Studies on Traditional Knowledge of Ethnomedicinal Plants in Jawalamukhi, Himachal Pradesh, India

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Abstract

Himachal Pradesh, a western Himalayan state is a rich store house of medicinal plants. The people of the state have great faith in effectiveness of medicinal herbs. This traditional system of medicine is fast disappearing due to relatively low income in this tradition and scarcity of written documents. The present study was carried out to explore traditional medicinal knowledge of plants of Jawalamukhi shakti peeth, Himachal Pradesh. It was found that 25 different plants belonging to 20 families are used to treat various diseases.

Keywords: Traditional knowledge, Medicinal plants, Jawalamukhi

Introduction

Ethnobotany is the study of relationship between plants and people1. Since prehistoric times medicinal plants have been used virtually in all cultures as a source of medicine. The main traditional medicinal system includes ayurveda, sidha and unani. The rigveda, dating between 3500B.C. to 1800B.C, is the earliest recorded information on medicinal plants2. India is one of the 17 mega biodiversity countries in the world. It has 45000 plant species, out of which 15000-20000 plants have medicinal values1. In India, plants have been used for medicinal purposes since ancient time, as mentioned in Ayurveda3. The luxurious and diverse flora of India represents an invaluable repository of medicinal plants5. Medicinal plants have served as the main source of medicine in India6. Medicinal plants are used for preventive, promotive and curative purposes. Medicinal plants have been preliminary selected on the basis of local traditional knowledge4. The traditional system of medicine along with folklore tradition continues to benefit a large section of the population, especially in rural areas, despite the arrival of the modern medicine. The traditional knowledge of herbs is famous among the indigenous and local people6. The traditional healers are the main source of information on medicinal importance of plants5. The rural population has immense faith for traditional and magical herbs. The rural people have traditional indigenous knowledge about the use of medicinal plants to cure various diseases. Traditional indigenous knowledge comprises practices based on observations10.

During the last few decades, there has been an increasing interest in the study of medicinal plants and their indigenous uses in different parts of the world. Medicinal plants have been used for research in both systematic and advanced field of plant sciences11. Documentation of such indigenous knowledge is essential for conservation and utilization of biological resources12.

The Himalaya have great wealth of medicinal flora and traditional folklore medicinal knowledge. Himachal Pradesh, a Western Himalayan state is a reservoir of medicinal plants. Himachal Pradesh is also well known medicinal plant hot spot in the western Himalaya that has rich diversity of flora13-14. Ethnobotanical work in Himachal Pradesh was done by several workers14-20.

Jawalamukhi, is a temple town located in tehsil Jawalamukhi of district kangra, Himachal Pardesh. It lies between 76°32’ East longitude and 31°88’ North latitude. This holy place is one of the Shakti peeths of India and is famous for temple dedicated to goddess Jawalamukhi, the deity with flaming mouth. The track is covered by Kalidhar range and the elevation is 500-650meters above sea level. This region is rich in diverse flora and suitable for ethnobotanical exploration. Keeping in mind, the medicinal importance of plants among local people, the present study was undertaken to study Ethnobotany of Jwalamukhi, District Kangra.

Methodology

The study area, Jawalamukhi is situated in the Kangra district, Himachal Pradesh (figure-1). Ethnomedicinal data was collected according to the methodology suggested by Jain and Goel21. Several ethnobotanical survey was conducted during the period of 2012-2013. Local healers called vaids, gujjar community, native people and resource persons mainly woman, using medicinal plants for curing various diseases were interviewed for documenting the information in their local dialect (Kangari).
The collected specimens were identified taxonomically with the help of Flora Simlensis and Flowers of the Himalaya. The Department of Biosciences, Himachal Pradesh University (Shimla), Institute of Integrated Himalayan Studies, Himachal Pradesh University (Shimla) and Forest Research Institute, Shimla were also visited for verification of identified plants. Data was tabulated with plant name, Family, local name, part used and folk use (table 1).

**Results and Discussion**

In the present study, 30 plants species belonging to 22 families were reported after undertaking the survey and having conversation with elder persons of various age groups (figure 4 and 5). It was found that dominated medicinal plants of this region are main source of primary health care (table 1). Majority of the elder persons have sound knowledge of medicinal plants and use these plants in their daily life. These plants are used in the forms of decoction, juice, powder, paste and whole plant extract. Plants of family Euphorbiaceae were largely represented (5 sp.) followed by Asteraceae, Solanaceae, and Menispermaceae (2 sp. each). The rest of the families recorded one species only (figure 2). These medicinal plants are mainly used for the treatment of mouth ulcer, body pain, cough, bronchitis, piles, asthma, flatulence, pimples, dysentery, constipation, headache, stomach, leucoderma, gum problem, knee pain, tetanus and wounds healing. Leaf was the most widely used plant part accounting for 14 species in a total of 30 reported plants. This was followed by root and seed (6 species each), stem (3 species), whole plant and flower (2 species each) and inflorescence (1 species) (figure 3).
Family wise distribution of ethnomedicinal plants recorded from Jawalamukhi (H.P.)

![Figure-2](image)

**Figure-2**
Family wise distribution of ethnomedicinal plants recorded from Jawalamukhi (H.P.)

![Figure-3](image)

**Figure-3**
Use of different plant parts for the treatment of various diseases recorded from Jawalamukhi (H.P.)
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Botanical Name</th>
<th>Vernacular Name</th>
<th>Family</th>
<th>Part Used</th>
<th>Ethnobotanical uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Achyranthes aspera Linn.</td>
<td>Puthkanda</td>
<td>Amaranthaceae</td>
<td>Leaf</td>
<td>Leaves chewed for mouth ulcer</td>
</tr>
<tr>
<td>2</td>
<td>Adhatoda vasica Nees</td>
<td>Basuti</td>
<td>Acanthaceae</td>
<td>Leaf</td>
<td>Poultice of the leaves used for body pain</td>
</tr>
<tr>
<td>3</td>
<td>Boerhavia diffusa Linn.</td>
<td>Itsit</td>
<td>Nyctaginaceae</td>
<td>Root, Leaf</td>
<td>Root paste mixed with honey to cure cough. Leaves used as vegetables, useful for body pain</td>
</tr>
<tr>
<td>4</td>
<td>Bombax ceiba Linn.</td>
<td>Simal</td>
<td>Bombacaceae</td>
<td>Root</td>
<td>Roots used for asthma and piles</td>
</tr>
<tr>
<td>5</td>
<td>Bryonopsis lacintiosa Linn.</td>
<td>Shivlingi</td>
<td>Cucurbitaceae</td>
<td>Seed</td>
<td>Seeds used for fever and flatulence</td>
</tr>
<tr>
<td>6</td>
<td>Butea monosperma (Lam.) Kuntze</td>
<td>Plah</td>
<td>Fabaceae</td>
<td>Seed</td>
<td>Seeds powder given to expel worms</td>
</tr>
<tr>
<td>7</td>
<td>Celastrus paniculatus Willd.</td>
<td>Sankhiran</td>
<td>Celastraceae</td>
<td>Seed</td>
<td>Powdered seed used in cough and bronchitis</td>
</tr>
<tr>
<td>8</td>
<td>Centella asiatica Linn.</td>
<td>Brahmi</td>
<td>Apiaceae</td>
<td>Leaf</td>
<td>Powdered leaves with cow’s milk improve memory</td>
</tr>
<tr>
<td>9</td>
<td>Cissampelos pareira Linn.</td>
<td>Patindu</td>
<td>Menispermaceae</td>
<td>Leaf</td>
<td>Heated leaves applied to cure pimples. Leaves useful against dysentery</td>
</tr>
<tr>
<td>10</td>
<td>Cordia dichotoma Forst. f.</td>
<td>Lasura</td>
<td>Cordiaceae</td>
<td>Leaf</td>
<td>Leaf ashes mixed with honey recommended for constipation</td>
</tr>
<tr>
<td>11</td>
<td>Cymbopogon martini Stapf.</td>
<td>Makora gha</td>
<td>Poaceae</td>
<td>Root, Leaves</td>
<td>Roots and leaves as an effective remedy for urine blockage</td>
</tr>
<tr>
<td>12</td>
<td>Eclipta alba (Linn.) Hassk.</td>
<td>Bhringraj</td>
<td>Asteraceae</td>
<td>Leaf</td>
<td>Dry leaves mixed with black pepper used against piles. Leaf paste applied on stomach to cure stomach</td>
</tr>
<tr>
<td>13</td>
<td>Euphorbia geniculata Ort. ex Boiss.</td>
<td>Badi dudhli</td>
<td>Euphorbiaceae</td>
<td>Leaf</td>
<td>Leaf paste used to cure leucoderma</td>
</tr>
<tr>
<td>14</td>
<td>Euphorbia hirta Linn.</td>
<td>Choti dudhli</td>
<td>Euphorbiaceae</td>
<td>Leaf</td>
<td>Chewing of leaves used for dysentery</td>
</tr>
<tr>
<td>15</td>
<td>Jatropha curcas Linn.</td>
<td>Jablota</td>
<td>Euphorbiaceae</td>
<td>Stem</td>
<td>Twig used as a toothbrush, good for dental caries</td>
</tr>
<tr>
<td>16</td>
<td>Melia azedarach Linn.</td>
<td>Drek</td>
<td>Meliaceae</td>
<td>Seed</td>
<td>Dried seed powder used for bloody piles</td>
</tr>
<tr>
<td>17</td>
<td>Macuna pruriens DC.</td>
<td>Gajal bael</td>
<td>Fabaceae</td>
<td>Seed</td>
<td>Seeds fried in cow’s ghee and used for obesity. Seed soup used for bodyache</td>
</tr>
<tr>
<td>18</td>
<td>Oroxyllum indicum Vent.</td>
<td>Tapalanga</td>
<td>Bignoniaceae</td>
<td>Root</td>
<td>Root decoction prescribed for mouth ulcer</td>
</tr>
<tr>
<td>19</td>
<td>Oxalis corniculata Linn.</td>
<td>Malori</td>
<td>Oxalidaceae</td>
<td>Leaf</td>
<td>Leaf paste used for gum problems</td>
</tr>
<tr>
<td>20</td>
<td>Phyllanthus niruri Linn.</td>
<td>Bhumiamla</td>
<td>Euphorbiaceae</td>
<td>Whole plant</td>
<td>Juice of whole plant mixed with doob grass recommended for ulcer</td>
</tr>
<tr>
<td>21</td>
<td>Plumbago zeylanica Linn.</td>
<td>Chitra</td>
<td>Plumbaginaceae</td>
<td>Root</td>
<td>Root paste used for toothache</td>
</tr>
<tr>
<td>22</td>
<td>Portulaca oleracea Linn.</td>
<td>Kulfa</td>
<td>Portulaceae</td>
<td>Leaf</td>
<td>Leaves used as vegetables and good source of VitaminC</td>
</tr>
<tr>
<td>23</td>
<td>Putranjiva roxburghii Wall.</td>
<td>Patajen</td>
<td>Euphorbiaceae</td>
<td>Seed</td>
<td>Seed paste useful against headache. Powdered seed used for knee pain</td>
</tr>
<tr>
<td>24</td>
<td>Solanum nigrum Linn.</td>
<td>Khatmalu</td>
<td>Solanaceae</td>
<td>Whole plant</td>
<td>Decoction of whole plant used for liver infection and kidney stones</td>
</tr>
<tr>
<td>25</td>
<td>Solanum viarum Dun.</td>
<td>Jungali bhindi</td>
<td>Solanaceae</td>
<td>Root</td>
<td>Roots used for piles</td>
</tr>
<tr>
<td>26</td>
<td>Spilanthes oleracea Linn.</td>
<td>Akarkara</td>
<td>Asteraceae</td>
<td>Inflorescence</td>
<td>Inflorescence used for gum inflammation</td>
</tr>
<tr>
<td>27</td>
<td>Tinospora cordifolia (Wild) Miers.</td>
<td>Giloe</td>
<td>Menispermaceae</td>
<td>Stem</td>
<td>Stem decoction given to treat diabetes and arthritis</td>
</tr>
<tr>
<td>28</td>
<td>Verbascum thapsus Linn.</td>
<td>Jungali tambakoo</td>
<td>Scrophulariaceae</td>
<td>Flower, Leaf</td>
<td>Smoke of flowers and leaves useful for asthma</td>
</tr>
<tr>
<td>29</td>
<td>Vitex negundo Linn.</td>
<td>Bana</td>
<td>Verbenaceae</td>
<td>Leaf</td>
<td>Boiled leaves used for body swelling. Leaf juice used against tetanus</td>
</tr>
<tr>
<td>30</td>
<td>Woodfordia fruticosa Kurz.</td>
<td>Dhavi</td>
<td>Lythraceae</td>
<td>Flower, Stem</td>
<td>Flowers powder used against dysentery. Stem paste used for healing wounds</td>
</tr>
</tbody>
</table>
Achyranthes aspera  
Adhatoda vasica  
Boerhavia diffusa

Bombax ceiba  
Bryonopsis ceiba  
Celastrus paniculata

Centella asiatica  
Cissampelos pareira  
Eclipta alba

Euphorbia geniculata  
Jatropha curcas  
Mucuna pruriens

Figure-4
Oroxylum indicum
Oxalis corniculata
Phyllanthus niruri
Plumbago zeylanica
Portulaca oleracea
Putranjiva roxburghii
Solanum viarum
Spilanthes oleracea
Tinospora cordifolia
Verascum thapsus
Vitex negundo
Woodfordia fruticosa

Figure-5
Conclusion

The present study shows that Jawalamukhi region is rich with valuable medicinal flora and people are enriched with folk traditional knowledge about these herbs. Though this knowledge is passing orally from one generation to another but it has not been documented yet. So documentation of this knowledge is necessary for safeguarding this valuable information for the well being of future generation. All these plants need to be evaluated through phyto and pharmaco investigation to discover their potentiality as drugs. The present study will provide new incentive to the traditional system of healthcare and also will be helpful for researcher and pharmaceutical industries to find out the other uses of plants which would be helpful to modern healthcare system.

References


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