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SELECTED MEDICINAL PLANTS TREAT AGAINST ASTHMA IN CHHATTISGARH, INDIA

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ABSTRACT: - Chhattisgarh is rich in ethno-medicinal plants. In the present paper 50 species, 43 genera and 25 families, used by folk medicine practitioner treat against asthma have been documented due to expensive condition of modern healthcare facilities and poverty, indigenous people of the state fully or partially depend on local medicinal plants. An attempt has been made to document traditional knowledge on the treatment of asthma. The present paper is based on the survey of plants and interview of folk medicine practitioners. It is presenting a medicinal significance of plants and protection again many diseases. An attempt has been made to include the most familiar plants which are used by the tribal or dense forest living people of Chhattisgarh. Enumerated 50 plants are presented with their Botanical name, family, common name, Plant parts used, Mode of administration obtain from tribal and rural people of Chhattisgarh.

KEYWORDS:- Asthma, Chhattisgarh, Forest, Healthcare, Practitioners**.**

INTRODUCTION:-

Chhattisgarh is ninth largest state in India, situated on the north-east of India between 20^0 and 25' north latitudes and 68^0 and 75' east longitudes with 1 35192 km² Chhattisgarh is inhabited by a number of tribes, viz. Khairwar, Panda, Gond, Dhanuhar, Halba, Oraon, Kanwar, Munda, Nagesia, Majhi, Birhor, Baiga, Agaria, Pahadi Korwa. Asthma is one of the most prevalent health complaints. It is a condition where in the patient has repeated attacks of wheezing, which usually clear up completely with medical treatment. Attacks produce a variety of disabilities from mild distress to severe incapacity. Asthma can develop at any time in life but mostly starts in childhood. Asthmatic triggers are first attack is usually set off by a lung infection. Subsequent attacks are brought about by similar infections as even an ordinary cold. Allergies Drugs which the patient is allergic to may set off an attack. Exercise is emotional trauma like anger, sorrow etc and sudden fluctuations in weather and temperature.

In asthmatics, the bronchial tube muscles which take air to the airspaces in the lungs become narrow due to contraction, and air cannot move freely in or out of the lungs. Bronchial tubes also produce more mucous than usual thereby further reducing air movement. Symptoms of asthma are viz. wheezing is a characteristic symptoms of asthma, cough sometimes accompanies, pulse rate rises, inability to speak due to breathlessness, typical difficulty in breathing out rather than breathing in. Ethno botany of Chhattisgarh is known through the earlier works of Sanjay Dayal, Shrayan and Ranbir pal (2009), Contractor (1986), Mac and Parabia (1989), Pandya (1989), Jain (1991), (Bhatt et al.; 1999, 2003). Some Medicinal Plants with antiasthmatic potential: a current status (Taur and Patil, 2011). Traditional medicinal plants used for the treatment of asthma in Bhubaneswar, Orissa (Sagarika et al; 2018). Herbal traditional medicines used to cure asthma give good result of five years of extensive survey in Chhattisgarh during 2015-2020.

Aim of the study:-

The current study is an approach to find some cheap treatment for asthma. Medicinal plants have been utilized from the early human advancement on wards as a medicinal for a wide range of disease. Disregarding the improvement in the health science and creation of modern synthetic drugs, plants still involve an essential part in the modern and traditional system of medicine in everywhere throughout the world.

MATERIALS AND METHODS:-

The ethno botanical files survey was conducted in various parts of Chhattisgarh region like, Narayanpur, Sukma, Mungeli, Pendra, Kota(Bilaspur), Balod,

Dantewada's forest, Abujhmad Hillis, Samari path, Balrampur, Premnagar region, Jashpur, adjoint area of Manendragarh, Durg, Kanker, Sukma, Dhamdha, Saranggarg (Raigarh), forest belt of Baloda (Janjgir) during 2015-19. The firsthand data were collected by personal contact from a large number of tribal informants elder women and Vaidyas (Kaviraj) of herbal medicines of the villages who have knowledge about the therapeutic value of wild plants in asthma. The uses and local names of plants were recorded as given by folk medicine practitioners or Vaidays. The collected plant specimens were identified using flora of CG state (Jain S K 1963). The collected data have been deposited in the Herbarium. More than 200 local informants were interviewed. The data were considered worth mentioning only. When more than 35 informants were gave similar answers for the same plants.

Table (1): Enumeration of plant species along with their Botanical name, family, common name, and plant parts used, mode of administration.

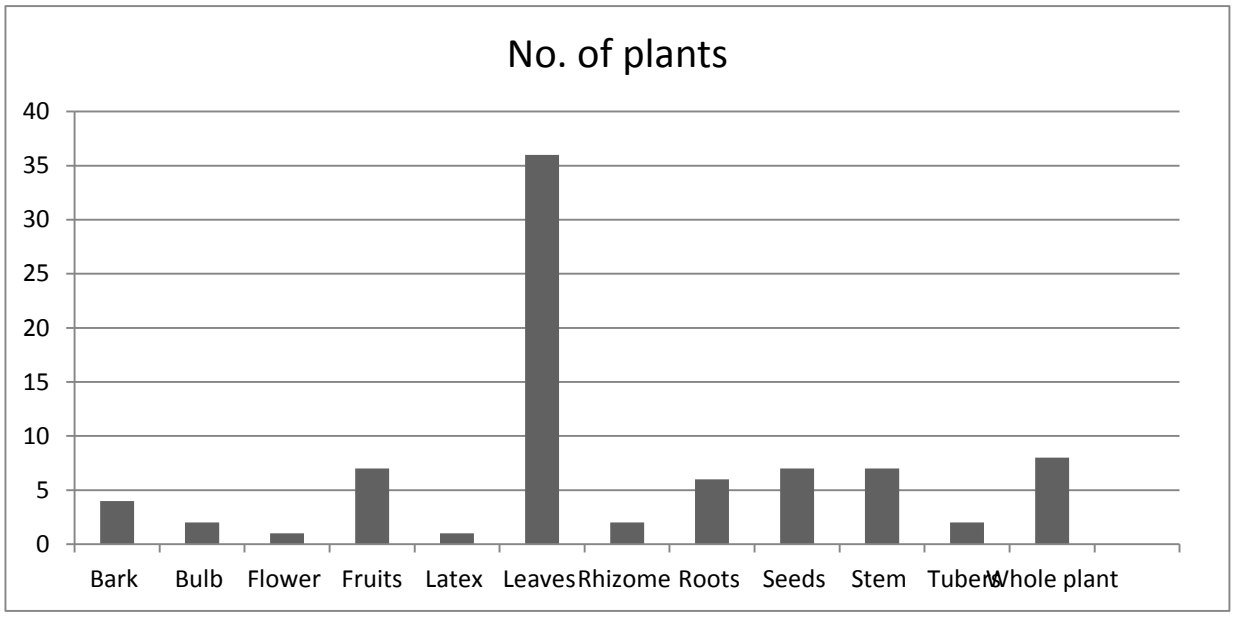
S. No.	Name of the plant	Family	Common name	Use of plant parts	Mode of administration
1	*Abrus precatorius* L.	Fabaceae	Lal gunja	Leaves	Juice of leaves taken once a day for a week during an asthmatic attack.
2	*Acacia catechu* L. Wild.	Mimosaceae	Kher	Rhizome	Rhizome powder is a long with powdered sugar or honey during asthmatic attack.
3	*Acalypha indica L.*	Euphorbiaceae	Dadro	Leaves	Juice of 10 gram leaves is taken once a day for a week.
4	*Acorus calamus L.*	Araceae	Ghodavaj	Whole plant	Decoction of whole pant is taken during asthmatic attack.
5	*Acayranthes aspera L.*	Amaranthaceae	Agedi	Flower	Juice of flower is taken to twice a day for a week.
6	*Adhatoda vasica Nees.*	Acanthaceae	Ardusi	Leaves	Juice of 100gm leaves in water is taken twice a day for week.
7	*Allium cepa L.*	Liliaceae	Dungli	Bulb	Juice 50gm bulb is taken once a day during asthmatic attack.
8	*Allium sativum L.*	Liliaceae	Lahshun	Bulb	Cooked 50gm bulb lets are taken twice a day for three days during asthmatic attack.
9	*Artemisia maritime* Wang.	Alangiaceae	Kirmaniaj mod	Leaf	One leaf is chewed along with sugar in early morning.
10	*Asparagus racemosus* Willd.	Liliaceae	Satavari	Leaves	Juice of leaves are taken twice for a week
11	*Asteracantha longifolia* L.	Acanthaceae	Akharo	Seeds	Seeds are eating along with bulb of onion during asthmatic attack.
12	*Azadirachta indica* A. Juss.	Meliaceae	Limdo	Leaves, bark	Juice of leaves or decoction of inner bark is taken once a day in the morning.
13	*Berberis aristata* L.	Berberedaceae	Daru-hardar	Fruits	Juice of fruit is taken twice a day for a week.
14	*Bombax keiba* L.	Bambacaceae	Simdo	Whole plant	Past of whole plant is given along with honey for a week
15	*Calotropis gigantean Ait.*	Asclepiadaceae	Moto-ankdo	Latex,	Put a drop of latex on sugar candy died it candy use to eat.,
16	*Cissus quadrangularis* L.	Fabaceae	Hadjod	Whole plant	Diabetes, Heart disease, Obesity.
17	*Clitoria ternatea* L.	Fabaceae	Aparajita	Leaves	Stress, Infertility, Gonorrhea
18	*Coccinea grandis* (L.) Voigt	Cucurbitaceae	Kundaru	Whole Plant	Antipyretic, Diabetic, Inflammatory, Malaria, Ulcer & Fever

19	*Combretum album* Pers.	Combretaceae	Madumalti	Bark, Leaves	Diarrhea, Digestive disorders, Inflammation.
20	*Cucumis savita* L.	Cucurbitaceae	Khira	Fruits	Blemished skin, Burns, Sores, heat rash
21	*Dalbergia volubilis* Roxb.	Leguminosaceae	Bankhara	Leaves, Roots	Sore throat, Gonorrhea, Gastec
22	*Gymnema sylvestre* (Retz.) R. Br. Ex Schult.	Asclepiadaceae	Gurmar	Leaves, Stem	Diabetic, Malaria, Metabolic syndromes
23	*Holmskioldia sanguinea* Retz.	Verbenaceae	Kapni	Leaves, Stem, Bark	Blood purify, Headache, Dysentery, Arthritis and Rheumatism,
24	*Ipomoea aquatica* Forssk.	Convolvulaceae	Kalmi saag	Leaves, Root	Fever, Diabetic, Liver complaint, Jaundice, Nervous disorders
25	*Ipomoea nil* (L.) Roth.	Convolvulaceae	Kaladana	Seeds, Leaves	Tumor, fungal infections.
26	*Ipomoea purpurea* (L.) Roth.	Convolvulaceae	Morning glory	Seeds	Mental disorders
27	*Legenaria siceraria* (Molina)	Cucurbitaceae	Lauki	Fruits	Cardiac failure, Ulcer, Piles, Colitis, Insanity, Hypertension, Jaundice, Diabetic & Skin disease
28	*Lantana camara L.*	Verbenaceae	Baramasi	Whole plant	Malaria, Asthma, Blood pressure, Bilious fever, Chicken Pox,
29	*Merremia tridentata* (L.) Hallier	Convolvulaceae	prasarani	Stem, leaves	Astringent, Swelling, Urinary infection.
30	*Mimosa pudica* (L.)	Fabaceae	Lajwanti / Chuimui	Whole plant	Mental health, Fever randomly, Nerve sciatic, Heal and liver
31	*Momordica charantia* (L.)	Cucurbitaceae	Karela	Fruits, Leaves	Cancer, HIV, Diabetic
32	*Mucuna pruriens* (L.) DC.	Fabaceae	Alkushi/Kenwach	Seeds, Leaves	Man infertility, Nervous disorders, Aphrodisiac
33	*Mukia maderaspatana* (L.) M. Roemer	Cucurbitaceae	Agnakhi/bilari	Leaves, Fruits	Cough, Vertigo, Constipation, Burning sensation and dental pain
34	*Operculina turpenthum* (L.) Silwa Manso	Convolvulaceae	Nisoth	Leaves	Fever, Constipation, Ulcers, Chronic gout, Skin disorders
35	*Paederia foetida* L.	Rubiaceae	Gandhali	Leaves, Stem	Dysentery, Infertility and Paralysis
36	*Passiflora edulis* Sims	Passifloraceae	Passion phal	Leaves	Sleeping problem, Itching and Cough
37	*Piper betel* L.	Piperaceae	Pan	Leaves	Anticancer, Anti-allergic, Diabetic and gastro protective
38	*Rivea hypocrateriformis* (Desr.) Choisy	Convolvulaceae	Ban poi/phang	Whole plant	Skin disease, Malaria, Headache Cough
39	*Teramnus labialis (L. f.)*	Fabaceae	Mashavan	Leaves, Seeds	Nerve disorders, Paralysis and Tuberculosis
40	*Tinospora cordifolia* (Willd.) Thoms.	Menispermaceae	Giloy	Whole plant	Fevers, Diabetes, Syphilis, Hepatitis and Ulcer disease
41	*Trichosanthes tricuspidata* Lour.	Cucurbitaceae	Lal indrayan	Fruits, Leaves	Fever, Migraine, Diabetic, Lung disease and Headache
42	*Vigna trilobata (L.)* Verdc.	Fabaceae	Mung	Seeds, Leaves	Jaundice, Diarrhea and Eyes pain

43	*V. unguiculata (L.)* Walp.	Fabaceae	Ban-mung	Seeds, Roots	Jaundice, Menstrual disorders, Epilepsy, Constipation
44	*Asparagus adscendens* Roxb.	Asparagaceae	Maha satavari	Stem	Upset stomach, Ulcer, Cancer, Diarrhea, Bronchitis, Diabetic
45	*A. racemosus* Willd.	Asparagaceae	Satamuli	Roots	Ulcer, Tuberculosis, Pain, Anxiety
46	*Dioscorea alata* L.	Dioscoreaceae	Bilari Kand	Leaves	Fever, Leprosy, inflammation, Gonorrhea
47	*D. Esculenta* (Lour.)	Dioscoreaceae	Suthani alu	Tuber, Stem, Leaves, Roots	Dysentery, Liver damage, Coolants
48	*D. Bulbifera L.*	Dioscoreaceae	Ban alu	Tubers, Stem, Leaves	Leprosy, Cough, Cancers, Piles, Asthma and Syphilis
49	*Zingiber officinale Rosc.*	Zingiberaceae	Adu	Rhizome	Juice of Rhizome is taken along with black pepper powder.
50	*Zizyphus jujube Lamk.*	Rhamnaceae	Beri	Fruits, Bark	Juice of fruits is taken once a day in the morning bark powder is taken along with sugar.

Table (2): The identified and collected plant samples arranged to their parts used in medicine.

S. No.	Name of Plant parts	No. of Plants
1	Bark	4
2	Bulb	2
3	Flower	1
4	fruits	7
5	Latex	1
6	Leaves	36
7	Rhizome	2
8	Roots	6
9	Seeds	7
10	Stem	7
11	Tubers	2
12	Whole plant	8



Graph (1): Plant parts used against asthma follows from table (2)

RESULTS AND DISCUSSION -:

Number of plants reported and their diversity -

In the literature search for the present paper, it was found, that most of these studies lack proper information for the oral use of the reported plants. In a current review paper, a total of 50 species belonging to 25 families and 43 genera has been listed, used against asthma in Chhattisgarh. From the table no. 1, Fabaceae was predominant family having (8 species) followed by Cucurbitaceae (6 species), Convolvulaceae (6 species), Dioscoreaceae (3 species), Liliaceae (3 species), Asparagaceae (2species), Verbenaceae (2 species), Acanthaceae (2 species), Asclepiadaceae (2 species), Amaranthaceae (1species), Araceae (1species), Alangiaceae (1species), Berberedaceae (1species), Bambacaceae (1species), Combretaceae (1species), Menispermaceae (1species), Mimosaceae (1species), Piperaceae (1species), Rubiaceae (1species), Passifloraceae (1species) Meliaceae (1species), Leguminosaceae (1species), Euphorbiaceae (1species), Rhamnaceae (1species) and Zingiberaceae (1species). The results concerning the high proportion utilization of family Fabaceae in Chhattisgarh agreed with other ethno medicinal floras.

Plant parts used -:

In remedies preparation, almost all parts of the plant were used against asthma in Chhattisgarh. These include leaves, roots, fruit, shoot, flower, seeds, bark, stem, latex, bulb, Whole plant, wood, gum, resin, Rhizome and pod. From table no. (2), data analysis shows that leaves were most frequently used (72%) against asthma followed by whole plant (16%), fruit (14%), seeds (14%), stem (14%), roots (12%), and bark (8%), Bulb (4%), Rhizome (4%), Tubers (4%), Flower (2%) and Latex (2%). All the plant parts are used to cure asthma but the leaves, whole plant, seeds, fruit, and stem are most favorite parts of the therapeutic plants. Compared with the formerly available information these outcomes are in a comparable pattern as leaves be found frequently used parts. The use of roots and whole plants in remedies preparation may create pressure on the flora if exploited accidently.

CONCLUSION -:

Chhattisgarh state is rich in very valuable plant and animal species. The local people and Ayurvedic doctors have been using plant products (Leaves, seeds, bark, fruits, roots, shoot, flower, stem, latex, bulb, whole plant, wood, gum, resin, rhizome etc.) in a crude manner. It reveals that these plant species are of immense medicinal values in treatment of asthma. Synthetic drugs are effective against asthma but they have numerous side effects, so plants are the cheapest and safest role in treatment of asthma.

Biodiversity is the major source of raw materials for the stability of the ecosystem, fodder, herbal medicine, source of food etc. the vegetation structure of study area is gradually deteriorating due to anthropogenic activities as well as over exploitation of flora. So these species need special attention on priority basis in view of the conservation of these dwindling, disappearing, keystone, species as well as sustainable development for the future generation.

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