DARUHARIDRA (BERBERIS ARISTATA DC.) AN IMPORTANT AYURVEDIC MEDICINAL PLANT - A REVIEW

Raj Patel1, Sushant Priyadarshi2, Ashwini Kumar Kushwaha3*
1 Master in Pharmacy, Faculty of Ayurveda, RGSC BHU, Varanasi, U.P., 221005
2 Bachelor in Pharmacy, Faculty of ayurveda, RGSC BHU, Varanasi, U.P., 221005
3* Assistant Professor, Department of Dravyaguna, Faculty of ayurveda, Institute of Medical Sciences, Rajiv Gandhi South Campus, Banaras Hindu University, Varanasi, U.P., 221005

Abstract
Herbal medicinal plants play an important role in the traditional system of medicine, they have been used since centuries in various health systems like Ayurveda, Siddha and Unani etc. Daruharidra botanically identifies as Berberis aristata is well known medicinal plant in Ayurveda which is used alone or in combination with other medicinal plants. This medicinal plant is very useful in skin diseases like skin inflammation and psoriasis and apart from this it is also used in various diseases like jaundice, splenomegaly, rheumatoid arthritis, fever, morning sickness etc. A major bioactive marker of this plant is berberine, which is known for its activity against cholera, acute diarrhea, amoebiasis and latent malaria and for the treatment of oriental lesions caused by Leishmania tropica. Although Berberis aristata is officially considered as Dahruharidra, review revealed that B. asiatica, and other species of Berberis like chytria are also taken under the name of Daruharidra. All the information about Daruharidra has been discussed in this review.

Keywords: Daruharidra, Berberis aristata, berberine, skin disease.

Introduction
Berberis aristata (DC.) commonly known as Daruhaldiand chitra belongs to the family Bereridaceae It is an evergreen shrub and widely distributed from Himalayas to Sri-lanka and hilly area of Nepal [1]. Daruharidra is an important medicinal plantand has been used in the indigenous system of medicine since a long time [2, 3, 4]. Fruit of this plant is edible and rich source of Vit-C. The root bark of this herb is rich in barberin and isoquinoline both chemical compound are anti-fungal, antibacterial, anti-oxidant, anti-viral, anti-diabetic, and anti-inflammatory in nature [5].
Hepatoprotective effect of psudoberberine C30 H30 O27 N2, a pseudopalmatine and taxilamine, Pakistanine, 18.19. pseudopalmatin GGGG e chloride, psudoberberine chloride, taxilamine, pakistainine, 1-0 methylpakistainine were also extracted from the bark of Plant [20,21].

**Flower** contains polyphenolic flavonoid named quercitin, meratine, rutine [22]. And acid E-callic acid and chloregenic acid [23].

**Rhizome** contain Cadmium, Lead, Chromium, Zinc, Iron, and Mangese [24].

1. Berberine 2. Tetrahydropalmatine 3. Tetrahydroberberine

4. Jatrorrhizine

5. Columbine

6. Palmatine Chloride


**Ayurvedic Properties of B. Aristata [25]**

**Rasa (Taste):** Kashaya (Astringent), Tikta (Bitter)

**Guna (property):** Laghu(light), Ruksha (Dry)

**Vipaka (Metabolic Property):** Katu (Pungent)

**Virya (Potency):** Ushna (Hot)

**Part Used [26]:** Root, stem, Fruit, water extract

**Botanical Action** [27]: Shothhara, Vedanasthapan, Vranashothhana, Deepan, Pitta-Sarak, Grahi, Raktashodhak, Garbhashaya shothahara.

**Uses** [28]: Kandu (Itching), Medoroga (Obesity), Mukharoga (Mouth Disease), Vrana (Ulcer), Amatisara (Diarrhea), Urustambha (Life Style Disease), Kapharoga (Disease of Head and Neck), Karnaroga (Ear Disease), Netra Roga (Eye Disease).

**Dose of Daruhyadra in Different form [29]**

Decotion: 50-100 ml

Fruit Powder: 3-5gm

**Pharmacological Activity of B. Aristata.**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Extract</th>
<th>In vitro / In vivo models</th>
<th>Dose</th>
<th>Pharmacological Action</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Equeou</td>
<td>Hamste</td>
<td>500-</td>
<td>Hepatoprot</td>
<td>[30-</td>
</tr>
</tbody>
</table>
s and metabolic extract | r, Rat model | 1000mg/g/kg | active, Anti-Inflammatory | 35 |
2. Alkaloid and hexane extract | Rabbit, infant mouse essay | Anti-microbial, Anti-bacterial, Anti-fungal | [36-41] |
3. Root extract | Rabbit, infant mouse | 500-1000mg/g/kg | Antidiarrheal | [42-45] |
4. Ethanolic and alcoholic extract | Alloxan induced rats | 250mg/kg | Hypoglycemic | [46-48] |
5. Methanolic extract | Human colon cancer | 250mg/kg | Anti-cancerous | [50-51] |
6. Aqueous ethanolic extract | Diabetic rat | 250mg/kg | Anti-oxidant | [52-53] |
7. Alcoholic extract | Rabbit | 100mg/kg | Anti-platelet | [54-55] |
8. Fruit extract | Rabbit | 500mg/kg | Cardio tonic | [56] |

**Ayurvedic Uses of Daruharidra (Berberis aristata DC.)**

- **Anaemia & Jaundice**
  - Darvighrita, Darvi and amalaki juice mixed with honey
  - Reference: CS.Ci.16/54

- **Skin Diseases**
  - Darvi or Rasanjana taken with Cow’s urine
  - Decotion of darvi, Khadira and Nimbu
  - Reference: CS.Ci.7/61, AH.Ci.19/3, AH.Ci.19/7

- **Dysuria**
  - Darvi amf Amalaki juice mixed with honey
  - Reference: CS.Ci.26/53

- **Scrotal enlargement**
  - Paste of Darvi with Cow’s urine
  - Reference: CS.Ci.26/3, AH.U.13/3

- **Disease of Mouth**
  - Extract of darvi (Rasanjana) with honey
  - Reference: CS.Ci.26/20, AH.U.2/2/10

- **Coryza**
  - Smoking of sticks made of darvi, Nirgundi, danti and Tulasi
  - Reference: VM.60/16

- **Eye Diseases**
  - Eye drop made with Decotion of darvi and prapaundarika
  - Reference: AH.U.16/33

- **Pradara**
  - Darvaddi kvatha
  - Reference: VM.63/6

- **Leucorrhoea**
  - Decotion of Daruharidra mixed with honey
  - Reference: GN.6.1.24

- **Poison**
  - Haridra & daruharidra are used as paste
  - Reference: GN.7/1/11

**Prameha**

- Darvi and amalaki juice mixed with honey
- Reference: VD.7/20

**Wound**

- Oil cooked with durva juice / Kampillaka or Paste of Darvi Bark
- Reference: CS.Ci.25/93

**Identity, Purity and Strength [API-Vol-2, Page no-35]**

- Total Ash Value: NMT 2%
- Acid insoluble Ash: NMT 5%
- Foreign matter: NMT 14%
- Alcohol Soluble Extractive Value: NLT 6%
- Water soluble extractive Value: NLT 8%

**Important Formulation of Daruharidra**


**Conclusions**

On review of various Ayurvedic literature it was found that Daruharida is an important medicinal plant described in different ayurvedic samhita such as Carak samhita, Shusruta Samhita and Astanga hridya and in other ayurvedic treatise and are used in skin disease, anaemia, jaundice, dysuria, scrotal enlargement, disease of Mouth, leucorrhoea and in other health issues, further on review of various published research works it is found that it shows various pharmacological activity like hepato-protective, anti-Inflammatory, anti-microbial, anti-diarrheal, anti-cancerous and cardio-protective activity.

**Funding**

None

**Acknowledgement**

Not Declared

**Inform Consent**

Not Required

**Ethical Statement**

Not Required

**Conflict of Interest**

No Conflict of Interest

**Author Contribution**

Ashwini Kumar Kushwaha conceived the idea of the article, Raj Patel wrote the article, Shushant Priyadarshri and Ashwini Kumar Kushwaha edited and proofread the document.

**References**

26. Sharma PV. Darvayaguna Vigyan Vol-II, Published by Choukhambha Bharti academy, Varanasi, Reprint 1998 pg. 539
29. WebMD.Tree-turmeric: Uses, Side effects, Doses, Interactions [Internet].Atlanta [last updated in 2016].
plants and cultivated ornamental species. Fitoterapia, 79(7-8), 589-591.


