Review Article

Bal Chaturbhaadra Churna: - A Boon for Children

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Abstract:
Background: Bal chaturbhadra churna is a poly-herbal formulation used in pediatric practice in Ayurveda especially in the treatment of vomiting, diarrhea, fever and respiratory disorders. The human clinical dose of Bal chaturbhadra churna is 1000 mg per day. It is prepared by mixing equal proportions of rhizome of Cyperus rotundus Linn. (Cyperaceae), fruit of Piper longum Linn. (Piperaceae), root of Aconitum heterophyllum Wall. ex. Royale. (Ranunculaceae) and gall of Pistacia integerrima Stew. Ex. Brandis. (Anacardiaceae). Material and Methods: Various Ayurveda classics and studies published in journals related to use of Bal chaturbhadra churna in management of childhood disorder are reviewed and analyzed.

Discussion: Contents of Bal chaturbhadra churna are mostly katu rasa, laghu guna, usna veerya and also deepana, pachana, krimighna, visaghna, hridya, ruchya, vrisya, rasayana, rochana, trisnanigrahana, tvakadosahara, jwaraghna etc. properties. Therefore, due to presence of these qualities, it is used in vomiting, diarrhea, fever and respiratory disorders. According to studies published in journals, it is beneficial as immuno-modulator, anti-inflammatory, anti-spasmodic, anti-asthmatic activity, anti-bacterial activity, antidiabetic activity, antioxidant activity, anti-fungal activity, hepatoprotective action, analgesic activity.

Conclusion: Present review reveals Bal chaturbhadra churna is quite safe for administration among Children and therefore can be used in various ailments in children which can limit the irrational use of antibiotics in them.

Keywords: Balchaturbhadrachurna, Ayurveda, Cyperus rotundus, Piper longum, Aconitum heterophyllum, Pistacia integerrima.

Introduction: - Among the eight branches of Ayurveda, Kaumarbhrutya deals with the nurturing, hygiene and care of child as well as prophylactic and therapeutic management of diseases in children. Various formulations have been advised in Ayurveda text for therapeutic management of diseases in pediatric population. The human clinical dose of Balchaturbhadra churna is 1000 mg per day. It is prepared by mixing equal proportions of the rhizome of Musta (Cyperus rotundus) Linn. (Cyperaceae), fruits of Pippali (Piper longum) Linn. (Piperaceae), roots of Ativisha (Aconitum heterophyllum) Wall. ex. Royale. (Ranunculaceae) and gall of Karkatashringi (Pistacia integerrima Stew.) Ex. Brandis. (Anacardiaceae). It is mentioned in various classical Ayurveda, like Chakradatta² Bhaishajya ratnavali³ and Yogaratnakar, specifically indicated for respiratory diseases, vomiting, diarrhea and fever in children. As there is increasing tendency of irrational use of antibiotics in children, this has led to the development of superbugs which do not respond to antibiotics and are posing the greatest challenge to conventional medicines. Balchaturbhadra churna is quite effective in various childhood disorders and if used in children can minimize the use of antibiotics. The present paper reviews the effect of Balchaturbhadra churna on childhood disorders.

Methodology: - Present paper reviews the ingredients, pharmacological activities & uses of Balchaturbhadra churnadescribed in Ayurveda texts.

| Table 1. Table showing Ingredients of Bal chaturbhadra Churna |
|---------------------------------|-------------------|-----------------|-------------|-------------|
| Name of drug | Botanical name | Family | Part used | Proportion |
| Musta | Cyperus rotundus Linn. | Cyperaceae | Rhizome | 1 part |
| Pippali | Piper longum Linn. | Piperaceae | Fruit | 1 part |
| Ativisha | Aconitum heterophyllum Wall. | Aconitaceae | Root | 1 part |
| Karkatashringi | Pistacia integerrima Stew. | Anacardiaceae | Gall | 1 part |
Table 2: Pharmacological properties of the contents of Balchaturbhadra churna

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Drug Name</th>
<th>Rasa</th>
<th>Gun</th>
<th>Veerya</th>
<th>Vipaka</th>
<th>Doshghnata</th>
<th>Karma</th>
<th>Therapeutic Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Musta³</td>
<td>Tikta, Katu.</td>
<td>Laghu</td>
<td>Sheeta</td>
<td>Madhura</td>
<td>Kaphahara</td>
<td>Pittahara</td>
<td>Sothahara(anti-inflammatory), Deepana(increases digestive fire), Pachana(digests undigested material), Grahi(absorbing), Jwaraghana (anti-pyretic), Atisaraghna (Antidiarrheal)³⁻⁹</td>
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<td></td>
<td></td>
<td>Ajeernan¹⁰,¹¹ (Indigestion), Aruchi(tastelessness), Atisara (Diarrhea)¹⁻¹²</td>
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<td></td>
<td>Jwara (Fever), Kasa (Cough)¹³⁻¹⁴, Shwasa (Asthma), Vanama (Vomiting), Vatarakta (Gout)¹⁵,¹⁶</td>
</tr>
<tr>
<td>2.</td>
<td>Ativisha</td>
<td>Tikta, Katu.</td>
<td>Laghu</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kaphahara</td>
<td>Pittahara</td>
<td>Deepana (increases digestive fire), Pachana (Digests undigested material), Grahi (absorbing)¹⁷</td>
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<td></td>
<td></td>
<td>Jwara (Fever), Chardi (vomiting), Atisara (diarrhea), Shoth (inflammation), Visha (poisoning), Ageerna (indigestion), Kasa (Cough)¹⁸⁻¹⁹</td>
</tr>
<tr>
<td>3.</td>
<td>Karkatshri ngi²⁰</td>
<td>Tikta, kasha ya</td>
<td>Laghu</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kaphahara</td>
<td>Vatahara</td>
<td>Kasahara (anti-tussive), Hikkanigrahan (anti-hiccup)²⁰</td>
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<td></td>
<td></td>
<td></td>
<td>Svasa (asthma), Chardi (vomiting), Hikka (hiccup), Jvara (Fever), Kasa (Cough)²⁰</td>
</tr>
<tr>
<td>4.</td>
<td>Pippali²¹</td>
<td>Katu</td>
<td>Snigdh</td>
<td>Ushna</td>
<td>Mudhra</td>
<td>Kaphhara, Vathara</td>
<td>Deepana (increases digestive fire), Hridya (heart disease)</td>
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<td></td>
<td>Arsana(Haemorrhoid), Hikka(hiccup), Kasa (cough), Prameha(diabetes), Udararoga(abdominal pain), Jwara(fever)²²</td>
</tr>
</tbody>
</table>

Therapeutic uses of Balchaturbhadra Churna²³⁻²⁵: Jvaratisara (fever & diarrhea), Kasi (cough), Svasa (asthma) and Yamana (vomiting).

Effect of Balchaturbhadra Churna: The Balchaturbhadra Churna did not modify humoral antibody formation, relative weight of spleen and the thymus of albino rats to significant extent. Immunological edema represents cell mediated immune response hence it can be inferred that the Balchaturbhadra Churna produces significant suppression of cell mediated immunity which is direct correlation of delayed type hypersensitivity (DTH) response and do not influence humoral immune response. The observed effect may be the main mechanism for the efficacy of the drug in respiratory disorders (Parmar, et.al., 2011).

Dose: The dose for the experimental study was calculated by extrapolating the clinical human dose of Balchaturbhadra churna (1000 mg per day) to an animal dose based on body surface area ratio by using conversion factor of 0.018.²⁶ The histopathological studies of 16 organs showed that Balchaturbhadra churna at 450 mg/kg, increased the cellularity in the thymus and spleen. Other organs exhibited normal cytoarchitecture suggesting that the preparation is devoid of serious organ degenerative potential at this dose level. At the higher dose of 900 mg/kg changes were observed in the spleen, thymus, and testis. The white pulp (lymphatic tissue) of the spleen forms a sheath around the arteries. The stroma is a network of reticular fibers and phagocytic reticular cells or fixed macrophages. As in all lymphatic tissue, the meshes of the framework are filled with free lymphocytes of various sizes, distributed to form diffuse and nodular lymphatic tissue which vary continuously and reflect the reaction of lymphatic tissue to various generalized stimuli.²⁷
Conclusion: Present review reveals that Balchaturbhadra churna is quite safe for administration among children and can provide better result in diseases of vomiting, diarrhea, fever and respiratory disorders both as prophylactic and curative medication due to its Katu rasa, Laghu guna and Usna virya according to Ayurveda. A large number of research studies reveal that constituents of Balchaturbhadra churna is beneficial as immuno-modulator, anti-inflammatory, anti-spasmodic, anti-asthmatic activity, antibacterial activity, antidiabetic activity, antioxidant activity, anti-fungal activity, hepatoprotective action, analgesic activity. This undoubtedly solves the safety concerns related to the presence of Aconitum species drug in the formulation. Balchaturbhadra churna is quite safe for administration among Children and therefore can be used in various ailments in children which can limit the irrational use of antibiotics in them.

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