



# Ethno Medicinal Plants used as Hepatoprotective by tribes at Adoni Region Kurnool District AP.

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## Abstract:-

An Ethno botanical survey was undertaken to collect the information from tribal people using medicinal plants for the treatment of Jaundice in Adoni area, Kurnool District, A.P. during the year of 2014-2016. Ethnobotanical data was obtained through questionnaires and personal interviews during several field trips. The study revealed that many medicinal plants were used by tribes for different ailments like fevers, cold cough, fractures Inflammations. Jaundice etc., the tribals using different plant parts as drugs. Some of the plants were used as Hepatoprotective their phyto chemicals were screened out for the identification of secondary metabolites.

**Key Words :** Ethnobotanicals, Jaundice, Medicinal uses, screening techniques, secondary metabolites

## Introduction :-

Ethnobotany is a multidisciplinary science which is defined as the interaction between plants and people, plants have been used in traditional medicine for several thousand years . People all over the world are still 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 area predominantly depend up on locally available medicinal plants to take care of their health and has become an integral part of their culture.

An attempt has been made to bring into light Ethnobotanicals used by ethnic tribes like Sugali, Yerukala and Yandi at Adoni area. In this present study identified some of the medicinal plants were used for Jaundice by the tribes. It was found through personal interviews, proper documentation was made and their medicinal uses were recorded for the use of future generations. The objective of the present study is to mainly focus on the hidden, unexplored valuable knowledge with the tribal people secondly to aware the mankind about the value of

vegetation and to give further research scope in the field of ethnobotany and phytochemistry.

Study Area:- Adoni occupies nearly 8.31% area in Kurnool District situated 103 Kms from Kurnool 80 Kms from Bellary, Raichur. Maximum temp is 34.3°C. normal rainfall 6.59 millimeters annually. Second important town in Kurnool district is selected for the present study

Ethnobotanical Survey:-

Extensive field trips were conducted from 2014 to 16. Places like Pattikonda, Devenakonda, Nernike, Alur selected for exploration studies necessary information was collected through interviews and discussion with the local tribes and local practitioners. The collected information includes useful plant species with local names, parts of the plants used for curing different ailments. The scientific names, families were identified Herbarium was prepared and deposited in the Dept., of Botany out of 70 plants identified medicinal plants used for Jaundice were subjected to solvent extractions. Their medicinal uses were recorded and their secondary metabolites were extracted.

Materials and Methods:- Plant sps were collected and washed thoroughly under tap water and subjected to shade dried leaves were separated and grinded into coarse powder. They were stored in polythene bags for further use. 60 to 100 gms. of coarse powder was taken into Soxhlet extraction. Solvents are used and extraction was done 6<sup>h</sup> until to get crude extract. The crude was collected to small beakers and they were used for phytochemical screening”.

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

Results and Discussions:- In the present investigation 7 medicinal plants were identified which were used for Jaundice medicinal plants were collected and their medicinal uses scientific names parts used were recorded. Jaundice is a disease in which there is yellowish staining of the tissues and excretion with bile. Hepatoprotive means a drug which protects the liver. Person infected with Jaundice their liver functioning will be slow. These herbal leaf extracts are mixed with other ingredients and would be used during Jaundice. The following table reveals the medicinal uses for the ethnobotanicals.

Table No. 1

S.No.	Name of the Plant	Scientific name	Family	Parts used	Medicinal uses.
1	Nela Usiri	Phyllanthus amarus	Euphobiaceae	Whole plant	Jaundice Hiccups
2	Chitramulam	Plumbago zeylanica	Plumbagi-naceae	Root	Jaundice Wounds
3	Palleru	Tribullus terrestris	Zygo phyllaceae	Whole Plant	Jaundice Mouthulcers
4	Tummi	Leucas aspera	Lamiaceae	Leaf	Jaundice Paralysis Stomach Pain
5	Atibala	Abutilon indicum	Malvaceae	Leaf	Jaundice Piles fevers
6	Uttareni	Achyranthus aspera	Amarantha -ceae	Leaf	Jaundice Asthma Cough Kidney stones
7	Punarnava	Boerhavia diffusa	Nyctangi -naceae	Whole Plant	Liver Jaundice inflammation

Table No. 2

S.No.	Plant Name	PT	SOL	Alk	Aq	Cu	Gly	Plv	Sap	STE	TA	JER	PHE	Oils
1	Phyllanthus amarus	L	PE	+	-	+	-	+	-	-	+	+	+	-
			ET	+	-	+	-	+	-	-	+	+	+	-
			AQ	+	-	+	-	+	-	-	+	+	+	-
2	Plumbago zeylanica	RT	PE	-	-	+	-	-	-	+	-	-	+	++
			ET	-	-	+	++	+	+	++	++	-	+	-
			AQ	-	-	+	++	-	+	+	+	-	+	-
3	Tribullus terrestris	L	PE	+	-	+	-	-	-	-	-	+	-	-
			ET	+	-	+	+	+	-	-	+	+	-	-
			AQ	+	-	+	+	+	+	-	+	+	-	-
4	Leucas aspera	L	PE	+	-	+	-	+	-	+	+	-	-	++
			ET	+	-	+	+	+	-	-	+	-	-	-
			AQ	+	-	+	+	+	-	-	+	-	-	-
5	Abutilon indicum	L	PE	-	-	+	+	+	-	-	-	-	-	-
			ET	+	-	+	+	+	-	+	+	-	+	-
			AQ	-	-	+	+	-	+	+	+	-	-	-
6	Achyranthus aspera	L	PE	+	-	+	+	+	-	+	-	-	+	-
			ET	+	-	+	-	+	-	+	-	-	+	-
			AQ	+	-	+	-	+	-	+	+	-	+	-
7	Boerhavia diffusa	L	PE	+	+	+	+	+	-	++	-	++	+	-
			ET	++	+	+	-	+	-	-	++	-	+	-
			AQ	++	++	+	-	++	++	-	++	++	+	-

Note : PT : Plant Part used

Phytochemicals are naturally occurring chemical compounds present in plants. They are in the form of secondary metabolites. Secondary metabolites are the organic substances that act in defensive mechanisms. Soxhlet extraction of phytochemicals from the tested species reveals that coumarins are present in all tested species. Next flavonoids, glycosides and alkaloids are present. Coumarins are important

class of photochemicals they have biological significance they are used to cure different diseases. Coumarins have strong pharmacological activity, low toxicity and side effects. They have antiviral and antifungal and antiinflammatory properties they have been increasingly attracting special interest due to their outstanding contributions in the prevention and treatment of diseases.

Flavonoids used as anti allergic, antiviral hepatoprotective, anti cancer. It has antioxidant properties. Now a days flavonoids considered as indispensable component in a variety of pharmaceutical, medicinal and cosmetic applications they have antimicrobial defensive compounds. Glycosides have therapeutic effect in human and animals as they are used in traditional and modern medicine they have hepatoprotective, cardiac, laxative and purgative properties.

Alkaloids are important class of secondary metabolites imparts medicinal value to the plants they have diversified pharmacological actions anti inflammatory, antispasmodic, anti microbial, hepatoprotective in function. Analgesic antimalarial, anti tumour expectorant used to treat chronic bronchitis actions. In the second order of priority tannins, phenols and terpenoids are present. Tannins and terpenoids attributed to analgesic and anti inflammatory activities. Tannins have antiviral, anti bacterial properties. Phenols have pharmacological as well as health benefits. They are antiseptic, antibacterial and anticancer properties. Steroids are present only in 3 tested species other metabolites like saponins, oils and anthraquinones are almost absent. Boerhavia shows anthraquinones. By the above study it is clear that 7 medicinal plants have curative properties due to presence of bio active principle compounds coumarins. Flavonoids, alkaloids, glycosides, tannins, terpenoids and phenols. These impart medicinal properties to all the 7 species and used as hepatoprotective in jaundice.

**CONCLUSION:-** The present investigation reveals medicinal plants used by tribes of Adoni area for jaundice they have hepatoprotective properties due to presence of secondary metabolites. It was identified through screening techniques. Besides jaundice 7 tested species were also used in other diseases like cancer, asthma, paralysis, ulcers, stomach pains etc and rich antioxidant properties. Knowledge and use of herbal medicine for treatment of various ailments among the local people still part of their life and culture it is important to study and document the traditional knowledge pharmacologists, phytochemists must come forward to expedite drug discovery through screening of secondary metabolites.

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