PASHANBHEDA: A VALUABLE MEDICINAL PLANT

G. S. Indoriya, 2Sharma Ashwini Kumar, 3Tanwar Pankaj

ABSTRACT:
The word Pashanbheda is made of two words first is Pashan means a stone and second is Bheda means to break. Means one which breaks the stones. Stones means renal and bladder stones or ordinary stones disintegration of the calculi in the bladder and kidney. There are so many plants that are used by this name like Saxifraga ligulata, Aerva lanata, Aerva javanica, Homonia riparia etc. due to their diuretic and lithotriptic activites. One of such plant that is widely accepted under the name of Pashanbheda Bergenia ligulata Syn. Saxifraga ligulata. The rhizomes of this plant are used to prevent and expel urinary stones.

Key words: Bergenia ciliata, distintegration, urinary bladder, pattharachaura, Renal stone.

INTRODUCTION: PASHANBHEDA (Bergenia ciliata) grows up by breaking stones and its very interesting that it also used for removal of renal stones by breaking them. It synonymously called velvat leaf. It also known by the common names pattharaachata, pattharachaura, silphora etc. pashanbheda has a special place in Ayurveda as it is a main drug for stone of kidney and urinary bladder. It is an evergreen plant the concentration of alkaloids remain good in winter season. The native place of ciliate Central Asia. It is mostly found in Himalayas region and Khasia hills of Meghalaya. It can survive even extreme condition even in stones without soil. It is wonderful that leaves produces new plants that come contact with an suitable climate. It is a small perennial herb with red coloured flower. The leaves of this plant resemble very much banyan tree. The pieces of root of this plant are sold as pashanbheda in Gujarat and North India market. It grows in the temperate Himalayas from Kashmir to Bhutan between7500 to 10000 ft. and Khasia hills.

Ayurvedic properties and Pharmacological action: According to ayurveda literature Pashanbhedha is kasaya (Astringent) and Tikta (bitter) in rasa, Laghu (light) and Snigdha (smooth) in guna (properties) sita (cold) in virya (potency) and katu (Pungent) in vipaka (metabolism). Due to these properties, it pacifies tridosha Vat, Pitta and Kapha. It has mutra virechaniya (diuretic) karm (action).

Kashmiri - Pashanbheda.
Kannad – Alepgaya, Hittaga, Hittulaka, Pahanbhedi, Pasanberu.
Malayalam – Kallurvanchi, Kallurvanni, Kallorvanchi.
Marathi - Pashanbheda.
Mizoram – Khamdamdawi, Pandamdawi.
Oriya – Pashanbhedi.
Punjabi – Batipa, Dharposh, Kachalu.
Tamil – Sirupilai.
Telugu – Kondapindi, Telanurupindi.
Urdu – Krchalu, pakhambheda.

Synonyms – Asmaghana, Upalabhedaka, Sailodbheda. ¹

Species of pashanbheda uses in different parts of India-(1)

<table>
<thead>
<tr>
<th>S.N.</th>
<th>BOTANICAL NAME</th>
<th>FAMILY</th>
<th>LOCAL NAME &amp; PLACE WHERE USED</th>
<th>Useful part</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Aerva lanata</em> Juss.</td>
<td>Amaranthaceae</td>
<td>Sirupeeli or sirupoolai (Tamil), Cherubula (Malayalam), Pindiconda (Telugu), Rajasthan</td>
<td>Whole plant but the siddha physicians used only roots.</td>
</tr>
<tr>
<td>2</td>
<td><em>Aerva javanica</em> Juss.</td>
<td>Amaranthaceae</td>
<td>Gorakha-Ganjo (Gujarat)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td><em>Ammonia bacifera</em> Linn.</td>
<td>Lythraceae</td>
<td>Kerala, Agiyo (Gujarat), Kalluruvi (Tamil, Malayalam and Kannada), Neermale neruppu (Tamil), Agni – vednapaku (Telugu)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td><em>Rityka aquatic</em> Lour</td>
<td>Ehretiaceae or Boraginaceae</td>
<td>Mysore</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td><em>Bergenia ligulata</em> (wall) or <em>Saxifraga ligulata</em></td>
<td>saxifragaceae</td>
<td>Patharaachura (Kashmir) Kashmir to Bhutan, Khasia hills. (root pieces of this plant are sold as Pashanbheda in Gujarat and north India.</td>
<td>Used special for lythophytic action.</td>
</tr>
<tr>
<td>6</td>
<td><em>Coleus aromaticus</em></td>
<td>Labiatae</td>
<td>Bengal</td>
<td>Useful part is root</td>
</tr>
<tr>
<td>7</td>
<td><em>Bryophyllum calicynnum</em> Salisb. Or <em>Kalanchoe pinnata</em></td>
<td>Crassulaceae</td>
<td>Bengal</td>
<td>Zakhme Hayat in Unani means leaves juice is best styptic, stops bleeding and cures the</td>
</tr>
</tbody>
</table>
Pharmacological action of pasanbheda is Mutrakorcha hara, Asmarihara (remove renal stone), Prameh hara (anti diabetic), Yonirog hara (effective in vaginal diseases), Plihodara (effective in spleen disorders), Hridrog hara (effective in cardiac disorders) and Gulm. 1,2,7

Classical references – 5, 6, 7

Acharaya Charak has cauterized it in Mutra virechaniya Mahakasaya. Acharaya Susruta and Vagabhatta include it in Vratarvadi Gan.

Useful part – Root

Dosage – powder – 3 to 6 gm., Decoction – 50 -100 ml.

Important formulation – Pasanbhedadi ghrat, Pasanbhedadi churna, Pasanbhedadi kavtha (Decoction)

Chemical constituents:

1- Berganin alias cuscutin is trihydroxybenzonic acid glycoside. It possesses o-demethylated derivative, so called nor bergenin. It has some extraordinary effects in boosting immunity.

2- B – sitosterol is plant sterols. It is an analgesic component. It increases the pain tolerance by 300 percent. It is structurally similar to cholesterol. They are hydrophobic and alcohol soluble.

3- B – sitosterol – D-glucoside is basically having some analgesic effect. We can increase pain tolerance 157 percent by use of it.

4- Leucocyanidin is used for the treatment of many diseases. It has antiseptic, anti convulsant, anesthetics and anti asthmatic property.

5- Gallic acid- It is a type of phenolic acid or a type of organic acid. It is also known as gallates. It is found in many plants. Mainly it is used in ink industry and pharma industry.

6- Methyl gallate – It is well known anti oxidant. It reduces the aging process.

7- Catechin – It is a chemical that effects on the B M I. It is beneficial in obesity and reduces extra fat. Usually it reduces subcutaneous fat.

8- Mucilage – It is a common thick, gluey substance, which is found in most of the plants. Plants use it as food storage agent. It is useful in gastro intestinal inflammatory disorders.

Medicinal properties and uses of it –

1- It acts as a very good diuretic. It can be used for many diseases like cardiac asthma, renal failure etc.

2- Breaks and rebreaks the kidney stones and that is the drug of choice of the urinary tract disease or infection.

3- It works as hepatoprotective agent and commonly found in many herbal liver products.

4- It acts as a very good anti oxidant and usually used in many herbal preparations.

| 8. | Bridelia Montana | Euphorbiaceae | Also called Fater – food (stone crusher) in Goa |
| 9. | Homania riporia Lour | Euphorbiaceae | |
| 10. | Ocimum basilicum | Labiatae | |
5- It is widely used for the treatment of obesity. It reduces the subcutaneous fats.
6- It is effective in jaundice or hepatitis.
7- It has anti-aging ability and that can help us in keeping ourselves fresh and energetic.
8- It is a good medicine for disease of genital area and often use in homely medications.
9- It acts as very good renal tissue protective agent.
10- It is useful as an antidote in opium poisoning.
11- It helps in breakdown of renal stones and it is specialist for this purpose.
12- It is helpful in hydrenephrosis and keeps the kidneys safe.
13- It is helpful in chronic renal diseases.
14- It helps in controlling of diarrhea and dysentery.
15- It works as antimicrobial agent.
16- It helps in controlling diabetes and reduces the chance of diabetic renal disease.
17- Root powder of Pashanbheda described for turbid urine of children. (i)
18- Decoction of root powder of its5 gm. with honey 10 gm. is useful in Amebic dysentery, Opium toxicity, Leucorrhea, Menorrhagia, Dysmenorrhea, Renal pain and Calculi.
19- Mix powder of Pashanbheda root, Glycyrrhiza glabra, Pedalium murex, Hygrophila auriculata, Bamboo manna, 1-1 part, sugar 5 parts with cow milk two times a day for Seminal weakness, Premature ejaculation, Spermatorrhea.

**Research:**

1 - The aqueous, alcoholic and acetone extracts of roots (20 mg./kg i.v.) produced transient fall in B P of anaesthetized dogs. Only alcoholic extract potentiated pentobarbitone – induced hypnosis in mice in a dose of 50 mg/kg. An oral dose of 0.5g/kg of alcoholic extract showed a significant diuretic activity in rats. (Sharma, 1970). 
2 – Alcoholic extract of rhizome showed anti-cancer activity in walker carcinosarcoma 256 in rats. It also showed anti- protozoal activity against Ent. Histolytica. (Dhara et al.1968).
3- The aqueous extract had some diuretic effect in rats and insignificant anti – lithic activity in male rats (Maurya et al.1972).
5 – Enoeavour Of Pashanbheda (Bergenia ligulata (Wall.) In Urolithasis Prakash Sanjay International Journal Of Applied Ayurved Research 
7 -Studies on Antimicrobial Potentials of Aerva lanata Fractions B M Dinnimath And S S Jalalpure2 Kleu’s college of pharamacy, Nehrunagar, Belgaum-590010

**CONCLUSION:** In the present era, herbs are being rediscovered, as people around the world seek a healthier and more natural life style and Pasanbheda is one of the important herbal plant. Berginia ligulata is an important medicinal plant used for the treatment of various disease specially in renal stone and urinary tract infection. Pasanbheda is used in vitiated condition of vat pitta and kapha.
REFERENCES:
3. Sharma Priyavrata , Namrupajnanam, satyapriya prakashan , Varanasi ,2000;
7. Chunekar Prof. K. C. edited by Late Pandey Dr. G. S., Bhavprakash Nighantu of Shri Bhavmishra, commentary by Chaukhambha Bharaati Academy , Varanasi.
9. Dr. Bapa Lal Vaidya Some Controversial Drugs in Indian Medicine , Chaukhambha Orientalia , Varanasi .
10. Dr. Bhautya Ramesh Kumar , Ayurvedic Medicinal Plants of India Volume 1 , Scientific Publishers Jodhpur , India .
20. A Manual on Participatory Inventory and Management of Pakhenbed (Bergenia ciliata syn. Bergenia ligulata)
Based on results of case studies from six CFs of Ramechhap District. Nepal Swiss Community Forestry Project (NSCFP) Date: April 07, 2006 Ref. No. 24/062/63.


25. Sharama HK, Chhangte L, Dolui AK. Traditional medicinal plants in Mizoram, India Fitoterapia 72: 2001;146-161.


34. Garodia P, Ichikawa H, Malani N, Sethi G, Aggarwal BB. From ancient medicine to modern medicine: ayurvedic
concepts of health and their role in inflammation and cancer. JSociety for Integrative Oncology. 5(1): 2007; 1-16.
44. Singh AP. Didymocarpus pedicellata: The Lithotriptic Ethnomedicine. Ethnobotanical Leaflets 11: 2007;73-75
48. Reddy UDC, Chawla AS, Deepak M, Singh D, Handa SS. High pressure liquid chromatographic determination of bergenin and (+)- afzelechin from different parts of
69. Mitra SK, Saxena E, Babu UV. Herbal composition for maintaining/caring the skin around the eye, methods of preparing the same and uses therefore. US patent 7, 2010;785,637 64. Pelczar MJ, Chan ECS, Krieg NR. Microbiology. 5thed. MC Graw Hill.1993; 578.

Corresponding Author: Dr.G. S. Indoriya, Principal, Pt.M.M.M.Government Ayurved College,Udaipur Rajasthan.
Email: drashwinisharma1972@gmail.com

Source of support: Nil
Conflict of interest: None
Declared