LITERARY REVIEW OF BIBHITAKA (TERMINALIA BELLIRICA. ROXB)

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ABSTRACT
Bibhitaka is one of important ingredient of popular Ayurvedic formulation ‘Triphala choorna’. A well known plant which has been used for medicinal purpose regularly since vedic era. Part of Bibhitaka used mainly is fruit and seeds. Bibhitaka is well known for its astringent property and is used since ancient times for cough, sore throat, laryngitis, dyspepsia(internally) and for graying of hair(external application). Modern research shows Terminalia bellirica to be a powerful adaptogen. This review article covers review of Bibhitaka from vedic era, samhitas granthas, Nighantus till date.

KEYWORDS: Ayurveda, Bibhitaka, Charak Samhita, Sushrut Samhita, Nighantu.

INTRODUCTION
Use of plants as medicines is increased in recent times. Now-a-days individuals prefer products made from natural sources. Profound research work is being carried out and plants are screened for their various pharmacological and phytochemical properties. Bibhitaka (Terminalia bellirica. Roxb) is one such plant which is found abundantly in Indian subcontinent and other tropical regions. So far, Bibhitaka is screened for its analgesic activity, anti-diarrhoeal, hepatoprotective, anti-oxidant, wound-healing, anti-hypertensive, anti-microbial, anti-biofilm, antipyretic and anti-ulcer activities. Many other actions mentioned in samhitas need to be screened and may require further research.

HISTORICAL REVIEW
I) BIBHITAKA IN VEDIC ERA (2000B.C. to 800 B.C.)
1. Bibhitaka has been mentioned in Rigveda(7/86/6).[1][1] In Rigveda synonyms of Bibhitaka are mentioned –‘Bafru’ and ‘Kali’.
Atharvaveda\textsuperscript{[2]} mentioned that Bibhitaka was used for preparation of chariot and so synonym ‘Dhyoota’ is used for Bibhitaka. In Kaushiksutra Bibhitaka is used for treating Jwara. In Chandogyopnishad word ‘Aksha’ is used for Bibhitaka alongwith reference of ‘Padmaksha’ and ‘Rudraksha’.

II) BIBHITAKA FROM SAMHITAS

In this period, Bruhattrayi have mentioned Bibhitaka in some of the formulations. It has been indicated mostly for curative purposes. Keshya action of Bibhitaka was overlooked here. Details are elaborated below.

1) CHARAK SAMHITA\textsuperscript{[3]}(1000 B.C.)

Charaka samhita mostly have Kayachikitsa orientation and is known for its utility in Ayurvedic medicine. Bibhitaka is quoted by Charakacharya in Charaka Samhita in many formulations, but it is not related with its Keshya action. ‘Beheda’ is the synonym mostly used for Bibhitaka.

Acharya Charaka illustrated its therapeutic action in Kasa.

Table No.1. References of Bibhitaka in Charak samhita

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Reference</th>
<th>Page. No</th>
<th>Adhikar</th>
<th>Yoga/Formulation (Bibhitaka as a content)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cha.su.4/30</td>
<td>45</td>
<td></td>
<td>Jwarahar Mahakashaya</td>
</tr>
<tr>
<td>2</td>
<td>Cha.chi.1-1/75</td>
<td>23</td>
<td>Rasayanadhikar</td>
<td>Amalaka rasayana</td>
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<td>3</td>
<td>Cha.chi.1-1/76</td>
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<td>Rasayanadhikar</td>
<td>Haritakyadi Rasayana</td>
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<td>4</td>
<td>Cha.chi.1-1/77</td>
<td>25</td>
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<td>Sahastraritakyadi</td>
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<td>Cha.chi.1-3/23</td>
<td>46</td>
<td>Rasayanadhikar</td>
<td>Lohadi Rasayana</td>
</tr>
<tr>
<td>6</td>
<td>Cha.chi.1-3/42-47</td>
<td>52</td>
<td>Rasayanadhikar</td>
<td>Triphala Rasayana 1,2,3,4.</td>
</tr>
<tr>
<td>7</td>
<td>Cha.chi.1-4/26</td>
<td>67</td>
<td>Rasayanadhikar</td>
<td>Dwitiya Indroka Rasayana</td>
</tr>
<tr>
<td>8</td>
<td>Ch.chi.3/201</td>
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<td>Jwarachikitsa</td>
<td>Vishamjwaranashak yoga</td>
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<td>9</td>
<td>Ch.chi.3/205</td>
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<td>10</td>
<td>Ch.chi.3/206</td>
<td>187</td>
<td>Jwarachikitsa</td>
<td>Madhukadi Sheeta kashaya</td>
</tr>
<tr>
<td>11</td>
<td>Ch.chi.3/208</td>
<td>187</td>
<td>Jwarachikitsa</td>
<td>Triphalaadi kwatha</td>
</tr>
<tr>
<td>12</td>
<td>Ch.chi.3/222</td>
<td>190</td>
<td>Jwarachikitsa</td>
<td>Vasadi ghrita</td>
</tr>
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<td>13</td>
<td>Cha.chi.5/123-125</td>
<td>267</td>
<td>Gulma</td>
<td>Drakshadya ghrita</td>
</tr>
<tr>
<td>14</td>
<td>Cha.chi.5/151</td>
<td>272</td>
<td>Gulma</td>
<td>Mishraka Sneha</td>
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<tr>
<td>15</td>
<td>Cha.chi.6/35</td>
<td>290</td>
<td>Pramehachikitsa</td>
<td>Kampilakaadi yoga</td>
</tr>
<tr>
<td>16</td>
<td>Cha.chi.6/40</td>
<td>291</td>
<td>Pramehachikitsa</td>
<td>Phalatrikadi Kwath</td>
</tr>
</tbody>
</table>
2) SUSHRUTA SAMHITA\(^{[4]}\)(1000 B.C.)

Sushruta samhita deals with surgical aspect and holds important place in Ayurveda.

Sushrutacharya mentioned Bibhitaka for external application purpose for Krushnikaran of vrana in shashtiopkram and also as an ingredient in Khalitanashan tail.

### Table No.2: References of Bibhitaka from Sushruta Samhita

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Reference</th>
<th>Page. No</th>
<th>Adhikar</th>
<th>Yoga/Formulation (Bibhitaka as a content)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Su.su.46/200</td>
<td>412</td>
<td>Annaanvidhi-adhyay</td>
<td>Bibhitaka Guna</td>
</tr>
<tr>
<td>2.</td>
<td>Su.chi.25/32-</td>
<td>376</td>
<td>Mishrakchikitsa(palitya)</td>
<td>Palit-khalitnashak tail</td>
</tr>
</tbody>
</table>

3) ASHTANGA SANGRAHA\(^{[5]}\) (600 A.D.)

Ashtanga Sangraha also mentioned Bibhitaka in the same manner as that of Charaka Samhita.

4) ASHTANGA HRUDAYA\(^{[6]}\) (700 A.D.)

Ashtang Hrudaya Samhita is known for its easy access in Sanskrit, and is a combined form of Charaka Samhita and Sushruta Samhita.
Table No.3: References of Bibhitaka from Ashtanga Hrudaya

<table>
<thead>
<tr>
<th>Sr. no</th>
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<th>Page. No</th>
<th>Adhikar</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A.H.Su,6/156</td>
<td>35</td>
<td>Annaswaroopvidnyaniya</td>
<td>Guna</td>
</tr>
<tr>
<td>1</td>
<td>A.H.Chi, 3/31</td>
<td>232</td>
<td>Kasachikitsa</td>
<td>Choorna</td>
</tr>
<tr>
<td>2</td>
<td>A.H.U,20/12</td>
<td>323</td>
<td>Shwitra chikitsa</td>
<td>Aksha Tail</td>
</tr>
</tbody>
</table>

5) MADHAV NIDAN (700 A.D.)
As Madhava nidana specially comments on diagnosis of diseases, it has not described properties and uses of any herb.

6) CHAKRADATTA[7] (1100 A.D.)
Chakrakradatta a commentor on Charaka samhita mentioned following formulations of Bibhitaka:

Table No. 4: References of Bibhitaka from Chakradatta

<table>
<thead>
<tr>
<th>Sr. no</th>
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<th>Page No.</th>
<th>Adhikar</th>
<th>Yoga / Formulation (Bibhitaka as a content)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cha.D.11/27</td>
<td>139</td>
<td>Kasarogadhikar</td>
<td>Bibhitaka Yoga</td>
</tr>
<tr>
<td>2</td>
<td>Cha.D. 12/17</td>
<td>147</td>
<td>Hikkashwas</td>
<td>Bibhitaka Choorna</td>
</tr>
</tbody>
</table>

7) YOGARATNAKAR (1800 A.D.)
In yogaratnakar curative aspects of Bibhitaka is given and various formulations of drugs is mentioned.

Table No. 5: References of Bibhitaka from Yoga Ratnakara: Poorvardha

<table>
<thead>
<tr>
<th>Sr. No</th>
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<th>Page No.</th>
<th>Adhikar</th>
<th>Yoga / Formulation (Bibhitaka as a content)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yo.Ra.pu.</td>
<td>281</td>
<td>Kshudrarog(Arunshika)</td>
<td>Triphaladi Tail</td>
</tr>
<tr>
<td>2</td>
<td>Yo.Ra.pu.</td>
<td>281</td>
<td>Kshudrarog(Palitya)</td>
<td>Lepa</td>
</tr>
<tr>
<td>3</td>
<td>Yo.Ra.pu.</td>
<td>409</td>
<td>Kasachikitsa</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Yo.Ra.pu.</td>
<td>413</td>
<td>Kasachikitsa</td>
<td>Kasakandavleha</td>
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<tr>
<td>5</td>
<td>Yo.Ra.pu.</td>
<td>414</td>
<td>Kasachikitsa</td>
<td>Vaidyajeevanadabibhitakavleha</td>
</tr>
<tr>
<td>6</td>
<td>Yo.Ra.pu.</td>
<td>412</td>
<td>Kasachikitsa</td>
<td>Lavangadi Vati</td>
</tr>
</tbody>
</table>

8) SIDDHABHISHAJ MANIMALA – In Siddhabheshaj manimala, Bibhitaka is mentioned under ‘Haritakyadi varga’.
9) CHIKITSA KALIKA (VANGSEN)
Vangasen mentioned that use of Bibhitaka fruit checks severe diarrhea and helps in Hridaygata vata.

10) RAJ MARTANDA
Bhoj in Raj Martanda mentioned the use of Bibhitaka in Kasa and dyspnoea and also the use of seed kernel in corneal opacity. Nothing about keshya activity of Bibhitaka is mentioned. Specific keshya activity is mentioned.

III) BIBHITAKA IN NIGHANTU
Dravyaguna Vidnyanshastra flourished in the era of Nighantu kala. Various Nighantus seem to originated in this time and have described about Bibhitaka along with its various synonyms, properties, different actions of every part of this herb used in the management of diseases. Detail review of Bibhitaka has been taken from the Nighantus right from Dhanvantari Nighantu.

1) Dhanwantari Nighantu (1000-1300 A.D.)[8]
In this Nighantu, Bibhitaka is included under the ‘Guduchyadi varga’. Keshavrudhikar action of Bibhitaka is mentioned.

2) Shodhala Nighantu (1200 A.D.)[9]
It is grouped in Shodhala nighantu under ‘Guduchyadi Varga’. Various synonyms are mentioned. Its effect over Doshas is also quoted.

3) Hruday-Dipaka Nighantu (1300 A.D.)[10]
In Hrudaya Dipaka nighantu, Bopadeva has given description of drugs based on doshaghnatva only.

4) Madanapala Nighantu (1400 A.D.)[11]
In this Nighantu, Bibhitaka is mentioned under ‘Haritakyadi varga’. Here the properties of the drug and indications are also quoted. The properties and action are similar to the other texts.

5) Raj Nighantu (1500 A.D.)[12]
Bibhitaka is grouped under ‘Amradi varga’ in Raj Nighantu. It is stated as one of important content of Triphala.
In this text, Bibhitaka is mentioned in ‘Aushadhi Varga’. Other properties of Bibhitaka mentioned are same as in Bhava prakash.

7) Bhavaprakasha / Haritakyadi Nighantu[14](1600A.D.)
In this classical text, Bibhitaka has been placed in ‘Haritakyadi varga’. Bhavaprakasha Nighantu, mentioned bibhitaka as of Kashaya rasa, madhur vipaka and Ushna veerya. The properties are Laghu, Teekshna and pharmacological actions mentioned are Deepana, Grahi, Swarya, etc.

8) Shaligrama Nighantu[15](1900 A.D.)
Shaligrama Vaishya has described Bibhitaka under ‘Karpuradi varga’in this nighantu. Various synonyms, properties and its therapeutic uses are mentioned in a systematic manner.

9) Nighantu Adarsha[16](1928 A.D.)
Bapalalaji Vaidya has compiled the description of drugs from ancient Nighantus. He has described Bibhitaka in ‘Haritakyadi Varga’. Furthermore, information about its historical background and therapeutic uses has also been specified. It depicts the picture of Bibhitaka by giving the significance of various synonyms.

10) Priya-Nighantu[17](1983 A.D.)
Acharya Priyavrat Sharma has described the properties and geographical distribution of Bibhitaka in ‘Haritakyadi Varga’. Some of the common therapeutic uses are also mentioned.1:1

11) Vanaushadhi Chandrodaya[18]
Shri Chandraraj Bhandari has mentioned some different synonyms of Bibhitaka and its distribution. Therapeutic uses also are mentioned. It is also mentioned here that oil of beheda is very potential for hair problems.

12) Vanaushadhi darpana (2006)
The vernacular names of Bibhitaka along with its action and uses are given in this text.

13) Gunaratnamala[16]
Described about properties of Bibhitaka & its fruit similar to Bhavmishra.
IV. MODERN PERIOD: (20th - 21st Century)

Bibhitaka has been described by modern authors as -

- **Books Describing *Terminalia bellirica***
  1. **Indian Materia Medica: Dr. K. M. Nadkarni**[^20]
     The author has explained *Terminalia bellirica* synonyms of family Combretaceae. Furthermore details regarding their vernacular names, habitat, chemical constituents etc. are listed.

  2. **Flora of Calicut: K.S. Manilal, V. V. Sivarajan**
     It is considered as one of the important source books for the knowledge of various species of Western Ghats and south India. Brief review of the external morphological features of *Terminalia Bellirica* is mentioned in this flora of calicut.

  3. **Flora of British India: J.D. Hooker**
     The book is considered as authentic source book for phamacopeal standards and even for the other information of medicinal plants. *Terminalia Bellirica* is delineated in terms of its botanical and pharmacological aspects. In addition to this its Ayurvedic properties, chemical constituents, information regarding mode of propagation and cultivation are also provided.

  4. **Wealth of India**[^21]
     There is detailed description of belliric myrobalan. It includes precise information about different varieties, methods of cultivation, propagation, manuring, diseases and pest, harvesting, storage and chemical constituents of various parts of *Terminalia bellirica*.

  5. **Medicinal plants of Uttaranchal State: Dr. Anil. k. Dhiman**[^22]
     Detailed description about vegetation of Bibhitaka, its vernacular names and medicinal uses is given.

  6) **Database on Medicinal Plants**[^23]
     Uses and actions of *T.bellirica* is described in database. Evaluation of Ayurvedic properties, Pharmacognostic and therapeutic actions is done. And guidelines about plant cultivation and propagation is given.

  7) **Indian Medicinal Plants**[^24]
     Described in detail about Bibhitakas geographical distribution, suitable climatic conditions

[^20]: Indian Materia Medica: Dr. K. M. Nadkarni
[^21]: Wealth of India
[^22]: Medicinal plants of Uttaranchal State: Dr. Anil. k. Dhiman
[^23]: Database on Medicinal Plants
[^24]: Indian Medicinal Plants
and uses of plant.

Thus, Bibhitaka is described in most of the scientific books. It is said to be effective drug in many disorders. But some of the actions of Bibhitaka mentioned in Samhitas and Nighantus may need further research for which this review article can prove to be helpful.

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