

# Herbal Abortifacients Used by Mannan Tribes of Kerala, India.

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**Abstract:** Twelve plant species (*Acacia catechu*, *Ananas comosus*, *Annona reticulata*, *Caesalpinia pulcherrima*, *Carica papaya*, *Curculigo orchioides*, *Dolichos trilobus*, *Gloriosa superba*, *Momordica charantia*, *Plumbago zeylanica*, *Rhynchosia rufescens*, *Solanum torvum*) were documented as new abortifacients from Mannan tribes of Idukki district, Kerala.

**Key words :** Abortifacient, Ethnobotany, Idukki, Kerala, Mannan tribe.

## INTRODUCTION

The relationship between plants and human beings is not limited to the use of plants for food, clothing, religious ceremonies, ornamentation and shelter but also includes in human healthcare. Over 7500 species of plants are estimated to be used by the ethnic communities of human and veterinary healthcare in India [1]. It was officially recognized that 21,000 plants have medicinal value while over 6,000 plant species are estimated to be explored in traditional, folk and herbal medicines. It is necessary that we should have full knowledge regarding the occurrence, frequency distribution, phenology and other aspects for their proper utilization. Traditionally the tribal women prefer plant medicines rather than modern medicines for menstrual trouble, conception disorders, birth control practices, sterility, abortion etc. Abortifacients are drugs or agents that cause abortion i.e. expulsion of foetus permanently,

particularly at any time before it is variable or capable of sustaining life [2].

Idukki district has the second largest tribal population of the Kerala state. The area of investigation lies between 09°50'32"N latitude and 77°53'39"E longitude. The area is characterized by numerous olds and extensions engulfing small narrow valleys and deep valleys which are difficult to reach even. About 85% of the area is at an altitude above 300msl, more than 50% of the area under forest cover. There are more than eight scheduled tribal communities in this district such as Malayaryan, Mannan, Muthuvan, Urali, Ulladan, Paliyan, Malamandaram and Hill pulaya. Among them Mannan is one of the major tribes in this district. The area is covered under special tribal development scheme. For the present study, data have been collected from six hamlets of Mannan tribe of Idukki district and herbal remedies adopted by the Mannan tribal women for abortion and plants used as abortifacients.

## **MATERIALS AND METHODS**

The Ethnobotanical survey was conducted in six hamlets of Mannan tribe of Idukki district viz. *Kovilmala, Murikkattukudy, Maniyarankudy, Vallakadavu, Mannakkudy* and *Thoprakudy*. Regular field visits were made to the hamlets during 2010

December to 2012 January. The information regarding abortifacient was collected from elderly experienced women, plant collectors and medicine men (*Vaidyas*), using a detailed questionnaire

prepared according to the methodology suggested by Jain[3]. The fresh specimens were collected and identified with the Flora of Presidency of Madras [4]. The plant species used by *Mannan* tribes of Idukki district as abortifacients are enumerated with botanical name, family, local name, plant parts used and the methods to induce abortion are given in the Table 1. The voucher specimens were deposited in the herbarium of Department of Biology, Gandhigram Rural Institute, Gandhigram, Tamil Nadu, India.

**Table 1: List of abortifacients used by Mannan Tribes of Idukki.**

<b>Sl. No</b>	<b>Botanical name/ family</b>	<b>Local Name</b>	<b>Parts used</b>	<b>Method of Use</b>
1	<i>Acacia catechu</i> (L.f.) Willd. <i>Fabaceae</i>	Karingali	Bark	3-5 ml. of bark juice is taken orally for the first three months
2	<i>Ananas comosus</i> (L.) Merr. <i>Bromeliaceae</i>	Kannara	Fruit	Ripened fruit is used to induce abortion
3	<i>Annona reticulata</i> L. <i>Annonaceae</i>	Seetha pazham/Atha	Seeds	Seed paste is given orally on empty stomach for 3-5 days
4	<i>Caesalpinia pulcherrima</i> (L.) Sw. <i>Fabaceae</i>	Rajamally	Bark	Bark juice (2 ml) is administered orally on empty stomach for the first three months
5	<i>Carica papaya</i> L. <i>Caricaceae</i>	Kappalam	Raw fruit	10-15 ml of latex of raw fruit is given orally once a day for 3 days
6	<i>Curculigo orchoides</i> Gaertn. <i>Hypoxidaceae</i>	Nilappana	Tuber	Paste of the tuber is given orally in empty stomach
7	<i>Dolichos trilobus</i> L. <i>Fabaceae</i>	Kattumuthira	Whole plant	whole plant juice is used to induce abortion in the first three months
8	<i>Gloriosa superba</i> L. <i>Liliaceae</i>	Menthonni	Root tuber	Root extract is given orally for twice a day for 3days.
9	<i>Momordica charantia</i> L. <i>Cucurbitaceae</i>	Pavakka	Raw fruit	Fruit juice is given orally twice a day for 5 days on the first three month.
10	<i>Plumbago zeylanica</i> L. <i>Plumbaginaceae</i>	Koduveli	Root	3-5 ml. of root paste is taken orally to induce abortion
11	<i>Rhynchosia rufescens</i> (Willd.) DC. <i>Fabaceae</i>	Ramachempu	Leaf	Leaf decoction is administered for abortion for the first three months
12	<i>Solanum torvum</i> Sw. <i>Solanaceae</i>	Ana chunda	Leaf	3-5 ml Leaf extract is given orally for 5days

## **RESULTS AND DISCUSSION**

In the present study 12 flowering plants (*Acacia catechu*, *Ananas comosus*, *Annona reticulata*, *Caesalpinia pulcherrima*, *Carica papaya*, *Curculigo orchoides*, *Dolichos trilobus*, *Gloriosa superba*, *Momordica charantia*, *Plumbago zeylanica*, *Rhynchosia rufescens*, *Solanum torvum*) belonging to 8 families were documented as useful abortifacients. Among this *Acacia*, *Ananas*, *Annona*, *Carica*, *Curculigo*, *Gloriosa*, *Plumbago*, *Rhynchosia* and *Solanum* are used before as abortifacients in various parts of the country[5]. *Curculigo*, *Gloriosa* and *Solanum* were reported among the Mannan tribe of Periyar Tiger reserve[6].

The above mentioned plant species, have many other medicinal uses also, but the abortifacient and antifertility properties of some of these species have also been reported from the various part of the country. Tarafeder [2] reported that bark of *Acacia catechu*, unripe fruit of *Ananas comosus*, seeds of *Annona squamosa*, unripe fruit of *Carica papaya*, root of *Curculigo orchoides*, root of *Gloriosa superba*, tuber of *Momordica tuberosa*, various parts of *Plumbago* spp. and leaf of *Rhynchosia minima* were used to induce abortion in various parts of Bihar. Similarly *Plumbago* root is used among the rural people of Haryana [7], seeds of *Annona squamosa*, fruit of *Carica papaya*, tuber of *Gloriosa*

*superba* and leaves of *Rhynchosia minima* are used in North Maharashtra [8]. The leaves of *Plumbago zeylanica* are used for abortion [9].

The tribals depend exclusively on these plants for abortion. The experimental literature gives a scientific backbone for the use of plant species as abortifacients. Some act by their toxicity and some by their pharmacodynamic properties. But it is very difficult to identify the effectiveness of herbal abortifacients. So further research on these medicinal plants is necessary to identify and improve the quality and effectiveness of these medicines. Any how this documentation would help to preserve the indigenous knowledge for posterity.

## **CONCLUSION**

Traditional healthcare practices of indigenous people pertaining to human health are termed as ethnomedicine. Ethnomedicine is the mother of all other systems of medicine. Recently the importance of these traditional medicines has been realized world wide as some of them proved to be very effective [11]. Mannan tribal women of Idukki district use various plants for their health care especially for gynaecological problems and disorders. This work also gives scope for appropriate scientific studies on the phytochemical and pharmacological activities of the recorded plants for drug design.

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