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ASHOKA(SARACA INDICA), A PLANT FOR WOMEN HEALTH- AN OVERVIEW

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ABSTRACT

Saraca asoca (Roxb.), De. wild (Family: Caesalpinaceae) is a vital indigenous plant with a traditional significance commonly known as *Ashoka*. The word *Ashoka* means "*without sorrow*", a reference to reputation of its bark for keeping a woman healthy and youthful. The stem bark is chiefly used in medicines and it has been reported to contain chemicals such as glycoside, *flavonoids, tannins, saponins, alkanes, esters* and primary alcohols. *Saraca asoca* has been greatly used as traditional medicine for women related problems, such as menorrhagia, leucorrhoea, bleeding hemorrhoids, dysfunctional uterine bleeding etc. In this review, emphasis is lead upon research associated to therapeutic properties, phytochemistry and pharmacological profile of *Saraca asoca*

Keywords Saraca asoca, glycoside, menorrhagia, phytochemistry.

INTRODUCTION:*Ashoka* is one of the most legendary and sacred trees of India, frequently known as "Ashok briksh", or *"Ashoka"* belonging to family *Caesalpinaceae* . Classically while describing *Ashoka* it had been described as *"nasthi soka yasmt* " [1]that means that gives no grief. Synonyms like vitsoka, sokanasa conveys the same.

An elaborate description of *Ashoka* plant is available in the oldest literatures of Ayurveda. In *Puranas* its been said that eighth day of brighter half of the month of chaitra, if the women eats eight buds of *asoka* flower and chants mantra she will be relieved from pain and sorrow of her mind [1].The reference of *Ashoka* even available in Ramayana said that *Ashoka* means without sorrow, Buddha was said to be born under this tree, and its believed as sacred plant through out India. *Charaka Samhita* which is believed to have been composed in 1000 BC describes about *Ashoka* tree and its medicinal benefits[2,3,4].

The *Ashoka* is a rain-forest tree. It is found all over India, especially in Himalaya, Kerala, and Bengal and whole south region. Its original distribution was in the central areas of the Deccan plateau, as well as the middle section of the Western Ghats in the western coastal zone of the Indian subcontinent. As a wild tree, the *Ashoka* is a vulnerable species. It is becoming rarer in its natural habitat, but isolated wild *Ashoka* trees are still to be found in the foothills of the central and eastern Himalayas, in scattered locations of the northern plains of India as well as on the west coast of the subcontinent near Mumbai[5].

The *Ashoka* is valued for its attractive foliage and fragrant flowers. It is a beautiful, small, erect evergreen tree, with deep green leaves growing in dense clusters. Its flowering season is around February to April. The *Ashoka* flowers come in heavy, lush bunches and are bright yellow which turns red before wilting [6].

Description[7]

A. Colour Brown

B. Odour -Characteristic

C. Taste -Characteristic

D. Appearance- Free flowing powder

Solubility : A. In water NLT 60%w/w

B. In Alcohol NLT 40%w/w

Table 1: Chemical constituents

PH (1% w/v solution)	5 to 7
Loss on drying	NMT 5%w/w
Moisture Content by K.F	NMT 5% w/w
Ash Content	NMT 5% w/w
Sulphated Ash Content	NMT 5% w/w
Volatile oil content	Do Not Available
Pesticide residue	Do Not Available
Solvent residue	Do Not Available
Assay of active principle by HPTLC / HPLC	Tannins NLT 30 % w/w

Microbiological analysis[7]

A. Pathogens (E. coli, S. aureus) Absent

B. Total Bacterial Count (CFU/gm) NMT 800 CFU/gm

C. Total Fungal Count (CFU/gm) NMT 500 CFU/gm

Heavy Metal[7]

A. Arsenic NMT 1ppm

B. B Lead NMT 5ppm

Ashoka is one of the most significant *Ayurvedic* drug for the treatment of several feminine disorders especially in menorrhagia. Its bark is useful for keeping a woman healthy and youthful. The property of *Ashoka* as per ayurvedic texts says its bark is bitter, astringent and sweet in taste.

Table:2 Taxonomic Position [8]

Kingdom	Plantae
Division	Magnoliophyta
Order	Fabales
Family	Caesalpinaceae
Genus	Saraca
Species	asoca

Habitat

It is found all over Indian subcontinent. The tree is believed to have originated in the Western Ghats and Deccan plateau. It can also be found in central and Eastern Himalayas. It is known to grow at an altitude of 750 m above the sea level[6]. The plant grows to a height of about 9m in length. The plant generally grows in fertile and semifertile areas across India. The tree belongs to Caesalpinaceae family. This is a perennial plant which can range from dark green to grayish green in colour. The lenticels are circular and ridged opposing. The seeds generally are reddish brown with fibres.

Table 3:Vernacular Names [9]

Sanskrit	Kankeli, Sita*Ashoka*
Oriya	*Ashoka*
English	*Ashoka*

Assamese	*Ashoka*
Kashmiri	Ashok
Marathi	Ashok, Jasund
Bengali	*Ashoka*, Oshok
Malayalam	Asokam
Gujrati	*Ashoka*
Hindi	*Ashoka*, Vand ichitrah
Kannada	Ashanke, Kenkalimara
Punjabi	Ashok
Tamil	Asogam
Telugu	Vanjulamu

Ashoka in Obstetric and Gynecology:

Ashoka is one of the most significant *Ayurvedic* drug for the treatment of several feminine disorders especially in menorrhagia. The natives and traditional healers of Chhattisgarh use *Sita-Ashoka* (the name given to Saraca asoca) mainly in treatment of gynecological disorders. It has stimulating effect on endometrial and the ovarian tissue. It is useful in internal bleeding, hemorrhoids, ulcers, uterine affections, menorrhagia especially due to uterine fibroids, meno-metrorrhagia, leucorrhoea and pimples.

Ashoka in menorrhagia:

Ashoka dried bark has been used for menorrhagia in India. In India *Saraca asoca* dried bark as well as flower is given as a tonic to ladies in case of uterine disorders. *Saraca asoca* stem bark also used to treat all disorder associated with the menstrual cycle. *Saraca asoca*, dried bark, used as an astringent in menorrhagia, to stop excessive uterine bleeding.

Aqueous extract of the bark is reported to contain active principles, one stimulating and the other relaxing the plain muscle of the ileum of the guinea pig. The drug is reported to stimulate the uterus, making the contraction more frequent and prolonged. The crystalline glycoside substance is also reported to stimulate uterine contraction. Hence it can be understood as ***Ashoka*** stimulates uterine contraction there by arrest the bleeding [10,11.12,13]

Ashoka in Dysmenorrhoea

Ashoka bark in India, used as a uterine sedative and hot water extracts administered to human adult female stimulates the uterus similar to ergot, but without producing tonic contraction.[8] Aqueous extract of the bark is reported to contain active principles, one stimulating and the other relaxing the plain muscle of the ileum of the guinea pig,[11] the action can be expected as it reduce the effect of prostoglandins there by reduces the pain.

Saraca asoca leaves extracts are accountable for analgesic activity. The leaf extracts like petroleum ether, chloroform, methanol and water were investigated for Phytoconstituents like *sterols, glycosides, saponins, carbohydrates, alkaloids, flavonoids, tannins, protein* etc. The analgesic activity of above extract was evaluated by using tail immersion method and formalin induced pain method in albino mice. Analgesic activity of *petroleum ether, chloroform, methanol* and water extracts create dose dependent analgesic activity, formalin test is one of

the principle analgesic models to compare with clinical pain. In the early phase of formalin test pain arise due to the direct stimulation of the sensory nerve fibres by formalin while in the late phase pain was due to inflammatory mediators like histamine, prostaglandins, serotonin and bradykinins [14]

Ashoka in Amenorrhoea:

Saraca asoca is outstanding *ayurvedic* medicine for its use as a stimulant to the endometrium and ovarian tissue. The estrogenic effect of U3107 (1mg/kg p.o) was considered in normal and ovariectomised rats. U-3107 was administered as an aqueous suspension for a period of 21 days. The management of ovariectomised rats did not expand on uterine weight. U-3107 holds estrogenic activity only in the presence of functional ovary and is devoid of any progestational activity.This shows the action of *Ashoka* on HPO axis to stimulate ovulation.[11]

Ashoka in vaginitis:

The ethanolic extract of *Saraca asoca* leaves shows the anti-inflammatory activity. The leaves of Saraca asoca determined the antiinflammatory activity against Carrageenan induced paw oedema in animal is most suitable test procedure to screen anti-inflammatory activity. The ethanolic extract of *Saraca asoca* reduced the paw oedema significantly [16,17]

DISCUSSION

The available reference of Asoka in Ayurveda and purans texts shows wide range of use *Ashoka* in female reproductive disorder. Stambaka property of Asoka has prime role in managing diseases like vaginal inflammation with abnormal vaginal discharge and menorrhagia. To fortify the statement ,Galic acid a chemical constituent in *asoka* has proven gallic acid can inhibit motility, adherence and biofilm formation of *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Streptococcus mutans*, *Chromobacterium violaceum*, and *Listeria monocytogenes* .Hence it can understand that use of *asoka* reproductive tract infection seems to be beneficial and can validate after clinical trail.

The chemical constituents of bark of Asoka shows presensce of myoinsitol , the potent drug form which is widely using in treatment of PCOS . The administration of this molecule, acting as a direct messenger of insulin signalling and improving the glucose tissues uptake, could improve the insulin resistance status of PCOS women, restoring indeed their hormonal status and restoring the ovulation process.

A study showed that hot water extract administered to human adult females stimulates the uterus similar to ergot, but without producing tonic contraction. It is also used in treating menorrhagia, as an emmenagogue, uterine sedative, and uterine affections as well as used in several preparations related to dysfunction of the female reproductive system. Hence a Asoka gives wide range of opportunity in clinical research and in clinical practice.

CONCLUSION

The medicinal importance of the tree as discussed above evidently prove that *Saraca asoca* is one of the most promising botanical which possess a lot of therapeutic values. Several mechanisms are likely to account for the observed pharmacological effects, the most important being the antimicrobial, antimenorrhagic, uterine tonic, and analgesic, anti-inflammatory, antioxytocin activity. In future the standardization and stabilization studies on *Saraca asoca* can

be carried out which can help in proving it to be a promising source in pharmaceutical industry.

REFERENCES

1.Tuhin Kanti Biswas Asoka (Saraca Indica Linn) - A Cultural and Scientific Evaluation, Indian journal of history of science 7(2):99-114 · December 1972

2. Anonymous, Indian Medicinal Plants-A Compendium of 500 Species, vol 5, Orient Longman Pvt Ltd, Chennai, 2006.

3. Nadkarni AK, Dr. K.M. Nadkarni's, Indian Materia Medica, vol 1., Bombay Popular Prakashan, Mumbai, 2005.

4. Kashyapa K, Chand R, The Useful Plants of India, National Institute of Science Communication and information Resources, CSIR, New Delhi, 2006

5. Pradhan et al., Saraca asoca (*Ashoka*): A Review, Journal of chemical and pharmaceutical research, 2009, vol.1, pp. 62- 71.

6. Sharma PC, Yelne MB, Dennis TJ, Database on medicinal Plants used in Ayurveda, Central Council for Research in Ayurveda and Siddha, Department of ISM&H, Ministry of Health and Family Welfare (Govt. of India), New Delhi, 2005, p. 3, 76-8

7.PK Warrier; VPK Nambier; PM Ganpathy. Some important medicinal plants of the western ghats, India : A Profile. International Development Research Centre, New Delhi. 2000; 343-360.

8. Biswas TK, Debnath PK, Ind J Hist Sci, 1972, 7(2), 99-114.

9.http://www.saracaindica.com/Ayurvedic Pharmacopoeia of India. 2001. Vol. I; Part-I: 17-18

10. Middelkoop TB, Labadie RP, Int J Crude Drug Rec., 1986, 24(1), 41-44.

11. Bhandary MJ, Chandrasekhar KR, Averiappa KMK, J Ethnopharmacol, 1995, 47(3), 149- 158.

12. Kumar Y, Haridasan K, Rao RR, Bull Bot Surv India., 22 ¼, 1980, 161-165.

13. Middelkoop TB, Labadie RP, Naturforch Ser., 1985, 40(6), 855-857

14. Verma A et al., Analgesic activity of various leaf extracts of Saraca indica Linn., Der Pharmacia Lettre, 2010, 2, 352-357.

15.Mitra SK, Gopumadhavan S, Venkatarangana MV, Sharma DNK and Anturlikar SD. uterine tonic activity of U-3107 (even care), a herbal preparation in rats, Indian journal of pharmacology, 1999, 31, 200-203

16.Nayak S, Sahoo AM, Chakarbarti CK, Haque Ml, Antibacterial study of Saraca indica leaves extract, IJPRD, 2011, 3(3), 160-163.

17. ACHARYYA, S., PATRA, A. AND BAG, P.Evaluation of the Antimicrobial Activity of Some Medicinal Plants against Enteric Bacteria with Particular Reference to Multi-Drug Resistant Vibrio cholerae

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