PHARMACOLOGICAL REVIEW OF DHANVAYASA (FAGONIA CRETICA LINN)

Dr. Tarun Gupta1*, Prof. Dr. U. U. Zala2 and Prof. Dr. P. U. Vaishnav3

1P.G. Scholar, Post Graduate Department of Rasashastra evam Bhaishajya Kalpana, J.S. Ayurved Mahavidyalaya, Nadiad, Gujarat.

2Professor, Post Graduate Department of Rasashastra evam Bhaishajya Kalpana, J.S. Ayurved Mahavidyalaya, Nadiad, Gujarat.

3Principal and Head, Post Graduate Department of Rasashastra evam Bhaishajya Kalpana, J.S. Ayurved Mahavidyalaya, Nadiad, Gujarat.

ABSTRACT
Dhanvayasa (Fagonia cretica Linn.) is a small spiny woody perennial under shrub, mostly found in the dry regions of North-west India. Fagonia Cretica Linn. belongs to family Zygophylaceae, commonly known as Dhamaso in Gujarati and Duralabha in Bengali. Dhanvayasa and its compound formulations are widely used in Ayurvedic classics to treat vitiated conditions. It possesses Tikta-Kashaya-Madhura Rasa and its compound formulations are widely used in Ayurvedic classics to treat vitiated conditions. It possesses Tikta-Kashaya-Madhura Rasa (taste), Laghu-Sara Guna (properties) and Sheeta Virya (potency). It’s Rasapanchaka and therapeutic properties are explained in different Samhita and Nighantu. It’s astringent, antiviral, antimicrobial, antiseptic, anti-inflammatory, antioxidant, in liver cancer and thrombolytic action had been found in different researches. Sarjika Kshara is prepared by processing the ash of Dhanvayasa Panchanga and it is used as main ingredients in many Ayurvedic formulations e.g. Chitrakadi Vati, Duralabhadi kwath, and Ushirasava. In present study, an attempt to collect information regarding Dhanvayasa and its Pharmacological activities from available classical literature and previous research articles in a systematic manner, which can be useful in conducting further clinical trials.

KEYWORDS: Dhanvayasa, Fagonia Cretica, Pharmacological Action, Rasapanchaka.
INTRODUCTION
In Ayurveda, substances of natural origin, including whole plant or their part, animal Parts and minerals are used as medicine either alone or in combination. Dhanvayasa and its compound formulations are widely used in Ayurvedic classics to treat Pitta vitiated conditions. Dhanvayasa (Fagonia cretica Linn.) is a small spiny woody perennial under shrub, mostly found in the dry regions of North-west India.[1] Fagonia Cretica Linn. belongs to family Zygophyllaceae, commonly known as Dhamaso in Gujarati and Duralabha in Bengali.[2] Sarjika Kshara is prepared by processing the ash of this plant[3] and it is used as main ingredients in many Ayurvedic formulations e.g Chitrakadi Vati, Duralabhadi kwath, and Ushirasava. It’s Rasapanchaka and Therapeutic properties are explained in different Samhita and Nighantu. Hence, in this article an attempt has been made to collect information regarding Dhanvayasa and its Pharmacological activities from available classical literature and previous research articles in a systematic manner, which can be useful in conducting further clinical trials.

AIM OF STUDY
To Review the Pharmacological Action (Rasapanchaka) of Dhanvayasa (Fagonia cretica Linn.)

MATERIALS AND METHODS
In this article, information of Rasapanchaka (Pharmacological action) are compiled and analyzed from Rajanighantu[4], Bhavaparkasha nighantu[5], Madanpal nighantu[6], Dhanvantari nighantu[7], Priya nighantu[8], Nighantu Ratnakara[9], Nighantu Adarsha[10] and Ayurvedic Pharmacopeia of India.[11]

Table. 1. Showing Rasa of Dhanvayasa in different classical texts.

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Guna- Dhanvayasa possess Laghu and Sara Guna.[12]

Vipaka- Dhanvayasa possess Madhura Vipaka.[13]
Table. 2. Showing Virya (Potency) of Dhanvayasa in different classical texts.

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Karma Acc to A.P.I. Kaphahara, Vatahara, Pittahara and Medohara.

Chemical Constituents: Saponins I & II, Alkaloids (Harmine), Aminoacids (Alanine, glycine, leucine, arginine, isoleucine, Lysine, Phenylalamine, proline, tyrosine and valine), Terpenoids of oleanane group.

Pharmacological Activities
- Thrombolytic activity.
- Neuroprotective Activity.
- Antioxidant activity.
- Synergistic activity.
- Cytotoxic, Antitumor.
- Analgesic activity.
- Anti pyretic.
- Anti-inflammatory activity.
- Wound healing study.
- Antiallergic.
- Anti-microbial activity.
- Radioimmuno Assay of Fagonia critica and isolated triterpenoids.

Table. 3. Showing Therapeutic Uses of Dhanvayasa in different classical texts.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Therapeutic Uses</th>
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<tbody>
<tr>
<td>Kaidev Nighantu</td>
<td>Raktapitta, kapha, medo, Brahma, Visarpa, Kustha, Vatarakta, Trsna, Kasa, Jvara and Chardi.</td>
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</table>
DISCUSSION

Dhanvayasa possesses Tikta-Kashaya-Madhura Rasa (taste), Laghu-Sara Guna (properties) and Sheeta Virya (Potency). Rajnighantu, Nighantu Ratnakar and A.P.I mentioned Katu rasa along with Tikta, Madhura and Kashaya rasa. Raj nighantu also mentioned Ushna virya of Dhanvayasa. It have Kaphahara, Vatahara, Pittahara and Medohara karma. Duralabha is the Synonyms for Dhanvayasa. It is indicated in Raktapitta and Kaphaja Chardi by Acharya Charaka. It is indicated in Mutraghata and Bharama by Acharya Vagbhatta and Acharya Chakradatta respectively. The ayurvedic references also shows that the Plant Dhanvayasa have Kaphahara, Vatahara, Pittahara and Medohara properties and can be used in Atisara, Grahani, Daha, Jvara, Visamjvara, Trsna, Prameha, Moha, Murccha, Raktapitta, Raktivikara, Kushta, Vatarakta, Gulma, Bhrama, Chardi, Kasa and Mutraghata vikara.


Controversy: Acc.to Bhavaparkasha Nighantu, Dhanvayasa and Yavasa are considered to be identical in properties as well as indications. They have been used as a substitute for each other. At present Dhamasa is identified as Fagonia cretica Linn. and Yavasa as Alhagi pseudalhagi (Bieb) desv and both are different species.

CONCLUSION

According to Ayurvedic Literature and investigations of various researchers it is concluded that Dhanvyasa (Fagonia cretica Linn.) has active medicinal potential and various proved pharmacological actions like Anti-inflammatory, Analgesic, Antiallergic, Neuroprotective, Thrombolytic, Antimicrobial, wound healing and used in treatment of Atisara, Grahani, Daha, Jvara, Visamjvara, Trsna, Prameha, Moha, Murccha, Raktapitta, Raktivikara, Kushta, Vatarakta, Gulma, Bhrama, Chardi, Kasa, Mutraghata. This study helps in conducting further clinic trials, so that Dhanvaysa can be used for more therapeutic purposes.
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