Review article

Role of Jwaraghani gutika in the management of Jwara

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INTRODUCTION

In Ayurved, Jwara is not merely the concept of raised body temperature, as said in Charaka Samhita, 'Deha- Indriya- Manah- Santap' is the cardinal symptom of Jwara. This can be defined as the state where the body, mind as well as sense organs suffer from the high temperature. Jwara is considered as a king of all diseases because every person in this world comes with Jwara and depart with it. Acharya Charaka while illustrating diseases give first preference to Jwara both in Nidansthana and Chiktasthana. It takes away the life of all living beings, causes a disturbance in the body, sense organs and minds and diminishes intellect, strength, completion, pleasure and enthusiasm. Jwara Vyadhi is discussed in details in all the Ayurvedic Samhita Granthas. Rasa dravyas are widely practiced in the treatment of Jwara due to its easy availability and high efficacy. There is a wide spectrum of Jwarahara dravyas mentioned in Rasashastra and Jwaragghani gutika is one of them. It is one of such herbo-mineral preparations which have been used from ancient time for the treatment of Sarva Jwara. It is firstly illustrated by Rasa Prakash Sudhakar (12th century AD) in Jwara Rogadikar. Herein, this article reviews the role of Jwaraghani gutika used in Jwarachikitsa as per Ayurvedic classics.

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spreads throughout the body resulting in the obstruction of various Srotas (body channels) and later on an elevation in body temperature.

**Samprapti ghataka (factors involved in pathology)**

According to Kathuri (2006), the factors involved in the pathology of Jwara are as follows.

1. Dosha: Pitta predominant Vata Kapha
2. Dushya: Rasadhatu
3. Agni: Jatharagni
4. Adhistan: Twak, Sarvashereera
5. Srotas: Rasavaha, Swedvaha, Annavaha
6. Srotodusthi: Sanga (obstruction)
7. Udghava sthana: Amashaya
8. Rogamarga: Abhyantara

**Jwara Pradhana Lakshana (symptoms)**

The symptoms of Jwara are obstruction of sweating, increased body temperature and mild body pain which occurs at the same time (Acharya, 2012). Besides, mental distress, indigestion, loss of appetite, heaviness in body parts, congestion in eyes, lethargy, lacrimation, oversleep, uneasiness and debility are the other symptoms of Jwara.

**Jwara Chikitsa (treatment)**

The line of treatment in Taruna Jwara is Pachana (digestion) of Avipaka Doshas (Acharya, 2009). In addition, Langhana (fasting), Swedan (fomentation), Kala (time or passage of 8th day), Yavagu (medicated gruels) and Tikta rasa (drugs having a bitter taste) are the other important aspects for the line of treatment.

**Drug profile**

The complete profile of the drug (Jwaraghani gutika) for Jwara is given in Table 1 and 2. The mode of application of the drug is oral at the doses of 1 g twice a day (BD) with Anupana of Guduchi Swaras (Tinospora cordifolia juice).

**Table 1. Mineral content and action of the drug**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Mineral</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sudha Parad</td>
<td>Mercury</td>
<td>Yogwahi, Rasayan, Tridosagha, Krimighana, Sarvarogajit</td>
</tr>
<tr>
<td>Sudha Gandhaka</td>
<td>Sulphur</td>
<td>Dipan, Pachan, Rasayan, Vishahar, Krimihar</td>
</tr>
</tbody>
</table>

**Table 2. Jwaraghani gutika herbal contents and their antipyretic activity**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Latin name (Family)</th>
<th>Action</th>
<th>Antipyretic activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elva</td>
<td>Aloe barbadensis (Liliaceae)</td>
<td>Bhedi, Pittanirhara, Rajapravartaka, Jwaranut</td>
<td>Jwarahara Leaf extract showed anti-inflammatory and analgesic effect (Haque et al., 2012)</td>
</tr>
<tr>
<td>Akarkara</td>
<td>Anacyclus pyrethrum (Asteraceae)</td>
<td>Vatahara, Pittahara, Sukrala, Vajikara, Svedakara, Dipana, Balakaraka</td>
<td>Root extract showed anti-pyretic activity (Priya et al., 2014)</td>
</tr>
<tr>
<td>Haritaki</td>
<td>Terminalia chebula (Combretaceae)</td>
<td>Chaksusya, Dipana, Medhya, Rasayan, Anulomana, Sarvadosaprasmana, Yogwahi</td>
<td>Vishama Jwarghana Fruit extract showed analgesic and antipyretic activities (Lahon et al., 2012)</td>
</tr>
<tr>
<td>Pippali</td>
<td>Piper longum (Piperaceae)</td>
<td>Dipana, Hridya, Tridosahara, Rasayan, Rechana</td>
<td>Jwarahara Piperine isolated from the plant showed analgesic and antipyretic activity (Sabina et al., 2013)</td>
</tr>
<tr>
<td>Indravaruni fruit &amp; root</td>
<td>Citrullus colocynthis (Cucurbitaceae)</td>
<td>Krimighna, Vamak, Visahara, Rechana, Slesmahara, Kaphahara, Pittahara</td>
<td>Jwarghana Fruit extract showed antipyretic and anti-inflammatory activity (Reddy et al., 2012)</td>
</tr>
</tbody>
</table>


**DISCUSSION AND CONCLUSION**

In Rasatantrasara and Sidhaprayogasangraha, there are forty Rasa yogas mentioned for Jwara rogaadikar, and Jwaraghani gutika is one of them. It is mentioned in many other texts such as Rasa Prakash Sudhakar, Yogratnakar, Bhava Prakash nighantu, Brihat Rasa Raj Sundar, Raskaamdhenu, Sarangdhar Samhita as well as in Ayurvedic Formulary of India. In Jwaraghani gutika, Acharya Sarangdhara mentioned seven drugs, where Parad (mercury) and Gandhak (sulphur) are two main Ras dravyas (Acharya, 2005).

The name Rasashastra itself signifies Parad which was used therapeutically from Samhita Kala. Gandhak increases the potency and decreases the
toxic effect of Parad, which signifies its importance in Rasashastra. The herbal ingredients of Jwaraghani gutika viz. Elva, Pippali and Indravaruni fruit and root known for their antipyretic activity as per classics and also proved by the researchers (Table 2).

Among all the ingredients of Jwaraghani gutika, Pippali and Indravaruni have antipyretic activity marked out in Ayurvedic classics which also has scientific evidence. Piperine, an active constituent of Pippali (Piper longum) has antipyretic activity produced by a significant reduction in rectal temperature that may be due to inhibitory effect in prostaglandin secretion.

Similarly, a significant antipyretic activity of Indravaruni fruit extract may be due to its flavonoids contents. As flavonoids have been known for their anti-inflammatory, antibacterial and antiviral activities by inhibiting cyclooxygenase enzymes (mediate the synthesis of PGE2) activities and thereby prevent the synthesis of PGE2 (ultimate mediator of febrile response) (Agarawal, 2011).

An ethanol extract of the roots of Indravaruni has potentially the expression levels of pro-inflammatory cytokines viz. TNF-α, PGE2 & COX-2. As pyrexia is a part of inflammatory response so this mechanism of action of Indravaruni root extract also leads to antipyretic effect. Again, the flavonoids present in the fruit extract of Haritaki are responsible for their antipyretic activity. Elva has established Jwaranut action that was evident from the study done on different extracts of musabar resulting in significant activity against all the pathogenic bacteria (Haque et al., 2012). The ethanol extract of Akarkara root has strong antipyretic and broad-spectrum antibacterial activity (Priya et al., 2014).

Parad (mercury) and Gandhaka (sulphur) itself have the antimicrobial property that may also assist the antipyretic activity of Jwaraghani gutika. So, all these ingredients are responsible for moulding Jwaraghani gutika into a potent antipyretic drug. Anupana is also mentioned for Jwaraghani gutika, which is Guduchi swaras. The role of anupana is to increase the bioavailability and to prevent the adverse effects of a drug. The studies have also proved the antipyretic activity of Guduchi (Ikram et al., 1987).

Acharya Charaka also mentioned that the juice of Guduchi (Tinospora cordifolia) is extremely useful in the treatment of irregular fever. The dose, anupana and pathya-aphathy should be kept in mind while administering the Rasa to avoid complications.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

REFERENCES


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