

Taxonomic aspect of Ethnomedicinal Plants accustomed for the Treatment of Rheumatic Pain by Traditional Healers in Chlaheli Dhar (H.P.)

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ABSTRACT

India a country which has a long history of plant based medicines. This is also explored in Vedic period dating back from 3500 to 1800. Indian people are ethnic and traditional, live in villages and far flung areas from main cities, so allopathic medicines are beyond their reach. These people depend upon plants for their edible, medical, fodder, fuel and other needs. The main objective of the study is the documentation of knowledge how the ethnic people of villages living at Chlaheli dhar use plants to reduce and treat the effect of rheumatic pain. Rheumatoid arthritis is a multiracial autoimmune disease. This disease primarily affects the joints and then extra-articular system is affected by the disease. The study document 16 plants along with their botanical name, species, family, parts used preparation, distribution and brief description of plants.

KEY WORDS: Allopathic, Autoimmune, Ethnic, Disease, Medicine, Rheumatoid arthritis.

RHEUMATISM

Rheumatic arthritis is a chronic, inflammatory autoimmune disease. The disease initially affects the small joints, then large joints, skin, eyes, heart, kidneys and lungs. The disease affects joints, cause fatigue, fever and weight loss. Joints are the spaces or areas where two or more bones meet. These joints are also affected by rheumatic pain. According to Ayurveda the cause of the disease is the imbalanced Vata Dosa. Ethnobotanical methods used by the people play an important role to reduce the Vata Dosa of body, so help to reduce the effects of disease. The ethnic people works with a holistic methodology. They modify their diet and use more herbs and spices. The main focus of the study how these people by using ethnomedicine can reduce the chances of disease, symptoms, reverse and avoid further complications. A large population of the world moving towards traditional system of medicine for their healthcare (Tyler, 1986; Wambebe, 1990).

COLLECTION OF DATA

For collecting information of the plant parts used for rheumatic pain in Himachal Pradesh, India, intensive and extensive surveys were undertaken in different seasons of flowering and fruiting. The information collected from different knowledgeable people (traditional people, old and experienced people, practitioners, farmers and house women) of various communities. For the collection of data the proforma designed by Jain and Goel, 1995 was used. Information of the native species was obtained from different sources Agarwal, 1985; Arya, 2004; Asolkar et al., 1912; Bentley and Trimen, 2008; Chauhan, 1984; Chopra, 1933; Dastur, 1970; Dixit and Kumar, 2003; Dutta, 1985; Farroq, 2005; Khare, 2004 and all other available floristic works for the region.

METHODOLOGY OF STUDY

Field trips are conducted from 2020 -2021, to collect data from different places. The plants were dried, preserved and mounted on the herbarium sheets according to herbarium practices designed by Jain and Rao (1977). The present specimens were identified by using different regional floras (Chauhan, 1999; Chowdhery and Wadhwa, 1984; Collett, 1902; Polunin & Stainton, 1984; Stainton, 1988) manuals and monographs. These specimens were authenticated by carefully matching the specimens at the herbaria of Botanical Survey of India (BSI), Northern Circle Dehradun. For the identification of nomenclature of plant species Bennet (1986) and Wiegorskaya (1995) were used. The recorded plants are arranged in alphabetical order by their botanical names along with their taxonomical aspect like brief description, parts used and folk uses.

Brief description and Uses of Plants

Abrus precatorius Linn. (Family: Fabaceae)

Vernacular Name: Barae

Description : A copiously-branched climber with slender branches and 3-4 long leaves. Leaflets 24-30. Racemes more numerously flowered on longer peduncles. Calyx and corolla similar. Pods incurved with smooth valves.

Folk use: Dry seed powder with milk taken orally in the morning.

References: Asolkar, *et. al.* (1992); ,Bennet (1986); Kirtikar, & Basu. (1984).

Achyranthes aspera Linn. (Family: Amaranthaceae)

Vernacular Name: Puthkanda

Description : Erect stiff herbs with branched stem and thick, pubescent leaves. Petiole short. Flowers in slender or paniced spikes, pink or greenish white. Fruits deflexed.

Folk Use: Roots boiled in mustard and sesame oil applied on joints thrice in a day

References: Bennet (1986); Kirtikar, & Basu. (1984).

Adhatoda vasica Nees (Family: Amaranthaceae)

Vernacular Name: Basuti

Description : A wild shrub with minutely pubescent, elliptical leaves. Spikes dense short. Corolla white, tube short. Capsule 4-seeded. Seeds glabrous, tubercular-verrucose.

Folk Use: Dry powder of stem, leaves and flowers mix with sesame oil and applied on joints

References: Chauhan, (1999); Kirtikar, & Basu. (1984).

Ageratum conyzoides Linn. (Family: Asteraceae)

Vernacular Name: Ukalbooty

Description : Erect annual herbs possessing petioled ovate, alternate leaves and terminal corymb heads. Achenes black; pappus scales 5 awned, florets pale blue.

Folk Use: Leave and stem paste made in coconut oil applied on the joints

References: Asolkar, *et. al.* (1992); Bennet (1986).

***Asparagus officinalis* Linn. (Family: Lilaceae)**

Vernacular Name: Sansarbai

Description : A herb with alternate and reduced leaves. Cladodes slender, subulate. Pedicels solitary or paired, filiform. Flowers whitish-green, stamens 6. Berries red, glabrous with 3-6 seeds.

Folk Use: Root powder taken orally in an empty stomach in the morning

References: Asolkar, *et. al.* (1992); Bennet (1986).

***Bacopa monnieri* (Linn.) Pennel (Family: Scrophulariaceae)**

Vernacular Name: Jalneema

Description : A glabrous prostrate or creeping, juicy annual herb having simple branches and opposite decussate, sessile, fleshy, obscurely veined, entire, punctuate leaves and pale blue flowers. Fruits ovoid, acute. Seeds minute, numerous, striated.

Folk Use: Paste of whole plant with garlic bulb made in arund oil applied on affected parts

References: Bennet (1986); Chauhan, (1999).

***Calotropis gigantea* (Linn.) Br. (Family: Asclepiadaceae)**

Vernacular Name: Aak

Description : Erect large much branches shrub upto 3-4 metres tall. Leaves are green, oval. Stem is milky, covered with cottony hairs. Flowers are white and lavender in colour, large but not scented. Fruits are follicles.

Folk Use: Warm leave smear with mustard oil tied on the affected parts

References: Asolkar, *et. al.* (1992); Kirtikar, & Basu. (1984).

***Cannabis sativa* Linn. (Family: Cannabinaceae)**

Vernacular Name: Bhang

Description : Erect tall annual herbs with alternate leaves and lateral stipules. Flowers axillary green. Achenes compressed, crustaceous. Seeds flattened, pendulous.

Folk Use: Paste of leave, roots and stem with garlic bulb paste applied on joints

References: Bennet (1986); Khare, (2004).

***Carica papaya* Linn. (Family: Caricaceae)**

Vernacular Name: Papita

Description : Herbasious trees growing very rapidly to 8 m. Leaves segmented. Flowers yellow. Fruits large, black-seeded, yellow or orange.

Folk Use: Dried leaf paste with arund leaf in coconut oil applied on affected area

References: . Bennet (1986); Khare, (2004).

***Centella asiatica* Linn. (Family: Apiaceae)**

Vernacular Name: Dhroob

Description : Prostrate herbs with glabrous, pubescent petioled, orbicular - reniform leaves, short peduncle and small, ovate bracts embracing the flowers. Umbel 6- flowerd. Carpels oblong, subcylindric. Fruits orbicular, reticulated. Seeds compressed laterally.

Folk Use: Decoction of dried whole plant with seeds of kali mirch taken orally

References: Kirtikar, & Basu. (1984).

***Mangifera indica* Linn. (Family: Anacardiaceae)**

Vernacular Name: Amb

Description : Evergreen tree. 15-18 meters long. Leaves are lanceolate, green in colour. Flowers are small, pinkish and fragrant. Fruits oval, round, heart-shaped and slender. Seed is single, large and flattened.

Folk Use: Inner portion of seed powder taken orally

References: Kirtikar, & Basu. (1984).

***Murraya koenigii* (Linn.) Spreng. (Family: Rutaceae)**

Vernacular Name: Gandhela

Description : Evergreen trees. Leaves pinnately compound, spirally arranged. Leaflets alternate on rachis. Flowers small, white, in terminal corymbs. Stamens 10, alternately shorter. Ovary 2-celled. Fruits ovoid, purplish-black, 2-seeded.

Folk Use: Decoction of leave and stem is beneficial in joint pain

References: Asolkar, *et. al.* (1992).

***Oroxylum indicum* (Linn.) Vent (Family: Bignoniaceae)**

Vernacular Name: Alsan

Description : Erect, glabrous or pubescent strongly scented herbs with ovate toothed leaves. Bracts petiolate. Inflorescence in terminal clusters of whorled flowers (verticillasters). Flowers small. Fruiting calyx shortly pedicelled, two lower teeth awned, longer than the rounded upper. Corolla white, 1cm long, bilabiate. Stamens long. Nutlets long, ellipsoid, black.

Folk Use: Flower tied on joints

References: Khare, (2004).

Tinospora cordifolia* Linn. (Family: Menispermaceae)*Vernacular Name:** Giloy

Description : Large, deciduous, extensively-spreading climbing vine with several elongated twining branchines. Leaves are simple, alternate and exstipulate. Flowers are unisexual, small on separate plants. Fruits are aggregate, ovoid, scarlet or orange in colour.

Folk Use: Decoction of stem taken orally for one month daily

References: Khare, (2004).

Vitex negundo* Linn. (Family: Vervenaceae)*Vernacular Name:** Banna

Description : A small sized tree having 3-5 foliolate leaves. Leaflets petioled, lanceolate, opposite. Inflorescence terminal and axillary. Panicles closely white-tomentose. Corolla small, tubular. Drupes black.

Folk Use: Warmed leave tied on affected parts

References: Kirtikar, & Basu. (1984).

Withania somnifera* Linn. (Family: Solanaceae)*Vernacular Name:** Ghodgandh

Description : Thinly woolly unarmed erect shrubs having round branches, entire leaves and hermaphrodite, greenish flowers. Corolla 3-6. Stamens 5. Ovary 2-celled. Berries globose, many seeded.

Folk Use: Decoction of dried leave, stem with *Ocimum sanctum* leave taken orally for two week

References: Kirtikar, & Basu, (1984).

RESULT AND DISCUSSION

During the survey of study area, it was observed that as many as 16 plant species belonging to 16 genera and 16 species were being used to cure rheumatic pain. For prevention of rheumatic pain various plant parts used in order of preference are: Leaf (8 species), Stem (6 species), Roots (3 species), Whole plant (3 species), Fruits (8 species), Flower (1 species) and Seeds (2 species). The Ethnic people of Himachal Pradesh have a very good knowledge of the local flora and their uses. They prefer to use their knowledge to cure their ailments. This method cost low and have no side effects. Documentation of this knowledge is really beneficial for the welfare of mankind.



Figure I: Plants used in Rheumatic Pain A) *Achyranthes aspera* Linn. B) *Bacopa monnieri* (Linn.) Pennel C) *Centella asiatica* Linn. D) *Asparagus officinalis* Linn. E) *Oroxylum indicum* (Linn.) Vent F) *Withania somnifera* Linn.

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