



Local Routine Practices in the Treatment of Asthma during Covid-19 Pandemic

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ABSTRACT

As per the World Health Organization or the WHO, Asthama is a condition characterized by recurrent attacks of breathlessness and wheezing, which vary in severity and frequency from person to person, this condition is due to inflammation of the air passages in the lungs and affects the sensitivity of the nerve endings in the airways so they become easily irritated. In an attack the lining of passages swell causing the airways to narrow and reducing the flow of air in and out of the lungs. Asthama is a condition with no known cures but whose symptoms can be effectively managed with the plant medicines are fruitful in controlling the symptoms. Recently the Coronavirus Disease (COVID-19) pandemic emerges as a challenge to asthmatics. People of all ages can be affected by COVID-19. Older patients with pre-existing medical conditions such as diabetes, severe asthma, heart diseases are more vulnerable to COVID-19. There is concern that severe asthmatic patients with COVID 19 may have a worse outcome.

Present investigation deals with the local and routine practices in the treatment and control of asthma with the help of available plant resources by the rural peoples of Renapur tehsil of Latur district in the Marathwada region of Maharashtra. This survey gives information of 15 plants species belonging to 13 families, which are commonly found here and being used for curing asthma by the rurals. These rural peoples have a strong belief in their practice and they have developed such knowledge through the centuries of their experience and existence. This is preliminary survey and will be significant if detailed investigations in this area are undertaken.

Keywords: Asthma, Ethno medicine Rurals, Marathwada, Covid-19.

Introduction:

India inherits a rich herbal heritage. Our environment is characterized by richly diversified plant forms. The medicinal plants have been crucial in sustaining the health and well-being of mankind. Plant constitutes a vital component and plays a key role in maintaining the Earth's equilibrium and ecological balance. Generally it is believed that major portion of the population especially in the developing and under developing countries seek healthcare from sources other than conventional medicines, they also seek helps of some organized systems of medicines like Ayurveda, Unani, Siddha. Ethnobotanical information from India estimate that more than 40% of the vegetation are used in its codified and folk health care tradition. In India ayurvedic system of medicine has existed for over five thousand years. Our ancestors possessed a profound understanding of healing powers of plants. Asthma is one of the major noncommunicable disease worldwide. According to WHO estimates, there were more than 4 lakhs deaths and 339 million people suffer from asthma at global level. Appropriate management of asthma can enable people to enjoy a good quality of life.

The coronavirus disease 2019 (COVID-19) was first detected in December 2019 caused by Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). COVID-19 has rapidly infecting patients in several countries worldwide, leading to an immense strain on healthcare systems (Shende et al 2019). Covid Patients diagnosed with symptoms like fever, fatigue, dry cough, sore throat, and difficulty in breathing (Garg et al 2020). Early information about COVID-19 advised that people with chronic lung disease, including asthma may be at higher risk for COVID-19 (Chhiba et al., 2020). Local plant uses have been studied extensively in India by various researchers. Approximately 1500 species of vascular plants are used for medicinal purposes by tribal and ethnic groups in India. Preservation of traditional plant knowledge as a part of the global heritage has been championed by several authors. Maximum use of natural resources by villagers from rural areas is owing to no ready access for commercial products. Hence, there are several plants having more than one traditional use and also more than one plant organ such as roots or leaves being commonly used (Jog et al., 2009). In the developing world, traditional medicinal uses of plants are often the only or primary healthcare available to people and are of extreme importance. The Western Ghats of India and Sri Lanka together comprise a biodiversity hotspot and have more than 2000 endemic vascular plant species. Marathwada is the region of the Indian state of Maharashtra. The word Marathwada has been used since Nizams. The region coincides with the Aurangabad division of Maharashtra. It borders the states of Karnataka and Telangana and it lies to the west of Vidarbha and east of Khandesh region of Maharashtra. In marathwada region various tribal races are found. Marathwada has its own rich cultural and historical background distinct from rest of Maharashtra. The Tribals as well as rurals live in unhygienic condition and therefore, there is prevalence of asthmatic disorders and treatment of which is usually being done by using folk

medicines because there are no permanent cure in allopathic medicines. The olden peoples of the Renapur tehsil there are many medicinal or ayurvedic plant flora is found abundantly and these plants are used by them for curing the problems of asthma (Zingare *et.al.* 2012). According to Siddiqui (1995), the drug obtained from the plant is believe too much safer and exhibits remarkable efficacy in the treatment of various ailments. Extensive work has been done on medicinal or ayurvedic plants of India (Kirtikar and Basu ,(1935),Nadkarni (1954),Rastogi (1993) but very few reports were reported from the Marathwada region of Maharashtra hence keeping this in view the present work was taken up to document some traditional medicinal plants that are used for the treatment of asthma.

Materials and Methods:

The present ethno botanical survey was carried out among the rural peoples of Renapur tehsil to by visiting different villages to collect information of plant species used for asthma during COVID-19 Pandemic and the medicinal uses of these plants were confirmed by following Nadkarni (1972). Different communities of people were interviewed, local herbal practitioners like the Medicine men, vaidus, and poojari and also with senior men and women using questionnaire (Jain *et. al.*, 1995). These people have been using various plants for the treatment of asthma especially in the rural areas. The information regarding mode of use, parts used, amount and periodicity of dosage and local name was collected from them. The voucher specimens were processed into mounted herbarium sheets following the conventional methodology (Jain *et. al.*, 1977) and were deposited in the Herbarium of Department of Botany Shivaji Mahavidyalaya Renapur, Dist.Latur in the Marathwada region of Maharashtra.

Results and Discussions:

In the recent times, current pandemic taught us to approach the traditional healthcare to built up the immune. As far as asthma patients are concerned, the best thing a person with asthma can do is to get and keep their asthma under control. Ignorance of controlling medication might put the person at risk for developing an asthma exacerbation (Wang *et. al.*, 2020). Traditional health care system is helpful for saving the life of rural people where the modern health care systems are not available. In the present study, it was found that a total of 20 species of plants belonging to 17 families are being used for curing Asthma by the rural people of the Renapur tehsil. Among the different plant parts, the leaves were most frequently used for the treatment of diseases. Many researchers studied the phytochemistry and formulation of anti-asthmatic herbal medicines belongs to different regions. Few ethno medicinal plants like *Eclipta alba* and *Achyranthes aspera* are reported for their anti-asthmatic activities (Kumar *et. al.*, 2012). *Adhatoda vasica*, *Azadirachta indica* leaves and flowers used to treat mild asthma and cough (Muthu *et. al.*, 2006). and *Datura innoxia* leaves plays vital role in cure and control of the disease (Shende *et al.*, 2019).

Table- 1: Enumeration of Plants used by rural peoples for cure and control of asthma:

Sr. No	Name of the Plant	Common Name	Family	Parts used	Methods of Dosage
1	<i>Adathoda zeylanica</i>	Adulsa	Acanthaceae	Roots, leaves	Along with stems, leaves of Oscimum, Coleus, Eucalyptus and seeds of <i>Piper nigrum</i> are taken in equal proportion and ground, boiled with one glass of water to make it half, two spoon decoction is taken daily twice for a week.
2	<i>Achyranthus aspera</i>	Aghada	Amaranthaceae	Whole plant	Ash of whole plant can be used along with seed powder of <i>Calotropis gigantean</i> and lemon juice. Taken in equal quantities and ground. The paste made into small pills. Two pills taken daily twice for two weeks
3	<i>Allium sativum</i>	Lasun	Amaryllidaceae	Bulb	Boil two or three cloves in one-quarter cup of milk , allow it to cool and given daily for 3-5 days.
4	<i>Azadirachta indica</i>	Neem	Meliaceae	Leaves	Leaves of neem along with <i>Andrographis paniculata</i> and roots of <i>Abrus precatorius</i> taken in equal quantities to make paste. Two spoon paste mixed with sugar is given orally daily twice for a week
5	<i>Cassia alata</i>	Dalchini	Caesalpiniaceae	Leaves and Flowers	In one lit. water, leaves and flowers are taken in equal quantities to boil. Two spoonful is taken daily orally twice for one week.

6	<i>Calotropis gigantea</i>	Ruchik	Asclepiadaceae	Flower	Two spoonful of flower paste mixed in glass of water and taken daily twice for 10 days.
7	<i>Curcuma longa</i>	Haldi	Zingiberaceae	Rhizome	6-12 gms of turmeric powder fried in ghee given orally daily for a week
8	<i>Datura metel</i>	Dhotra	Solanaceae	Leaf	Two spoonful of dried leaf powder mixed with glass of milk is given once for 8 days.
9	<i>Eclipta alba</i>	Bhringraj	Asteraceae	Leaves	5-10gm of leaves along with 2gm pepper seeds is ground to form paste and taken with milk twice a day for a week.
10	<i>Ficus glomerata</i>	Umbar	Moraceae	Fruit	Washed 3-5 dried figs soaked in a cup of water overnight. Next morning, soaked figs are given and the remaining water administered for drinking on an empty stomach.
11	<i>Helicters isora</i>	Murudsheng	Struculiaceae	Fruits	Fruits along with the flowers of <i>Leucas aspera</i> and <i>Coleus</i> are taken in equal proportion and ground. Two spoonful of paste mixed in glass of water is given daily once for three to five days.
12	<i>Rauwolfia serpentina</i>	Sarp Gandha	Apocynaceae	Root	Roots of <i>Rauwolfia</i> along with rhizome of <i>Acorus calamus</i> and flowers of <i>Calotropis procera</i> are taken in equal quantities and powdered to make small pills. Two pills are given with a spoonful of honey for about a month.
13	<i>Terminalia bellerica</i>	Behada	Combretaceae	Seed	Seed powder along with honey in 2:1 proportion is advised daily twice for a week.
14	<i>Tinospora cordifolia</i>	Gulvel	Minispermaceae	Stem	Stem and roots of <i>Cyperus rotundus</i> and fruits of <i>Phyllanthus emblica</i> taken in equal proportion and made into decoction. Two spoon of it mixed with the little honey taken daily twice for three days.
15	<i>Zingiber officinale</i>	Adrak	Zingiberaceae	Rhizome	Rhizome paste and seed paste of <i>Piper nigrum</i> in equal proportion mixed in half glass of water and taken daily once for 10 days

Extraction of several bioactive compounds from mentioned traditional plant resources are tremendously being used by the pharmaceutical industries, for the preparation of novel drugs (Kumar *et. al.*, 2016). These traditional people have a strong belief in their practice and they have developed such knowledge through the centuries of their existence. But careful approaches should be followed before administering these drugs. Lack of proper documentation resulted in depletion of such valuable traditional knowledge, which has to be preserved for the future benefit of the human civilization. The documentation and digitalization of ethnic information is of utmost importance. However, the present study may create some awareness and precautions among the people which might help to conserve their rich and effective ethno-medicinal knowledge in this botanically blessed tehsil area.

Conclusion:

In the present study it was observed that about 15 plants are being used very commonly by the rural peoples for curing asthma, some plants listed above are being used by the many peoples and can be proved to be the good medicine for the asthma. This is a preliminary survey and will be beneficial if detailed investigations in this area are undertaken. It is concluded that, inspite of dependency on allopathic medicines, treatment of asthma in an herbal way would play a key role in the treatment and control of asthma in India.

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