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Wattakaka Volubilis Used By Traditional Healers in Jintur, Taluka of Maharashtra, India

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Abstract

An ethnobotanical survey was undertaken to collect information from traditional healers on theuse of medicinal plants in Jintur, during 2019 to 2020. The indigenous knowledge of local traditional healers and the native plants used for medicinalpurposes were collected through questionnaire and personal interviews during field trips. The present investigation revealed that, the traditional healers depends on the native plant for their basic needs including medicines. Themedicinal plants have been receiving great attention worldwide by the researchers because of their safe utility. The plant *Wattakakavolubilis*is a climbing shrub of the family Asclepiadaceae. Traditionally, the plant is useful in cold and eye disease,skin diseases, poison bites, stomach-ache and nervous disorders. Leaves are used as an application to boils, antidiabetic, antitumor,anti-oxidant and anti-bacterial activity, arthritis, haemorrhagic shock, hepatic injury, aging neuro degenerative diseases, carcinogenesis and abscesses. Plant contains tannins, saponins and alkaloids,secondary metabolites such as Alkaloids, Phenols, Flavonoids, Tannins, Saponins, Carbohydrates and Amino acids.

Key words: -*Wattakaka volubilis*, traditional healers, medicinal plants.

Introduction:

Plants were the main source of folk medicine, it gives rise to traditional system of medicine. The folk medicine and medicinal plants were also adapted in to a modern system of medicine. The traditional herbal medicine is becoming popular in the world for the treatment of several diseases and disorders now a days the herbal medicine, it is safer than the allopathic one. (Agrawal, V. S. 1986, A.K. Roy 2013, Patra. A. et., al 2009).

Normally several plants are used as medicinal plants in India. Many plants nearby our locality are used as a grandmother's remedy for several diseases and disorders. India has a rich flora, and other natural resources. The Ayurveda and folk medicine of India have started gaining high appreciation and acceptance in the world. (A.D.Kshirsagar et., al. 2010).

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The study of wild medicinal plant is very important in the rural area because biodiversity is preserved in the rural parts of India along with Jintur taluka in Maharashtra. Tribe's learn medicinal properties of plant from their ancestors, socio religious ceremonies and continued to further generations. Plants and tribe's relationship are very close from ancient time. (Chatterjee, A. and Prakashi, S. C.1991.Chopra, R. N. 1965, Chopra R.N., Nayar S. L. and Chopra I. C. 1956). Normally all tribes of Jintur are depending on the medicinal plant for their diseases, disorders and other need like food, shelter, ornamental, vegetable etc. The peoples belonging Jintur taluka such as Bhoe, Bhill, Mahar, Mang, Dohor, Koli, Costi, Pardhi, Lamani, Banjara, Wanjari, Dukalwar etc. used the Wattakakavolubilis as the medicinal plant for cure their sickness.It is used by the tribes for control several diseases and disorders some of them are cold and eye disease,skin diseases, poison bites, stomach-ache and nervous disorders. Leaves are used as an application to boils, antidiabetic, antitumor,anti-oxidant and anti-bacterial activity, arthritis, haemorrhagic shock, hepatic injury, aging neuro degenerative diseases, carcinogenesis and abscesses. [Purushoth Prabhu.et., al 2012]

Description - *Wattakakavolubilis*(L.f.) Stapf., belongs to the family Asclepiadaceae, is a tall woody climber, with densely branches, leaves opposite, broadly ovate or suborbicular, cordate, acuminate, flowers bright yellowish-green, in lateral drooping, umbellate, cymes, follicle usually 2, lanceolate covered with brown, mealy, tomentum, turgid, c. 2cm long; seeds yellowish brown broadly ovate or broad elliptic, winged, comose.[K. Babu 2016,Naik, V. N. 1998, Prajapati., Purohit., Sharma., Kumar 2006, 2007, Deshpande D. J. 2011, Deshmukh V. R. and Rothe S. P., 2003].

Chemical contains-Plant contains tannins, saponins and alkaloids,secondary metabolites such as Alkaloids, Phenols, Flavonoids, Tannins, Saponins, Carbohydrates, Amino acids.

[Moulisha Biswas et., al. 2009**,**Prajapati., Purohit., Sharma., Kumar 2006, 2007 Deshpande D. J. 2011Mazumfer UK. et., al 1997,1999, Rao, R. R. 1989].

Material and Methods: - Jintur taluka having numbers of tribes and diverse geographical area, its belongings to Parbhani district of Maharashtra, India. Cereals, millets, oil, pulses, cotton, sugarcane, vegetables, fruits such as mango, lemon, papayas, orange, jamb, mosumbi, watermelon, cucumber, cheeku, banana are cultivated. Wild fruit like boar, Biba, charuli, kar, karwandi, dhaman, yermuli, thembhri, jamun, bhoker, bartondi, awala, kawath, kamoni, katoli, kharbuj, khirni, hirda, bhehada, chich, tondli, padol, pimpal, bahala, bel, umber, kohala, bhopala, ran kanda, ran halad, ran mirchi, ritha, sarate, sagergota, aghada, yarand, tondale, kalingad, khirani, sitafal, sabja, [name in Marathi] etc. are grows naturally. The river Ddhudhana, Purna, Yeldari dam/ Dharan is the source of irrigation in the taluka,

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there are few hills of considerable elevation [Chellaiah Muthu et., al. 2006]

Local traditional healers having practical knowledge of plants in medicine were interviewed during 2019-2020. The four field trips were carried out in the study area during the study period. Methods of selecting informants depended upon the distribution of local people having folk knowledge. They were requested to collect specimens of the plants they knew or to show the plant species on site. These informants were traditional healers themselves or had tradition of healing in their families and had knowledge of the medicinal use of the plants. The medicinal plant knowledge among the people of this taluka is based on hundreds of years of beliefs and observations. This knowledge has been transmitted orally from generation to generation. Adopting the methods of Jain ethnomedicinal data were collected through general conversations with theinformants. The questionnaires were used to obtain information on medicinal plants with their local names, parts used, mode of preparation and administration. They were selected based on their knowledge of medicinal plants either for self-medication or for treating others. Informants were asked to come to field and show the plant with local name; the species mentioned by the informants weretaxonomically identified.

Preservation of plant specimen- Standard method was followed with regard to collection of plant materials, drying, mounting, preparation andpreservation of plant specimens. Voucher specimens of medicinal plant in triplicates were collected, prepared and identified. The identification and nomenclature of the plant was based on The Flora of Marathwada and The Flora of British India.

Results and discussion: -*Wattakakavolubilis* is used by the tribes for control several diseases and disorders some of them are cold and eye disease,skin diseases, poison bites, stomach-ache and nervous disorders. Leaves are used as an application to boils, antidiabetic, antitumor.Purushoth Prabhu.et., al (2012) conclude thatThe Chloroform extract of *Dregeavolubilis*possesses good anti-oxidant, anti-bacterial activity.The leaves are used in boils and abscesses. The roots and tender stalks are considered emetic and expectorant. It is also used in eye diseases and snake bites. Roots possess significant antibacterial and antifungal activity. Sandhya*et., al*. reported the protective effect of leaf extract against stress induced amnesia & useful in combating the stress induced CNS disorders. The present study has been carried out to standardize the histological features of leaf, stem, petiole, root and phytochemical analysis to serve as a possible tool for proper identification of *Wattakakavolubilis*(L.f.) Stapf. K. SridharaVishnusithan et., al.(2014) concludes that the alloxan induced diabetic rats elicited significant rise in blood glucose from 69.30 to 333.00 mg/dI ($p > 0.01$). On the contrary diabetic rats treated with aqueous extract of *W. volubilis*

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exhibited decreased blood glucose significantly at a dosage of 100 milligram/kilogram body weight.M. V. Patil and D. A. Patil (2006) stated that the Wattakakavolubilislocal name is Bokudvel, fruits and leaves are used in goat feed. The root and leaves are considered emetic and expectorant. Leaves are applied to boils, wound, skin diseases, and abscesses. Root and tender stalk are purgative and emetic. The leaves unripe fruit used in vegetable. Root s are anthelmintic and used in fever and regurgitation. The whole plant used on anasarca, dropsy failure of lactation and on urticaria. Leaves and root are used against gastric complaints in cattle. Plant used as antidote on snake bite.Bark powder is used on burnsand wounds.flower is used in treatment of cancer, cough,cooling, diarrhoea, dysentery, injuries, loss of appetite in pregnancy, menorrhagia, nausea, and used as tonic. The wholeplant used for the treatment bone fracture, chancre, dropsy, fever muscle pain, night blindness, spleen complaint, syphilis.ShubangiPawar and D. A. Patil (2008) recorded similar uses as those recorded by M. V. Patil and D. A. Patil (2006). K. Babu et., al(2016) stated that traditional systems of medicine use majority of the crude drugs from plant origin. When a crude plant drug is subjected to pharmacological or pharmaceutical standardization its botanical identity becomes an imperative prerequisite. The role of plant anatomist is sought at this juncture to provide a set of microscopic features of the drug which will help to considerable extent to ascertain the botanical identity of the drug in question. Histology and phytochemical perspective of medicinal plants in an integral component of pharmacognosy, especially while proposing diagnostic protocols for establishing the botanical and chemical identity and ascertaining the quality control of raw materials.Bhaskar Das et., al conform that the various parts of *Dregeavolubilis*(Family: Apocynaceae), locally known as Jukti (Bengali), are commonly used in Indian system of medicine to treat various ailments such as inflammation, piles, leukoderma, asthma, and tumors. Literature review suggested that there has been no detailed work on systemic pharmacognostic and phytochemical studies done on the flowers of the plant. The present study is aimed to lay down quality control parameters for *D. volubilis*flowers to confirm its identity, quality, and purity.PurushothPrabhu et., al (2012) stated that the ethanolic extract of Dregeavolubilis, benth was screened for anti-oxidant and anti-bacterial activity. Safer antioxidants suitable for long term use are needed to prevent or stop the progression of freeradical mediated disorders such as arthritis, haemorrhagic shock, diabetes, hepatic injury, aging neuro degenerative diseases and carcinogenesis. Antioxidant compounds in food play an important role as a health protecting factor. The plant exhibits high potent anti-oxidant, antibacterial activity and the drug can be recommended for minor infectious diseases.

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Biswas Moulisha et., al (2009) Conclude that apentacyclic triterpenoid compound designated as taraxerone and characterized as Dfriedoolean-14-en, 3 one together was successfully isolated. The structure was determined on the basis of spectral analysis (IR, MASS, NMR (PMR, CMR and DEPT) and the compound demonstrated in vitro anti-leishmanial and anti-tumour activities.Thupurani Murali Krishna et., al (2018) The study was framed out to evaluate the phytochemicals and the antibacterial activity of the fractions separated from crude extracts of the *Terminalia chebula, Momordica charantia, Dregeavolubilis.* The test carried out for screening of phytochemicals was given positive. According to results they noticed the presence of different types of secondary metabolites such as Alkaloids, Phenols, Flavanoids, Tanins, Saponins, Carbohydrates, Amino acids in the leaf fractions. The fractions inhibited the growth of bacterial strains used in the study and exhibited antibacterial activity. Moulisha Biswas et., al.(2010)Indicate that *D. volubilis*fruit is safe in Swiss mice demonstrating no noticeable toxicity.Chellaiah Muthuet., al (2006)revealed that, the traditional healers used 85 species of plants distributed in 76 genera belonging to 41 families to treat various diseases. The documented medicinal plants weremostly used to cure skin diseases, poison bites, stomachache and nervous disorders. In this studythe most dominant family was Euphorbiaceae and leaves were most frequently used for the
treatment of diseases. [Gopalkrishnan, k. and Krishnaprasad1992,Grewal, R. C. 2000,Brose SC, Bhamare PB and Patil DA. 1990, C. R. Ddeore and V. J. Somani. 2006,Deshmukh V. R. and Rothe S. P., 2003, Khandare M. S. Naik V. N. Prajapati et., al Rao et., al.].

The results of the cited authors in this research papers are compared with the present investigation and concluded that the *Wattakakavolubilis*is an important wild medicinal plant.

[The plant used under the prescription only because over doses causes the poison and skin lesion]

Conclusion

The survey indicated that, the study area has plenty of medicinal plants to treat a wide spectrum of human ailments. Earlier studies on traditional medicinal plants also revealed that the economically backward local and tribal people of Jintur prefer folk medicine due to low cost and sometimes it is a part of their social life and culture. It is evident from the interviews conducted in different villages, knowledge of medicinal plants is limited to traditional healers, herbalists and elderly persons who are living in rural areas. This study also points out that certain species of medicinal plants are being exploited by the local residents who are unaware of the importance of medicinal plants in the ecosystem. This study concluded that even though the accessibility of Western medicine for simple and complicated diseases is

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available, many people in the studied parts of Jintur is still continuing to depend on medicinal plants, at least for the treatment of some simple diseases such as, cold, cough, fever, headache, poison bites, skin diseases and tooth infections. Well-knowledge healers have good interactions with patients and this would improve the quality of healthcare delivery. The present-day traditional healers are very old. Due to lack of interest among the younger generation as well as their tendency to migrate to cities for lucrative jobs, there is a possibility of losing this wealth of knowledge in the near future. It thus becomes necessary to acquire and preserve this traditional system of medicine by proper documentation and identification of specimens.

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