ABSTRACT:
In ayurveda many vatarogas are explained in details among them sandhigatavata is very common having sign & symptoms like lack of movements of the joints, pain & stiffness in joints. In different texts many formulations are given useful in different vatarogas viz guggul kalpas & rasashaadhis. But data available and the mode of action of specific formulation is negligible. Taking this in consideration this is an effort to find out efficacy of Ajmodadi vatak in sandhigatavata. Ajmodadi vatak is a polyherbal formulation mentioned to be useful in all types of vataroga. Present review explains pharmacological potential of Ajmodadi vatak in sandhigatavata along with the other pharmacological activities of each ingredient in the formulation.

Keywords: Ajmodadi vatak, anti-inflammatory, analgesic, sandhigatavata, review.

INTRODUCTION: Sandhigatavata is the most common disease of old age mentioned under vataroga in ayurveda. Symptomatically sandhigatavata is much close to osteoarthritis. According world health organization osteoarthritis is the second commonest musculoskeletal problem in the world population. Disease starts between the age of 40 – 45 yrs., occurs due to degeneration of cartilage & synovial membrane in joints, which affects mostly weight bearing joints i.e.knees, hips. Common sign & symptoms are inflammation and stiffness in joints, pain during movements of joints, crepitations during movements of joints. Modern science explains it as degenerative joint disease . In the allopathic system of medicine the management mainly based on symptomatically relief in painful conditions but still there is need for such therapeutic regimen that could retard the disease progression. For the search of such agents, herbal remedies and dietary supplements have become an important area of research. The review is framed to discuss the recent advancement in use of ayurvedic drug for management of sandhigatavata. Several ayurvedic drugs are used in sandhigatavata mentioned in various ayurvedic texts. Ajmodadi vatak is mentioned in Chakradatta (Amvatarogadhikara) useful in many vatarogas viz, amvata, gridhrasi, vishwachi, tunipratituni, katipeeda, gudapeeda, asthipeda, sandhishotha1. Ajmodadi vatak is having ingredients like ajmoda, marich, sunthi, pippali, vidang, chirak, hariti, pippalimul, shatavha, vidharamul. Most of the ingredients are vatashamak and katu, ushna, laghu which digests ama, so it is useful in amvata but this study is to find out efficacy of ajmodadi vatak in sandhigatavata.

Material & Method of Preparation of Ajmodadi Vatak: Ajmodadi vatak is mentioned in Chakradatta Amvatarogadhikara shloka no. 37-43.
Name of Ingredients | Quantity | Name of Ingredients | Quantity
--- | --- | --- | ---
Ajmoda | 46gm | Shatavha | 46gm
Marich | 46gm | Saindhw | 46gm
Pippali | 46gm | Pippalimul | 46gm
Vidanga | 46gm | Sunthi | 460gm
Devdaru | 46gm | Vidharamul | 460gm
Chitrakmul | 46gm | Haritki | 230gm

All above drugs are made into fine powder form and kept ready for mixing in paka. 1570 gm gud is made into pieces and mixed with appropriate quantity of water in a vessel and heated over mridu agni till it reaches proper paka. All powders are mixed in gud paka uniformly. Then this substance is made into vataks having weight of 10gms.

**Table – 1 Ingredients of Ajmodadi Vatak**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Ingredient’s Name (Family)</th>
<th>Part used</th>
<th>Ayurvedic properties</th>
<th>Pharmacological activities of part used</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Marich Piper nigrum (Piperaceae)</td>
<td>Fruit</td>
<td>Rasa-Katu, Gun – Laghu, teekshna, ruksha Veerya – Ushna Vipak – Katu Doshaghnata – Kaphavatashamak Rogaghnata – Pratishyaya, kasa, shwasa, shoola, agnimandya, vatavikar, ajeerna, adhmana, shothvedanayuktavikar Karma – Lekhana, nadibalya, nadiuttejaka, deepana, pachana, vatanulomak, strotoshoodhana²</td>
<td>Antiinflammatory &amp; analgesic⁵, antioxidant⁶, lipolytic, muscle relaxant CNS depressant, anticonvulsant⁷</td>
</tr>
<tr>
<td>3</td>
<td>Pippali Piper longum (Piperaceae)</td>
<td>Fruit, root</td>
<td>Rasa – Katu Gun – Laghu, snigdha, tikshna, Veerya – Anushna, sheeta</td>
<td>Anti inflammatory, antinoiception⁹, antibacterial¹⁰</td>
</tr>
<tr>
<td>Page</td>
<td>Plant Name</td>
<td>Family</td>
<td>Part</td>
<td>Properties</td>
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</tr>
<tr>
<td>4</td>
<td>Pippalimula</td>
<td>Piper longum (Piperaceae)</td>
<td>Root</td>
<td>Vipak – Madhur, Doshaghnata – Kaphavata shamak, Rogaghnata – Shotha, aruchi, agnimandya, vibandha, amavata, vatarakta, shatayukta vedana, mastishkadaurbalya, vatanyadhí, udarshoola.</td>
</tr>
<tr>
<td>6</td>
<td>Devdaru</td>
<td>Cedrus deodara (Pinaceae)</td>
<td>Heart wood, oil, leaf, bark, resin</td>
<td>Rasa – Tikta, Guna – Laghu, snigdha, Veerya – Ushna, Vipaka – Katu, Doshaghnata – Kaphavata shamaka, Rogaghnata – Sandhivata, vedana, kandu, jeerna sandhivata, jeernaamavata, vatarakta, gridhrasi, amadosha, adhmana, vibandha, vatavikara.</td>
</tr>
</tbody>
</table>
| 7 | Chitrak | Plumbago zeylanica (Plumbaginaceae) | Root, Root, bark | Rasa – Katu  
Guna – Laghu, ruksha, teekshna  
Veerya – ushna  
Vipaka – Katu  
Doshaghnata –  
Vatakaphashamaka, pitavardhaka  
Rogaghnata – Shotha, amavata, nadidaurbalya, vatavyadhi, agnimandya, udarshoola, grahami.  
Karma – Lekhana, uttejaka, grahi, shotharahara, swedajanana, rasayana. | Anticancer, antibacterial, antifungal hypolipidaemic, antiatherosclerotic, antipyretic, hepatoprotective & CNS depressant. |
| 8 | Shatavha | Anethum sowa (Apiaceae) | Fruit, leaf, flower, seed oil | Rasa – Katu, tikta  
Guna – Laghu, ruksha, tikshna  
Vipaka – Katu  
Veerya – Ushna  
Doshaghnata –  
Kaphavatashamak.  
Rogaghnata –  
Externaly oil – useful in pakshaghant, sandhivata, udarshoola, karnashoola as lepa in shiroshoola, parshwashoola, vatarakta.  
Internal – Vatavyadhi, agnimandya, ajeerna, adhamana.  
Karma – External –  
Vedanasthapana, shotharahara, vranaropana.  
Internal –  
Kaphashamaka, hridya, uttejaka & shothahara. | Antibacterial, anti-inflammatory, antihyperlipidaemic, antioxidant, diuretic. |
| 9 | Saindhaw | Rock salt | | Rasa – Lavana slightly madhur  
Guna – Laghu, snigdha  
Vipaka – madhura  
Veerya – Sheeta  
Doshaghnata –  
Tridoshashamak  
Rogaghnata – Hikka, vrana, netraroga, vibandha.  
Karma – Rochana, deepana, vishaya, chakshushya, hridya, hikkanashan, | Carminative, Laxative, Stomachics & Tonic. |
<p>| | | | |</p>
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<tbody>
<tr>
<td>10</td>
<td>Sunthi</td>
<td><em>Zingiber officinale</em> (Zingiberaceae)</td>
<td>Fresh rhizome, dried rhizome (Ardak)</td>
</tr>
<tr>
<td>11</td>
<td>Vriddhadora</td>
<td><em>Argyria spesiosa</em> (Convolvulaceae)</td>
<td>Root, leaf</td>
</tr>
<tr>
<td>12</td>
<td>Haritki</td>
<td><em>Terminalia chebula</em> (Combretaceae)</td>
<td>Fruit</td>
</tr>
<tr>
<td>13</td>
<td>Gud</td>
<td>Saccharum officinarum (Poaceae)</td>
<td>Stem, root</td>
</tr>
</tbody>
</table>

**DISCUSSION:** Ajmodadi vatak is having 6 ingredients cedrus deodara, piper longum, zingiber officinale, piper nigrum, embelia ribes & anethum sowa which possess anti-inflammatory activity and 4 ingredients piper nigrum, embelia ribes, cedrus deodara & zingiber officinale are having analgesic properties. Some ingredients possess additional biological activities viz. antioxidant, anticancer, antibacterial, immunomodulatory, antipyretic, diuretic etc. The combination of piper longum, piper nigrum and zingiber officinale known in ayurveda as trikatu is a significant bioenhancer. Also maximum ingredients are having ayurvedic properties viz. katu, ushna, laghu, snigdha, vatakaphashamaka, vedanasthapaka, shothohara, vatanulomak & rasayana.

**CONCLUSION:** Above discussion shows maximum ingredients in ajmodadi vatak possess laghu, ushna & snigdha properties can reduce stiffness or rigidity of joints. Antinflammatory (shothohar) and analgesic (vedanasthapak) properties can remove inflammation & pain in joints. Vatashamak property of it’s ingredients can reduce discomfort & crepitations of joints. In totality it is rasayana which can provide nutritional value to the joints and promote their effective functioning. This concludes ajmodadi vatak can give beneficial effects in sandhigatavata.

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