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Ethnomedicobotanical Survey of Plants Used In the Treatment Of Different Ailments In Adoni Area.

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ABSTRACT
Ethnomedico botanical survey was conducted in Adoni division focus on the identification and classification of medicinal plants along with ethnobotanical information. The present investigation was carried out from 2014 to 2015 mainly in Adoni area, yerukula, sugali, tanda tribes were identified. Necessary information was collected through interviews and discussions with the local tribes and village elders. The information was collected about the plant names, local names, parts used mode of administration. Herbarium prepared and deposited in the Department of Botany. Nearly 40 medicinal plants were identified and medicinal uses were recorded. Some of the selected medicinal plants were subjected to phytochemical screening for secondary metabolites. Soxhlet extraction methods were used by ethylalcohol, ether and water and results were recorded. Secondary metabolites like Alkaloids, flavanoids, tannins, saponins, phenols, terpenoids, coumarins, steroids etc., were identified. The results suggest that the phytochemical properties for curing various ailments and possess potential antioxidant and tends to the isolation of new and novel compounds.

I. INTRODUCTION

Tribal people have traditional knowledge of plant species used for different purposes such as food, beverages, colours, resins, gums and medicine. This knowledge was even passed through generation to generation and played an important role in the conversation and sustainable use of biodiversity. Indigenous herbal treatment is part of the culture and dominant mode of therapy in most of the developing countries. The world health organization has estimated that over 80% of the global populations rely chiefly on traditional medicine (Akerele, 1992). These traditional phyto remedies with a considerable extent of effectiveness are socially and economically accepted. Still 1/3 of the modern pharmaceutical preparations have botanical origin. People all over the world are dependent on the traditional plant based healing practices as it is cheap and easily available. Rural people and tribal communities who live in the forest areas predominantly depend upon locally available medicinal plants to take care of their health and has become an integral part of their culture. Thus this study aimed to ascertain the detailed information and the pharmacological action was recorded among yerukula and tanda tribes of Adoni, Kurnool District, and A.P.

Study Area: - Adoni is situated at 15 36 North and long 17 16 east. It occupies 8.31% area in Kurnool 103 Kms from Kurnool 83 Kms from Bellary Raichur Maximum temperature is 34.3c.

Ethnobotanical survey: - The Ethnobotanical information was collected from local aged people, practioners, and herbal healers. The survey was conducted in the year 2014-15 in the months of August to December through interviews and discussions. The collected information includes useful plant species with local names, parts of the plant used for curing different aliments. The plant specimens collected with the help of inhabitants of surveyed villages. The Scientific names, families were identified. Herbarium was prepared and deposited in the Department of Botany. 40 plants were identified 10 medicinal plants were subjected to solvent extractions to identify secondary metabolites.

II. MATERIALS AND METHODS

Plant species were collected and washed thoroughly under tap water and subjected to shade dried. Leaves were separated and grinded in coarse powder. They were stored in polythene bags finely labelled for further use. 60 gm to 100gms of coarse powder was taken into soxhlet extraction. Solvents used are petroleum ether and ethyl alcohol. Solvent extraction was done for 6 hours until to get crude extract. The crude was collected in small beakers and they were used for phytochemical screening. Tests were conducted for 10 secondary metabolites as shown in the table.

In the second method Aqueous extracts were made by dissolving 10 gms of powder in 100 ml of distilled water kept for incubation for 72 hours extracts were filtered through muslin cloth and filtrate is subjected to phytochemical screening for 10 secondary metabolites.

III. RESULTS AND DISCUSSIONS

In the present investigation 40 plants were identified which were frequently used by different tribes in Adoni area. Out of 40, 10 medicinal plants were subjected solvent extractions. Abrus precatorus used for skin diseases and Bold head this is rich in phytochemicals like alkalidos, coumarins, glycosides, flavones and tannins. Abutilon indicum is rich in coumarins and glycosides. Acalypha indica is used for piles, fevers and intestinal worms.Achyranthus aspera is used for Asthma, cough and kidney stones, this is rich in coumarins and phenols. Aeglemormelos is used for poisonous bites and urinary infections this is rich in coumarins, flavones, tannins and terpenoids . Aeruvalenata is used for epilepsy and urinary problems. Coumarins, flavones, tannins and terpenoids are present. Alternanthera sensilis is used for eye sight this is rich in alkaloids, coumarins, glycosides, flavones, terpenoids and phenols. Boerhavia diffusa is used for liver inflammations. Aqueous extracts of all tested plants are rich in alkaloids anthro quinones, flavones, saponins, tannins and terpenoids. Calotropis procera is used for fistula, migraine and ear pain. Andrographis paniculata is used for blood purifires and viral fevers. They are rich in coumarins, glycosides, terpenoids, and phenols. The phyto chemical screening and qualitative estimation of 10 medicinal plants should reveal that the leaves were rich in alkaloids, anthocyanins , coumarins, glycosides, tannins , terpenoids, steroids and phenols.

Enumeration of Medicinal Plants Along With Ethnomedicinal Uses:

S.No	Local Name	Scientific name	Medicinal use
1.	Guruvinda	Abrus precatorus.	Inflammatory, skin infections Bold Head.
2.	Atibala	Abutilon indicum	Piles, Fevers, worms
3.	Kuppinta	Acalypha indica	Cough, Asthma
4.	Uttareni	Achyranthus aspera	Asthma, cough, Kidney stones
5.	Bilvam	Aegel marmelos	Poisonous bites, urinary infections.
6.	Kondapindi	Aeruvalenata	Epilepsy, Urinary problems.
7.	Ponnaganti	Alternanthera sesilis	Eye sight
8.	Nela Vemu	Andrographis paniculata	Blood purifier, viral fevers
9.	Atakamamidi	Boerhavia diffusa	Liver inflammations.
10.	Jilledu	Calotropis procera	For the treatment of fistula migraine, Ear pain.

Distribution of secondary metabolites in different crude drugs:

.	Plant Name	PT	SOL	ALK	AQ	CU	GLY	FLV	SAP	STE	TA	TER	PHE	OILS
1.	*Abrus precatorius*	L	PE	+	-	+	+	+	-	-	+	-	-	-
			ET	+	+	+	+	+	-	+	+	-	-	-
			AQ	+	+	+	+	+	+	+	++	-	-	-
2	*Abutilon indicum*	L	PE	-	-	+	+	+	-	-	-	-	-	-
			ET	+	-	+	+	+	-	+	+	-	+	-
			AQ	-	-	+	+	-	+	+	+	-	-	-
3	*Acalypha indica*	L	PE	-	-	+	-	-	-	+	+	-	-	-
			ET	+	-	+	-	+	-	+	+	-	+	-
			AQ	+	-	+	-	+	-	+	+	-	+	-
4	*Achyranthus aspera*	L	PE	+	-	+	+	+	-	+	-	-	+	-
			ET	+	-	+	-	+	-	+	-	-	+	-
			AQ	+		+	-	+	-	+	+	-	+	-
5	*Aegle marmelos*	L	PE	-	-	+	-	+	-	-	+	+	-	++
			ET	-	-	+	-	++	-	-	+	+	-	-
			AQ	-	-	+	-	+	+	-	+	+	-	-
6	*Aerva lanata*	L	PE	+	+	+	-	+	-	-	+	+	-	-
			ET	+	+	+	+	+	-	-	+	+	+	-

			AQ	+	+	+	+	+	+	-	+	+	+	-
7	*Alternanthera sessilis*	L	PE	+	-	+	+	+	-	+	-	+	+	-
			ET	+	-	+	+	+	-	+	-	+	+	-
			AQ	+	-	+	+	+	+	+	-	+	+	-
8	*Andrographis paniculata*	L	PE	+	-	+	+	+	-	-	-	+	+	-
			ET	++	-	+	-	++	-	-	-	+	+	-
			AQ	+	-	+	-	+	-	-	-	+	+	-
9	*Boerhavia diffusa*	L	PE	+	+	+	+	+	-	++	-	++	+	-
			ET	++	+	+	-	+	-	-	++	-	+	-
			AQ	++	++	+	-	++	++	-	++	++	+	-
10.	*Calotropis procera*	L	PE	-	-	+	+	-	-	-	-	+	-	-
			ET	-	-	+	+	+	-	-	+	+	-	-
			AQ	+	-	+	+	+	+	-	+	+	-	-

Anthocyanin helps the human immune system to work more efficiently to protect against viral infections (*Liu, A.L., et al., 2009*). Various studies have been demonstrated that coumarin is a potential antioxidant and its activity is due to its ability to scavenge free radicals and to chelate metal ions (Tseng,A., 1991).Terpernoids and tannins attributed for analgesic and inflammatory activities. Apart from this tannins contribute the property of astringency i.e., faster healing of wounds and inflamed mucus membranes (Okwu, D.E. and C.Josaiah, 2006).the growth of many fungi, yeaster, bacteria and viruses was inhibited by tannins (Chung, K.T., T.Y.Wong, C.L.Wei, Y.W.Huang and Y.Lin, 1998). Alkaloids occur in 20% of all plant species. They are defensive elements against predators because of their general toxicity and deterrence capability (Hegnauer. et.al.1988). These are useful in respiratory and cardiac troubles. Phenols act against pests and diseases including root parasitic mematodes. They could be an important part of plants defense systems. They are used as muscle relaxants and cures burning wounds (wuyts etal. 2006).Flavonoids protects cell from UV-B radiation because they accumulate in epidermal layers of leaves stems and absorb light strongly (lake.et.al. 2009). Glycosides are used to fight against cardiovascular troubles, intestinal ulcers, analgesic and mild laxative. Oils are absent in all tested species except in aeglemarmelos. In the present investigation plants are rich in coumarins, alkaloids, flavones, tannins and terpenoids.

Phyto chemical screening of medicinal plants is very important in identifying new sources of therapeutically and industrially important compounds. It is imperative to initiate urgent steps for screening of plants for secondary metabolites the present communication attempt to access the status of phytochemical properties in leaves of medicinal plants to improve health status of people and to use in pharmaceutical and nutraceutical products of commercial importance.

IV. CONCLUSION

The ethnomedical survey of Adoni area reveals that the medicinal plants are known to cure 20 types of ailments. The most widely sought after plant parts in the preparation of remedies in the study area are the leaves, tender tips, roots stem bark . it is important to study and document the knowledge on plants used by different ethnic people for the benefit of future generations. Such studies may also provide valuable information to biochemists and pharmacologists in screening of individual species and their phyto constituents to expedite the drug discovery and development process for the treatment of various diseases.

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