Section A-Research paper

The Fate of a Sacred Herb *Aristolochia indica*: Preliminary Overview

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ABSTRACT

Ancient man used many plants or a part of the plant as very good remedies for various ailments and it is well known that man depends on plants as sources of food and some of the constituents derived from plants are used as perfumes and spices. Some of the medicinal plants were used as a household remedy by common people and our grandmother's herbal remedies are still effective. In some cases, they are as good as those of modern medicine. Above all plants and their parts are used as life-saving agents in many diseases. The Ayurvedic, Unani, and Siddha systems of medicine in India have a long history of using drugs extracted from plants and herbs. A review of Charaka and Sushruta's tests, which compiled a wealth of information about the ayurvedic philosophy, reveals that the knowledge was built on a solid basis of the scientific methodology using the methods available at the time. However, for a variety of reasons, these indigenous medical systems were unable to keep up with the enormous developments in basic science knowledge that occurred in western countries during the 19th and 20th centuries, and thus their growth was slowed. Aristolochic acid obtained from *Aristolochiaindica* is thought to be responsible for the majority of the plant's risks, as evidenced by the literature. Because of its hazardous effects, folklore usage of the plant as an abortifacient and antivenom should be limited.

Keywords: *Aristolochia*, Medicine, Aristolochic acid, Toxicity, Fate.

1. INTRODUCTION

Plants were the first forms of life on Earth, so it's no surprise that all other living things that came later, such as animals and humans, are dependent on them directly or indirectly for many basic needs. Our forefathers relied on plants not just for food but also for shelter for a period. Their extensive knowledge of and close friendship with the plant kingdom is shown by their use of a large variety of plants for various purposes. In the age-old Indian epics and other ancient Sanskrit literature, there are thousands of references to man's use of plants[1].

In our country, traditional medicine has survived all vicissitudes and is practiced in our rural areas. Traditional medicine physicians in various parts of India tried to use locally growing herbals as much as possible and found them useful after clinical trials. So information on the use of the medicinal plant is scattered and so these indigenous systems of medicine have a very serious problem of standardization.

It is common to find the same name being used for herbal medicines of diverse botanical origins. This causes considerable confusion and reduces the value of indigenous medicine. So it needs standardization of the real drug and identification of substitutes and adulterants can be done by taking up critical pharmacognostic studies using botanical and chemical parameters. Scientists have been particularly interested in plant chemical research relating to isolating new compounds and elucidating their structures to discover their therapeutic value. Despite this, only about 5% of the world's 6 lakh plant species have been exposed to such chemical and pharmacological studies[2]. The present study reviews the therapeutic uses in ethnomedicinal practices by Vaidhyars and the fate of the sacred herb *Aristolochia indica* due to its toxic effects.

2. MORPHOGRAPHY

Aristolochia is a vast genus of herbs or shrubby twining plants with around 300 species, generally found in tropical and temperate climates[4]. India is home to eight different species. The *Aristolochia* are bitter and toxic, and they usually contain alkaloids. A few of them are medicinal, and they're said to help with snake bites[3]. Some exotic Brazilian species such as *Aristolochia fimbriata*cham, *Aristolochia elegant*, *Aristolochia elegans*mast and *Aristolochia ornithocephala* hook, are among ornamental creepers found in Indian gardens.

2.1 Plant Profile

Vernacular Name: Indian Birthwort	Sanskrit: Ishwarimul
Gujarathi: Arkmul	Telugu: Ishvaramuli
Hindi: Ishwaramul	Marathi: Papasan
Malayalam: Iswaramuli	Tamil: Iswaramuli.

3. THERAPEUTIC USES

Aristolochia indica Linn is a shrub that is otherwise called an Indian Birthwort (Figure 1) and was used by Tamil Vaidhyar in so many ailments. As the name iswari, indicates the plant is believed to have the power to neutralize or resist snake poison. The Tamil Vaidhyar of Tanjore were widely using juice obtained from the leaves of this plant in malarial fever, a specific antidote for cobra poisoning, and the other parts of their plant eg., Root, Stem is also used for the same condition. Fresh juice of the leaves is an antidote to the snake's poison. It is a purifier of blood (asradosajit) and hence useful in skin diseases. It heals wounds and dispels diseases due to the morbidity of Vata, pitta, and kapha. It is an appetizer, aphrodisiac, and

anthelmintic and relieves burning sensation. Chiefly the root and occasionally leaves are used in medicine. Juice of the leaves and also of the bark is used in the bowel complaints of children, diarrhea, and intermittent fevers. Roots are sometimes used for abortion by quacks. Niladaladitailam, Parantyaditailam, Pathadigulika, etc. are some of the preparations using the drug.

The Tamil Vaidhyar has described to us that he is using an aqueous decoction of this leaf for the treating snake bites and high fever, etc. the available literature states that there is only a little information about the leaf extracts activity even though it is widely used by the Tamil Vaidhyar of the Tanjore Districts of Tamil Nadu. The root is pungent, bitter alexiteric, and an emmenagogue that can help with "Tridosha" pains in one joint, children's bowel problems (Ayurveda), and occasional fevers and other ailments[5].

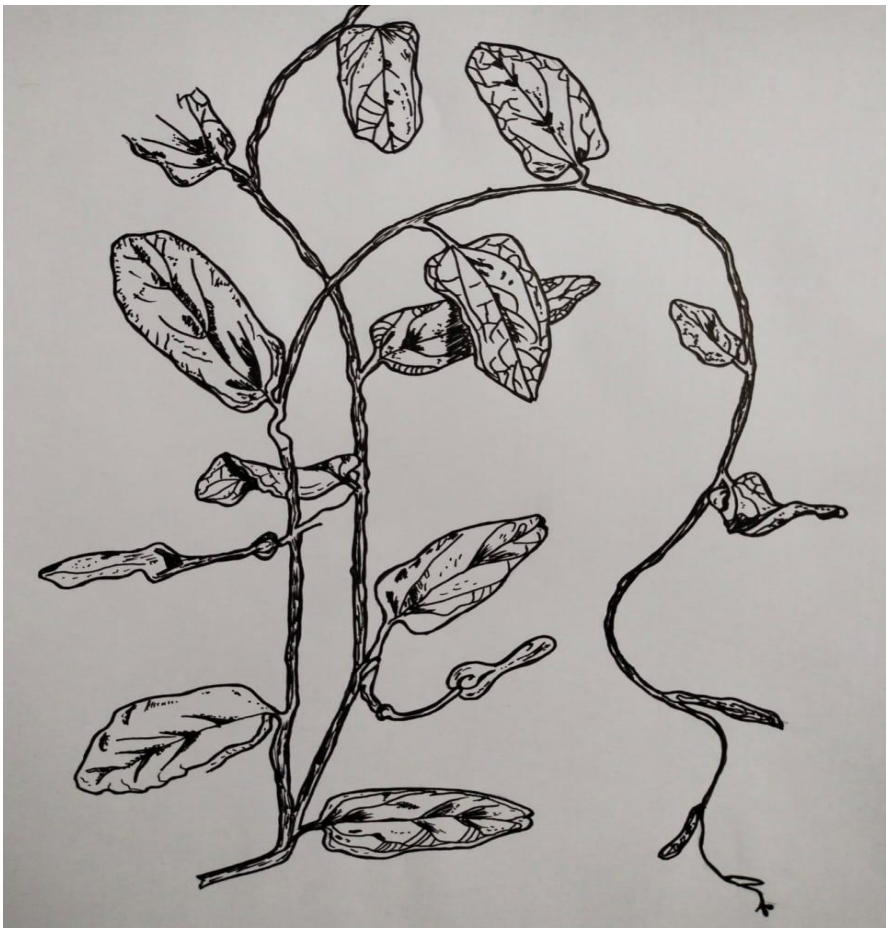

Figure 1. ***Aristolochia indica***

It is primarily administered in Bombay for children's bowel symptoms, and it is used as a stimulant, tonic, and externally applied to the abdomen in cases of cholera. The seeds have no taste and can be used to treat inflammations, dry coughs, joint pains, children's dyspnoea, and purgatives (Unani). For Leucoderma, the powdered root is mixed with honey. Malaria patients were also given a decoction made from the roots of this herb. All parts of the plants are considered to be medicinal value. The tribals living in Vallam near Tanjore District consider *Aristolochia indica,* Linn. as a shrub that gives shelter for the worship of Tribal gods.

4. THE FATE OF A SACRED HERB

The main active ingredient in the plant is aristolochic acid. It has anticancer[6], antispermatogenic[7], abortifacient[8], anti-oestrogenic, and anti-implantation properties[9], according to studies. It has been linked to the development of cancer and the development of interstitial nephritis when used as a diuretic, rheumatoid, and analgesic[10]. There have been reports of aristolochic acid nephropathy and urothelial carcinoma[11]. In a review of herbs and herbal ingredients active against snakebite, *Aristolochia indica* was found to be effective against snake envenomation[12]. Aristolochic acid-containing products were taken off the market in the early 1980s because it was discovered to be a powerful carcinogen[13]. The dangers of combining *Aristolochia indica* with other *Aristolochia* species were also evaluated and reported[14]. Even though the plant has been described as an emmenagogue, abortifacient, antiseptic, anti-antimicrobial, antipyretic and on the other hand, it has been described as a powerful nephrotoxic agent. The diagrammatic illustration for the discussed properties of *Aristolochia indica* was given in Figure 2.

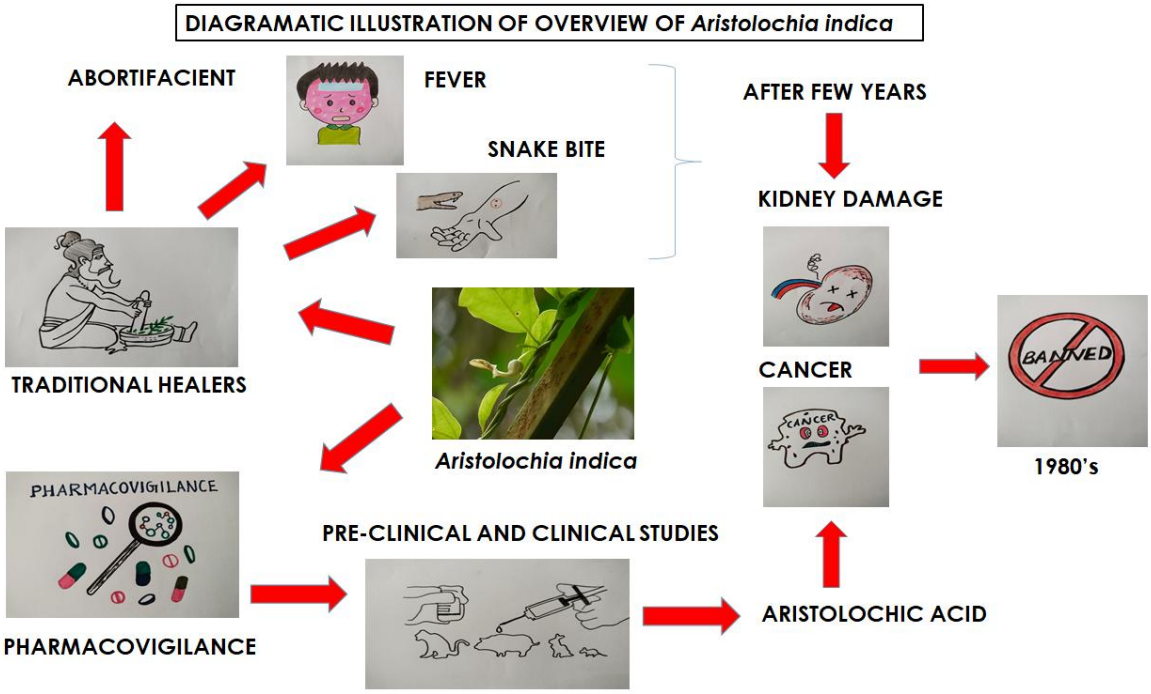

Figure 2. Diagrammatic representation of preliminary overview of *Aristolochia indica*

5. CONCLUSION

Aristolochic acid is thought to be responsible for the majority of the plant's risks, as evidenced by the literature. Because of its hazardous effects, folklore usage of the plant as an abortifacient, antivenom and many other uses should be limited.

Acknowledgments

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Conflict of Interest

We have no conflict of interest

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