorbiaceae
- **Botanical Name:** Baliospermum montanum

**Plant Description:**
Herbs shrubs or small tree of various habits are with milky juice stem slender and leafy or thick and fleshy and sometimes leafless or nearly so. Flower monoecious combined in an inflorescence of many male florets surrounding a solitary female. Leaves are opposite or less commonly alternate. Flowers monoecious, combined in an inflorescence of many male florets surrounding a solitary female, arranged in a common 4-5 lobed perianth. Like involucr with thick glands and the mouth, each gland often bearing a petaloid spreading white or colored limb. Male flowers a stalked stamens without floral envelope. Female flowers, ovary 3 celled on an ultimately excreted stalk in the centre of the involucr; ovule solitary in each cell, style 3 free or connate. Fruit is capsule of 3-2 valved cocci, spreading elastically from a persistent axis and dehiscing ventrally or both ventrally and dorsally. Seeds albuminous,cotyledons broad, flat. The flower- heads in the genus have all the appearance of a single 2 sexual flowers especially when the involucr bears petal like appendages. Species 750 chiefly subtropical and warm.

- **Gan:** Bhavprakash nigantu;Guduchyadi varg,Dhanvantari nigantu; Guduchyadi varg;Raj nigantu;Piplyadi varg. **According to Charak:** Charak considered danti as in virechaniya gana. The root only indicated for the Virechana..He quoted it as the example of prabhava dravya. Aashukari, Vyavayi, Vikasi is the prabhava of danti. **According to Shusrut,** the danti comes under the adhobhaga hara and shyamadi gana.

**Properties as per Ayurved**
- **Ras:** katu
- **Virya:** ushna
- **Vipak:** katu
• **Guna:** guru, tikshna

• **Doshaghanta:** According to Kayyadeva N., Bhavaprakasha and Charak the Danti is a Kapha-pitta hara dravya.

• **Varieties: According to Raj Nigantu there are twotypes of Danti**
  1. Laghu Danti
  2. Bruhat danti

• **Parts used** – Root, leaves, seed and oil

• **Uses** – The root, leaves, seed and seed oil is used in the form of powder, seed and oil to treat piles, anaemia, jaundice, and skin diseases, cyst, as purgative, wound and conjunctivitis. Charak suggested a procedure for extracting the pulp from the fruit of *Aragwada*. He also described a process to reduce *vikasi guna* (causes looseness of tissues) of Danti root.

**Chemical Composition**

*Danti* has been explored phyto-chemically by various researchers and found to possess number of chemical constituents. The phytochemical studies on theroots of *B. montanum* revealed presence of five phorbol esters, viz. montanin (C32H48O8; yield, 0.018%), baliospermin (0.003%), 12-deoxyphorbol-13-palmitate (0.021%), 12-deoxy16-hydroxyphorbol-13-palmitate (0.001 %) and 12-deoxy5β-hydroxyphorbol-13-myristate (0.007%). A preliminary phytochemical study on the roots showed presence of flavonoids, glycosides, sterols and absence of alkaloids, saponins and terpenoids.

**Utility as per Ayurved**

The plant is attributed medicinal in number of classical texts of Ayurveda like *Ashtang Hridays, Bhav Prakash Nighantu, Dhanvantari Nighantu, Raj Nighantu, Shaligram Nighantu and Sushruta Samhita*. Almost all the parts of *Danti* are of medicinal importance and used traditionally for the treatment of various ailments.

- In Ayurvedic system of medicine roots of *B. montanum* are most popular and considered as good remedy in tvakdosa (skin diseases), krimi (worm infestation), daha (burning sensation), udararoga (gastrointestinal tract diseases), asmari (lithiasis), Kandu (itching), kushta (leprosy), vrana (wounds) and gulma (abdominal lump). The roots of the plant are considered as purgative, anthelmintic, diuretic, diaphoretic, rubefacient, febrifuge and tonic. They are also reported to
be useful in dropsy, constipation, jaundice, leprosy and skin diseases. The roots are used in some important Ayurvedic formulations such as Dantyarista, Punarnava Mandura, Abhayarista, Kankayana Gutika, Dantiharitaki, Kalyanaka Kshra and Kaisora Guggulu.

- The leaves are found to be good for asthma and bronchitis.
- The seeds of the plant are drastic purgative, rubefacient, hydragogue and stimulant. The oil obtained from seeds is a powerful hydragogue cathartic and is found useful for external.

**Role of Danti in Virechan karma:**

Numerous drugs have been described for Virechan. Critical analysis of these drugs with reference to their pharmacological actions and disease-specific formulations has been narrated. Different classifications of Virechak dravyas were also mentioned in the literature depending on their action (Virechak and Virechakopaga), part [and potency of the drug used. Dose of these drugs has been decided depending on the form administered (powder/linctus/decoction etc.) which further depends on the type of Koshta (~gastrointestinal tract).] Even with all these critical inputs, there is difficulty in the fixation of dose within the patients of similar Koshta and varied output (Vegas) of Virechana is observed. Danti (Baliospermum montanum) is the least practiced purgative drug as a prime medicine. Drugs (used for emesis and purgation) which are ushna (hot), tikshna (sharp), sukshma (subtle), vyavayi (those pervading the entire body before getting digested) and vikasi (those causing looseness of joints), by virtue of their own potency, reach the heart and circulate through the vessels. Purgative drugs, because of the predominance of prithvi and jala mahabhutas, and because of their specific action, (prabhavajanya) move downwards to expel the morbid material through the downward tract (anus). Combination of both these attributes result in the expulsion of the morbid material through both the upward and downward tracts.

Virechan with Danti is mainly indicated in Gulma (growth), Udara (ascites), Grant hi (cysts), Aavrita vata (complex pathological conditions of Vata), Aartava dhushti (menstrual disorders), kushta (skin disorders) and in the conditions where Teekshana virechan (strong purgation) is advised. Danti (Baliospermum montanum) is attributed for possessing the property of hydragogue cathartic. This means it
produces a discharge of watery fluid belonging to the class of cathartics that retains fluids in the intestines and aid in the removal of only edematous fluids which can be correlated to bhedana/rechana type of Virechana. Hence, this might have induced the purgation even at mild doses.

Danti Kalpa for virechan is Danti Avleha which is very effective.

- **Usage in various diseases:**

  **According to Charak:**

  - Jaundice – Juice of Bilva leaves mixed and along with Trikatu should be taken. It alleviates jaundice or danti paste 20mg mixed with double quantity of Jaggeri should be taken with cold water.

  - Udana roga – In Sannipatika udara, in order to relieve pain, hardness and constipation. Oil of danti-dravanti should be given along with curd-water, soup, meat soup etc

  - Arshas – leaves of Trivritt, Danti, Changeri and Chitraka fried in iol and ghee (mixed) and added with fatty layer of curd should be given as vegetable. Dantyaristha is effective.

  - As purgative – bifurcating longitudinally a sugar cane, its inner surface should be cover with Danti paste and steamed. By taking it one is evacuated easily

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**According to Shusruta:-**

- Pandu – Danti 20gm should be boil in buffalo’s urine sixteen times, remaining to 80 ml. it should be given as purgative.

- Udararoga – Danti oil should be given added with rock salt and ajamoda.

**According to AstangaHrudaya:-**

- Jaundice – one should take powder of danti 80 mg with cold water or that of Dravanti mixed with honey along with Triphala decoction.

- Kushta – Danti, Trivrit and brahmi powder together should be taken with honey and ghee. It is an excellent remedy for Kushta, Prameha and numbness.

**CONCLUSION**

- Ayurvedic pharmacology is being dealt with these terms- Rasa (taste), Guna (Properties), Virya (active principles), Vipaka (Biotransformation) and Prabhava (Specific action).

- Rasa (Taste of Substance) Guna (Properties) Vipaka (Final Transformation) Virya (Active Principle) and Prabhava are properties which reside in dravya which exerts action on this basis. While exploiting the drug action one has to keep in mind all these factors considering their relative strength. Rasa is the basic thing
which is overpowered by Vipaka which again is subdued by virya and prabhava stands above all.

- **Danti** is one among best six purgative drugs mentioned in our classics. *Danti* possesses the qualities like *Teekshana* (sharp), *Ushna* (hot), *Guiru* (heavy), *Aashukari* (faster in action), *Vikasi* (relieves obstruction). This is more beneficial in reducing pitta and *Kapha doshas*.

**REFERENCES:**


