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PRELIMINARY PHYTOCHEMICAL ANALYSIS OF *CAREYA ARBOREA*

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Abstract:-
Careya arborea commonly known as Kumbhi. Generally it grows gregariously on open grasslands and scattered in mixed forest. Plantation can be raised both on irrigated and dry lands. Root suckers are freely produced and help in vegetative propagation. The plant is traditionally reported to possess astringent, bitter, alterative, aphrodisiac, anthelmintic, antibacterial and anti-asthmatic properties. As per phytochemical investigation, the ether, methanol and aqueous extract used for testing various chemical compound.
Keyword:- *Careya arborea* ,Phytochemical, Traditional, Kumbhi

Introduction:-

India is sitting on a goldmine of well-recorded and traditionally well-practiced knowledge of herbal medicines, therefore, any scientific data on such plant derivatives could be of clinical importance.

Careya arborea widely distributed throughout India. It holds an important place because of its medicinal and other miscellaneous uses. *Careya arborea* of economic value. It is one of the most beautiful tree has been put of some useful purpose. Is extensible used in Ayurveda, Unani and Homeopathic medicine and has become a cynosure of modern medicine. Commonly it is used as tonic, astringent, aphrodisiac and diuretics.

A glabrous tree with dark –grey bark. Leaf – alternate, sessile, obovate or oblanceolate, obtuse or shortly acuminate, glabrous, cuneate at the base, finely serrate or crenate. Flowers – sessile, yellowish, across, in terminal spikes. Fruit – across globular, crowned with the calyx-limb, many seeded.

Materials and Mehtods:-

The plants collected during the tours. The entire plant or its parts i.e. stem, root, leaves, bark, fruits were used for the phytochemical studies. The plants were washed properly with distilled water, chopped in small pieces and dried in shead. After drying they are granded in powder which was later kept in polythene bags. This was later used for the phytochemical analysis.

Procedure:-

The procedure of Chhabra et.al., (1984) was adopted here.

Qualitative detection of the compounds was done by soaking 10g powder of plant material in 100ml of petroleum ether. After 24 hours, petroleum ether was distilled off and the residue was dissolved in 25ml ethanol and divided in to two portions (A) and (B). portion A divided in two parts(A.1&A.2). portion (A.1) of the extract was tested was tested for alkaloidal bases and volatile oils. The other portion(A.2)was saponified with 5ml of alcoholic potassium hydroxide(0.5N) by refluxing on water bath for 90 minutes. The alcohol was distilled off and residue was redissolved in hot distelled water(10ml). The non-saponifiable (A.2.1) was extracted in ether (3x5ml) and tested for presence of carotenoids, steroids/triterpenoids. The alkaline aqueous solution was acidified (pH 3-4) with concentrated hydrochloric acid and extracted in ether (3x10ml). This ethereal solution (A,2.2) was tested for coumarins, emodins, fatty acids and flavonoids.

The plant residue marked (B) which was exhausted with ether, was extracted with hot methanol(100ml) and kept overnight for extraction by facilitated diffusion technique (Keen, 1978) on a orbital shaker at 150 rpm. The methanol extract was decated off in another flask and it was reduced to 1/3 of its volume under vacuum at 40^0 C. It was divided in two portions (B.1&B.2). Portin (B.1) was tested for alkaloida salts, reducing compounds and tannins. The other remaining portion (B.2) was hydrolysed with hydrochloric acid (5ml 10%) by refluxing on water bath for 30 minutes. Contents were cooled and after adding water (10ml), extracted with ether (3x10ml). The ethereal solution(B.3)was tested for anthracene glycosides, coumarins, flavonoids, steroids and triterpenoids. Acidic solution (B.4) was tested for anthocaynin and anthocyanidin.

The plant residue marked (C), exhausted with ether and methanol, was extracted with hot distilled water(100ml) and kept overnight to ensure complete extraction. The water extract was reduced to 1/3 its volume

under vacuum and divided into two portions. The portion (C.1) was tested for alkaloidas salts, ployosed, polyuronoids, reducing compounds, saponin, starch and tannin. The portion (C.2) was hydrolysed with hydrochloric acid(5ml 10%) by refluxing on water bath for 30 minutes. Contents were cooled and after adding water (10ml) extracted with ether (3x10ml). The ethereal solution (C.3) was tested for anthracene glycosides, coumarins, flavonoids, steroids and triterpenoids. Acidic soulution(C.4) was tested for anthocaynin and anthocyanidin

Preliminary Phytochemical Screening of *Careya arborea*

Table No, 1

Parts used	Alkaloids			Anthocyanin/ Anthocyanidin		Anthracene Glycoside		Anthroquinone
	Ether	Methenol	Water	Methanol	water	Methanol	water	
Bark	-	+	++	+	+	-	-	-
Flower	++	+	+	+	+	-	-	-

Preliminary Phytochemical Screening of *Careya arborea*

Table No. 2

Parts used	Carotenoids	Coumarins			Emodins	Fatty Acids	Volatile oils
	Ether	Methenol	Water	Ether			
Bark	-	-	+	-	-	-	-
Flower	-	-	-	-	+	+	-

Preliminary Phytochemical Screening of *Careya arborea*

Table No.3

Parts used	Flavonoids			Lignans	Polyoses	Polyuronoids	Reducing compound	
	Ether	Methenol	Water	Methenol	Water	Water	Methenol	Water
Bark	+	+	-	+	-	+	-	+
Flower	-	+	-	-	+	-	-	-

Preliminary Phytochemical Screening of *Careya arborea*

Table No.4

Parts used	Saponin	Starch	Steroid/Triterpenoid			Tanin		Volatoil oils
	Water	Water	Ether	Methanol	Water	Methanol	Water	Ether
Bark	+	+	+	+	-	+	-	+
Flower	-	+	-	-	++	-	-	-

Result and Discussion:-

Preliminary phytochemical screening of the presence of various phytocompounds is tabulated in the table 1,2 and 3. The bark and flowere showed the presence of alkaloids, Anthocyanin and anthocyanidin and flavonoids. Coumarin, lignans, polyurinoids and reducing compounds ware present only in bark while the flowers showed the presence of Emodins and ployses.

After surveying all the available paper, journals and books about plant *Careya arborea*

we can certainly conclude that, a number of compounds can be isolated by means of different extraction procedure following their through characterization and optimization. Study of the pharmacological activities with different extract, which show that the compounds have beneficial effects against a number of diseases.

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