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Ashok (Saraca asoca) in the light of Unani System of Medicine- A Review Article

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Abstract:

Unani system of medicine is a traditional system of medicine in which herbal therapies were used systematically. Ashok i.e. Saraca asoca (Roxb.) Wilde belonging to Caesalpinaceae subfamily of the Legume is one of the indigenous plants with lots of traditional significance. The all parts of this plant are considered pharmacologically important and has especially been used to manage various gynecological disorders like menorrhagia, leucorrhoea, dysfunctional uterine bleeding. Saraca asoca has been reported to contain phytoconstituents like flavonoids, steroids, glycosides, saponins, tannins, carbohydrates, proteins along with lot of pharmacological activities such as spasmogenic, oxytocic, uterotonic, anti-bacterial, anti-menorrhagia, anti-cancer, anti-esterogenic, anti-progestational, dermato protective, anti-mutagenic and geno protective activities. This review describes the socio-ethnobotanical usage, different reported pharmacological actions, phyto constituents and pharmacognostical information about Ashok herb. Saraca asoca is the ideal candidate for screening of its endophytes for pharmaceutical related compounds. It is hoped that this review will provide sufficient, ideal and unique information under one umbrella and also give new direction for the researchers and pharmaceutical industry to extend the Pharma worth of this natural product.

Keywords: Ashok, pharmacological activity, Pharmacognosy, gynecological disorder. House hold remedies and Unani formulation.

1. INTRODUCTION:

Traditional systems of medicine including Unani, Ayurveda, Sidha, Homeopathy, Naturopathy etc. are gathering increasing recognition in recent years. Traditional systems of medicine have always played important role in meeting the global health care needs. The World Health Organization (WHO) estimates that, 80 percent of the world population use herbal medicine for some treatment purposes. This is also in Media that soon AYUSH will be the mainstream medical science ahead. Unani System of medicine is one of the oldest traditional system of medicine which has strived through ages in the prevention and treatment of various medical conditions. Unani is the Arabic word for Ionian, or Greek for which popularly Unani medicine is also known as Unani Tibb or Graeco-Arab Medicine, as Arabs have developed and refined it through systematic experiment prominently by Avicenna. The history of Unani Medicine begins with the Greek notion of good health based on four humours. In countries of South Asian region, the Unani system of Medicine has been quite popular since centauries along with other traditional systems of Medicine. Today, the Indian government supports and subsidizes both Ayurvedic and Unani medical colleges and hospitals. But whereas Ayurveda has enjoyed a phenomenal surge in popularity, Unani Medicine still lags behind in recognition, perhaps due to its minority Islamic associations.

Fig. 1 Ashok plant with flowers

Fig. 2 Ashok plant and leafs

Plants have been used for medicinal purposes long before prehistoric period. Unani, Chinese, siddha, Ayurveda, the traditional system of medicine continue to be widely practiced on many accounts. Population rise, inadequate supply of drugs, prohibitive cost of treatments, side effects of several synthetic drugs and development of resistance to currently used drugs for infectious diseases have led to increased

emphasis on the use of plant material as a source of medicines for a wide variety of human ailments. Ashok is one the most ancient and sacred tree of India. It is known by its binomial nomenclature Saraca asoca (Roxb.) De. Wilde and Saraca indicia Linn. Belonging to Caesalpinaceae subfamily of the legume. Asoka or Ashok is the Sanskrit word that means "Without sorrow" Ashok is specially sacred to the Hindu god of Love, Kamadeva, for whom it is worshipped every year on December 27; it is mentioned in Hindu mythology that the Indian philosopher and founder of Buddhism, Gautama Siddhartha (c.563-483 B.C.) was said to have been born under this tree. In mahakavya, or Indian epic poetry the Ashok tree mentioned in the Ramayana in reference to the Ashok Vatika, where Hanuman first meets Sita. The Ashok is a rain-forest tree. Its original distribution was in the central areas of Deccan plateau, as well asthe middle section of the Western Ghats in the western coastal zone of the Indian subcontinent. The Ashok is valued for its beautiful foliage and fragrant flowers. The flowers being much used for religious ceremonies and temple decorations. It is a small, erect, evergreen tree, with deep green leaves growing in dense clusters. Its flowering season is around February to April. The Ashok flowers come in heavy, lush bunches. They are bright orange- yellow in color and turns into red before they fall.

Systemic:

A. **Gastro-intestinal tract** – In diarrhea, dysentery, worm infestation and thirst.
B. **Cardiovascular system** – The flower is indicated in edema and haemorrhages.
C. **Reproductive system** – In menorrhagia, dysmenorrhoea, leucorrhoea and other uterine disorders.
D. **Urinary system** – Powdered seed is used in dysuria and stones in the urinary tract.

The stimulant fractions is quite different in each case; thus he concluded that the stimulant fraction of Saraca indica acts by liberation of acetylcholine that of Polyalthia longifolia acts directly on the plain muscle fibre.

2. Unani medicine and the Concept of Health

Unani System of Medicine considers human body as a single unit, made of seven components known as Umoor-e-Tabiya. According to Unani philosophy, the body is made up of the four basic elements i.e. Earth, Air, water and fire which have different temperaments i.e. cold, hot, wet and dry respectively. After mixing and interaction of four elements a new compound having new Mizaj (temperament) comes into existence i.e. hot wet, hot dry, cold wet, and cold dry. The body has the simple and compound organs, which receive their nourishment through four Akhlaat (Humors) i.e. Dam (Blood), Balgam (Phlegm), Safra (Yellow Bile) and Sauda (Black Bile). Each humor has its own temperament blood is hot and moist, phlegm is cold and moist, yellow bile is hot and dry and black bile is cold and dry. Every person attains a temperament according to the preponderance of the humors in his/her body and it represents the person's healthy state. The temperament of a person may be sanguine, phlegmatic, choleric or melancholic

3. Pharmacological Action of Ashok.

Bark is strongly astringent and uterine sedative. It acts directly on the muscular fibers of the uterus. It has a stimulating effect on the endometrium and the ovarian tissue. The Ketosterol present in the bark of Ashok seems to be androgenic in nature. The activity of the drug appears to be due to the presence of the steroidal component and the calcium salt. Aqueous extract of the bark is reported to contain two active principles, one stimulating and other relaxing the plain muscle of the ilium of the guinea-pig. The drug is reported to stimulate the uterus, making the contractions more frequent and prolonged without producing tonic contraction as in the case of pituitary or ergot. The crystalline glycosidal substance is also reported to stimulate uterine contraction. It is suggested that the drug may prove useful in all cases of uterine bleeding where ergot is indicated. The drug is reported to have a stimulating effect on the endometrium and ovarian tissue, and is useful in menorrhagia due to uterine fibroids, in leucorrhoea and in internal bleeding, haemorrhoids and haemorrhagic dysentery.

4. Afa'al (Action) of Ashok in Unani system of Medicine.

In classical Unani literature, various actions of bark of the plant Saraca asoca have been described such as Anti-menorrhagic, Dafe Atash (Refrigerent), Qaatil-e-Deedan (Vermicidal) Dafe Bawasir (Anti-haemorrhoid) Muqawwi-e-Aasaab (Neural Tonic); Muqawwi-e-Rahem (Uterine Tonic), Dafe Isqaat (Anti-Abortive), Musakkin (Sedative), Mohallil-e-Auram (Anti-inflammatory) (Ramlubhaya, YNM); Qabiz (Astringent) and Haabisuddam.

5. Istemal (Uses) of Ashok in Unani system of Medicine.

Ashok Chhaal has been described to be useful in various ailments. It is used in many uterine diseases due to its strong haemostatic property and astringent effect on uterine muscles. It is specially used in Kasrat-e-Haiz (menorrhagia). It is used in Zofe-Rahem (Uterine debility), Sailanur Rahem (Leucorrhoea) and Ikhtenaqur Rahem (Hysteria) due to its tonic effect on uterus. The powdered bark 10 gm is mixed with milk 10 ml, then water 500 ml is added and the mixture is boiled till all the water is evaporated. The remaining solution is divided into three doses. Ashok Chhaal in a dose of 10 gm is also used as a decoction. Extract of Ashoka flower is useful in haemorrhoid and dysentery. Liquid extract of Ashok Chhaal can be used in a dose of 20-60 drops. For above purpose, powder of Ashok Chhaal in a dose of 3-5 gm can also be used. This powder should be consumed along with milk for good results, twice or thrice a day.

A. Dose (*Miqdar-e-Khorak*):

Safoof: 5 gm with milk (Ali, 1999).

Sharbat: 20-40 ml (Raml Lubhaya, YNM).

Decoction: 10-20 gm (Raml Lubhaya, YNM).

B. Compounds: Mastureen by Hamdard

Fig. 3 Ashok Bark powder

Fig. 4 Ashok formulation

6. Phytochemical study of Ashok.

Jayita Saha and Taniya Mitra et al has conducted the phytochemical and HPTLC analysis in Saraca asoca (Roxb.) Wilde and they were concluded that, the experimental yield of chloroform, ethanol, methanol, and water extracts of Saraca flower were found to be 1.80%, 11.90%, 15.10% and 22.00% respectively. Water soluble extractive value showed the presence of sugar, acids and inorganic compounds and alcohol soluble extractive values determined the presence of polar constituents. The physicochemical parameters total ash, acid insoluble ash and water soluble ash value were found to be 3.00%, 2.02% and 1.12% respectively. Total ash value percentage showed the amount of mineral and earthy material present in the plant sample. The amount of acid insoluble siliceous matter present in the plant sample was 2.02%. Alkaloids were found to be absent in all the four extracts. Carbohydrates, tannin, flavonoid, saponin, glycosides, proteins and steroids were found to be present in methanol and ethanol extracts. The chloroform extract contained only carbohydrates whereas the water in addition to carbohydrates, contain tannin, flavonoid, saponin and steroids. Methanolic extract of flower and leaves confirmed the presence of gallic acid using HPTLC assay. Jayita Sahaet al has firstly reported the presence of gallic acid in Saraca asoca leaf. The presence of gallic acid in leaf is very important because flowers are only seasonal, while leaf is available throughout the year.

Bark of S. asoca is the most important organ for its medicinal value. It is known to contain flavonoids, tannins, steroids, volatile oil, glycosides, steroidal glycosides such as β-sitosterol glucoside reducing sugars, and many compounds of potassium, sodium, calcium, aluminum, strontium, calcium, iron, magnesium and phosphate. Powdered bark also carries cellular species. Leaves of S. asoca have been reported to contain alkaloids, steroids, flavonoids, tannins, saponins, terpenoids, polyphenolics,

glycosides and many carbohydrates. The antioxidant activity of the leaf extracts has been described to be due to the presence of polyphenolics such as gallic acid and ellagic acid. Flavonoids such as quercetin, β-sitoterol, ceryl alcohol, and glucosides such as quercetin-3-O-α-rhamnoside and kaemferol-3-O-α-L-rhamnoside have been reported from S. asoca leaves. The flowers of S. asoca have been shown to contain tannins, flavonoids, saracasin, saracadin, waxy substances, carbohydrates, proteins and steroids. They are especially known for the presence of many fatty acids such as oleic, palmitic, stearic, linolenic and linoleic acids; glucosides such as quercetin-3-O-P-D- glucoside, apigenin-7-O-p-D-glucoside,pelargonidin-3,5-diglucoside and cyanidine-3,5-diglucoside; steroids such as p- and y-sitosterols; flavonoids such as quercetin, leucocyanidin, and polyphenolics such as gallic acid and ellagic acid. Seeds of S. asoca have been reported to contain various fatty acids such as oleic, linoleic, palmitic and stearic acids; sterols such as catechol and epicatechol; and a flavonoid, leucocyanidin. Saracin, a lectin from S. asoca seeds has been reported as an inducer of apoptosis or even mitogenic in human T- lymphocytes. Phenols, flavonoids, tannins, saponins, carbohydrates, glycosidesand salicylates have been demonstrated in the acetone extracts of S. asoca seeds. Fruits have been reported for the presence of various fatty acids such as oleic, linoleic, palmitic and stearic acids; sterols like catechol and epicatechol, and a flavonoid, leucocyanidin. Roots contain resinous and extractive matter, gum, sugar, colouring matter and salts of lime. Colouring matter consists of red crystalline principle purpurine; a yellow principle glucoside garancin, alizarin (orange red) and xanthine (yellow).

7. Pharmacological activity of Ashok.

A. Anti-menorrhagic activity of Ashok.

Ashok dried bark has been used in India for menorrhagia. In case of uterine disorder Saraca asoca dried bark and flowers are given as a tonic in females of India. Saraca asoca stem bark is also used to treat all the disorders related with menstrual cycle. In Sri Lanka Ashok bark is used for menstrual disorders and in menorrhagia. In India Saraca asoca bark is used as a uterine sedative and its hot water extract administered to human adult female to stimulate the uterus similar to ergot, but without producing tonic contractions. Also given in menorrhagia, as an emmenagogue, uterine sedative, uterine affections as well as used in many preparations related to female disorders. In Nepal Saraca indica bark is used to cure uterine affection and menorrhagia. In India dried bark of Saraca asoca is used as an astringent to stop excessive uterine bleeding.

Fig. 5 Ashok used to control Menstruation Cycle Pain

Fig. 6 Menstruation Cycle Pain in female

B. Antimicrobial activity of Ashok.

Saraca asoca possesses antibacterial activity on agar plate with different organisms such as Bacillus subtilis, Salmonella typhosa, Staphylococcus aureus, and (plant pathogen). Agrobacterium tumefaciens showed negative activity.Ashok dried flower buds are tested against antibacterial activity of methanol extract on agar plate against Shigella boydii, Escherichia coli, Salmonella viballerup, Shigela flexneri, Vibro cholera and Shigella dyserteriae showed positive result. Saraca asoca leaves tested against antibacterial activity of ethanol and water extract on agar plate Escherichia coli and Staphylococcus aureus. Escherichia coli found active whereas tested against Staphylococcus aureus showed negative result. The methanolic extract of Saraca asoca was tested against Alternaria cajani, Helminthosporium sp., Bipolaris sp., Curvularia lunata and Fusarium sp., at different concentrations (1000, 2000, 3000, 4000 and 5000 ug/ml). The extracts exhibited good inhibitory activity against A. Cajani, also it effective at lower concentrations against other fungi. Four different extract of Saraca asoca bark tested antibacterial activity against Escherichia coli, Salmonella typhi, Pseudomonas aeruginosa, Staphylococcus aureus, Bacillus cereus, K. Aerogenes, Sh. Boydis, P. vulgaris.different extract of Saraca asoca bark were tested against the enteric pathogen isolates namely Escherichia coli, Shigella sonnei and Salmonella enteritis.All the extract except aqueous extract showed antimicrobial activity and highest percentage of activity was observed with the methanol extract. Methanol and water extract of Ashok leaves having good activity against Bacillus subtilis, Pseudomonas aeruginosa and Salmonella typhimurium also both the extract showed marked activity against Alternania alterate, Colletotrichum gloesporioodes and Drechlera specifera.

C. Uterine tonic activity of Ashok.

In medicine Saraca asoca is a drug of choice for its stimulant activity on the endometrium and ovarian tissue. The estrogenic effect of U- 3107 was considered in healthy and overiectomised rats. U-3107 was administered as an aqueous suspension for a period of 21 days. The management of overiectomised rats did not any expand on uterine weight. Only in the presence of functional ovary U-3107 perform the estrogenic activity and is devoid of any progestational activity. U-3107 is a herbal preparation which is formulated by using various plant extract and is useful in variety of menstrual disorders like puberty, menorrhoea, Dysmenorrhoea, premenstrual syndrome, abnormal bleeding and threatened abortion.According to ayurrveda Ashoka or also known as asoca, bark powder is an effective uterine tonic, it helps to tone the uterus, easing heavy menstrual flow and relieving discomfort. The bark of ashoka also contains natural phytoestrogens which help to regulate the menstrual cycle, stimulating the uterus to normalise menstrual flow.

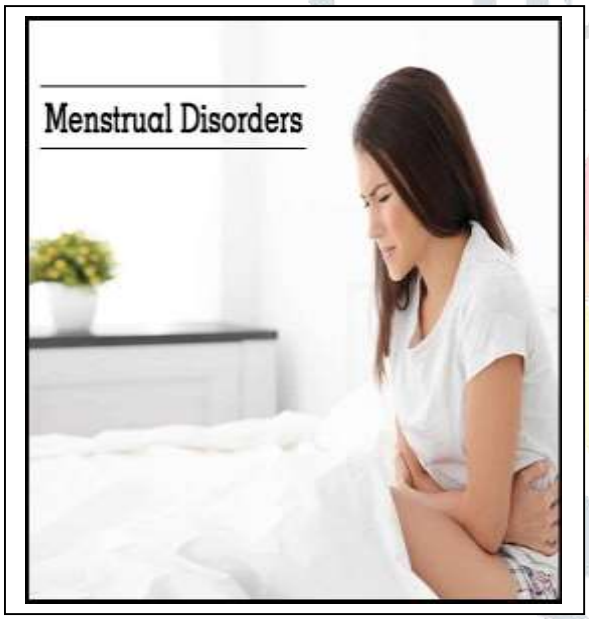

Fig. 7 Ashok used as uterine tonic in Menstruation Cycle Pain

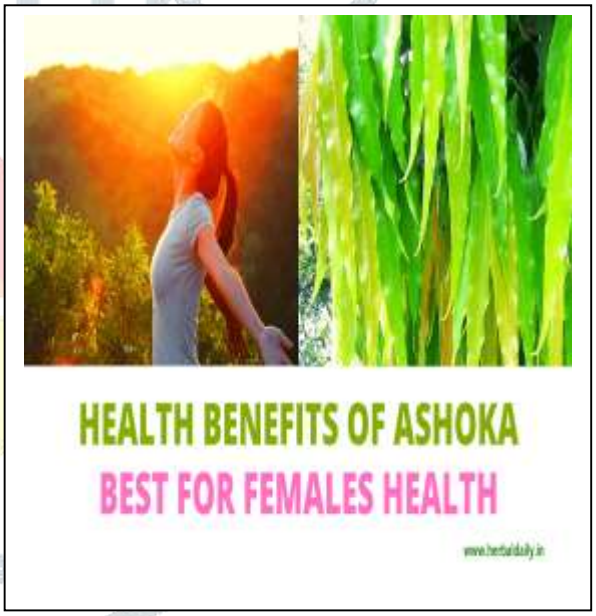

Fig. 8 Ashok used for various Gynecological problem

It is also rich in flavonoids, tannins and glycosides that work as a uterine sedative that has a direct impact on the fibres present in the muscles of the uterus. E. Ashoka can be effectively used to aid with a number of uncomfortable menstrual disorders such as; Premenstrual Syndrome, Amenorrhea (absent periods), Dysmenorrhea (painful periods) and Menorrhagia (heavy and prolonged menstrual bleeding).

D. Analgesic activity of Ashok.

There is lot of information available about the analgesic action of Saraca asoca in classical text of Ayurveda. The leaf and bark extract of Ashok like Petroleum ether, chloroform, methanol and water extract was evaluated by using tail immersion method, tail flik method and formalin induced pain method in albino mice. The analgesic property of Saraca indica has been attributed to its ability to inhibit sensory nerve stimulation (early phase). Analgesic effect of petroleum ether, chloroform, methanol, and aqueous extracts create dose dependent analgesic activity, in the early phase of formalin test pain arise due to the direct stimulation of the sensory nerve fibers by formalin while in the late phase pain was arise due to inflammatory mediators like histamine, prostaglandins and bradykinins. Thus it is assumed that extract of Saraca asoca typically relieved the pain by acting on both central as well as peripheral nervous system.

Fig. 9 Ashok used to control Ulcer in female and male

Fig. 10 Inflammation condition during ulcer

E. Anti-ulcer activity of Ashok.

The aqueous suspension of Ashok flowers, dried flower buds, bark and seeds were shown to produce ulcer in albino rats by using two models, namely pyloric ligation and aspirin- induced gastric ulcer. As compared to control rats, in both experiments the volume of gastric juice produced, the acidity and an ulcer index were shown to be reduced remarkably when treated with water extract of saraca asoca. The anti- ulcerogenic effect of these extract may be due to the presence of saponins, triterpenes, tannins, catechin, sterols, phenolic glycosides and flavonoids. Thus, the aqueous suspension of saraca asoca flowers produced the anti-ulcer potential activity either by inhibition of basal gastric secretion and/or stimulation of mucus secretions and /or endogenous gastric mucosal prostaglandin synthesis and /or antioxidant activity of flavonoids present in the water extract of saraca asoca

F. Anti-helminthic activity of Ashok.

Parasitic worms present in the human body are responsible for malnutrition, weakness, and more susceptibility to bacterial and viral infections. The methanolic and ethanolic extract of Saraca asoca leaves has been used for anti-helminthic activity and piperazine citrate used as a positive control against Indian earthworm. The methanolic and ethanolic extract has been reported to paralyze and kill the adult Indian earthworm. The glycosides, alkaloids, tannin, flavonoids and terpenoids from the ethanolic and methanolic extract of Ashok seems to be the important phytochemical constituents for performing anti-helminthic activity.

G. Anti-oxidant activity of Ashok.

A number of study has been reported to described the

Fig. 11 Health Benefits of Ashok

Fig. 12 Ashok- life saving drugs

presence of various antioxidant compounds such as Catechin, flavonoids, β- sitosterol and its glucoside form, ascorbic acid, lignin glycosides, polyphenols like gallic acid in petroleum ether, chloroform, and methanol extract of Ashok leaves, bark and flowers**.**

H. Anti-diabetic and hypo-lipidemic activity of Ashok.

The flavonoid fraction of Saraca asoca flowers and leaves has been shown to inhibit α- glucosidase and α- amylase enzymes linked to type-2 diabetes and also prevent LDL oxidation. These study have also been reported that Ashok extract lower lipid and cholesterol level and reduce the elevated glucose levels in a dose dependant manner an STZ- induced diabetic albino rats and mice. Several study have also been reported to reduce the diabetes induced renal oxidative stress. Use of these extract also improve the pancreatic, renal and hepatic profiles and overall health in diabetic mice.

Fig. 13 Ashok used to control CNS Depression

I. CNS depressant and brain tonic activity of Ashok.

The petroleum ether, chloroform, methanol and aqueous extracts of leaves of Saraca asoca shows CNS depressant activity depending upon their polarity out of which the methanol extract shows maximum CNS depressant activity in albino mice. The activity was examined by using phenobarbitone induced sleeping time with the help of actophotometer. The extract of Saraca asoca significantly reduced the locomoter activity in mice by 67.33%. The mechanism of the depressant activity can be associated with activation of γ- aminobutyric acid (GABA) receptors in the CNS by glycosides, flavonoids, saponins and tannins present in the plant extract which culminates in anxiolysis, muscle relaxation and sedation.

J. Infertility activity of Ashok

Ashok is considered particularly effective for female infertility and endometriosis. One study, published in "Complementary Therapies in Clinical Practice", identified Ashok as one of the herbal remedies used by traditional healers in remote areas of India to successfully treat “reproductive disorders”. An article published in the "Journal of Clinical and Diagnostic Research", explored some of the infertility treatments popular amongst Indian women. It said, “The drug of choice for female infertility is Ashok, by its astringent taste and cold potency, it strengthens the uterus. It stops the bleeding by contracting the uterine blood vessels and promoting uterine muscular contraction. It stimulates the uterine function by stimulating the

(endometrium) and the ovarian functions". It is important to note that diet and lifestyle were also addressed during treatment. The success of Ashok in the treatment of infertility in women may be linked to the herb's ability to successfully treat endometrios - one of the leading causes of infertility in women.

K. Larvicidal activity of Ashok.

The pet ether extract of the leaf and the chloroform extracts of the bark of Saraca asoca effective against the larva of c. Quin-quefasciatus with respective to LC50 value. The larvicidal bioassay follow the WHO standard protocols for experimental treatment, 1ml of plant extract dissolved in absolute ethanol was added to 99ml of distilled water in 150 ml disposable wax coated paper cup, which was shaken lightly to make a homogeneous test solution. Then 25 early fourth Inster larve of vector mosquito were transfer to each experiment was performing in four relplicates with a final total of 100 larve for each concentration. The test container was held at 27 +/-2c, 80-90% relative humidity and photoperiod of 12h dark. After 24 h exposures larval mortality was recorded. The experiments were repeated twice.

L. Anti-oxytocic activity of Ashok.

Oxytocic activity of Saraca asoca herb was seen in rat and human isolated uterine preparations. Estrogen primed or gravid uterus was more sensitive to the action of the alcoholic extract. Oxytocic action was completly blocked by Pentolinium bitartrate. Seed extract is found effective against dermatophytic fungi. In- vitro tests on rat uterus preparation, extract of Ashok did not show oxytocic activity. Saraca asoca has been tested twice previously with negative result and once with positive result.

Fig. 15 Ashok used as Anti Arthritic in Pain

Fig. 16 Ashok used in Diarrhea, Pile, and Diabetes

M. Anti- arthritic activity, Anti-inflammatory and Cardio protective Activity of Ashok.

Chronic arthritis and cardiovascular diseases are generally attributed to the inflammatory response mediated by pro inflammatory cytokines. The ethanolic and methanolic extracts of the leaf, bark and root of *S. asoca* have been shown to exhibit anti-inflammatory potential by significantly inhibiting the binding of various transcription factors such as NF-□B, AP-1, GATA-1, etc. to their target DNA sequences, thereby lowering the levels of roinflammatory cytokines11. *S. asoca* extract has also been shown to reduce the levels of pro-inflammatory cytokines IL-1 and TNF-□40. Several reports describe the antiarthritic potential of *S. asoca* using the model system of Carageenan-induced paw oedema and also brine shrimp assay. Furthermore, *S. asoca* plant extracts have been shown to reduce the level of liver and lysosomal enzymes, serum collagen and restoring of normal histological architecture of joints, thereby reducing rheumatoid arthritis in rats. The ethanolic extract of *S. indica* has been reported as anti-inflammatory and also shown to protect cardiac tissue from infiltration of inflammatorycells. *S. asoca* extracts are also known for their hemopurificatory effect.

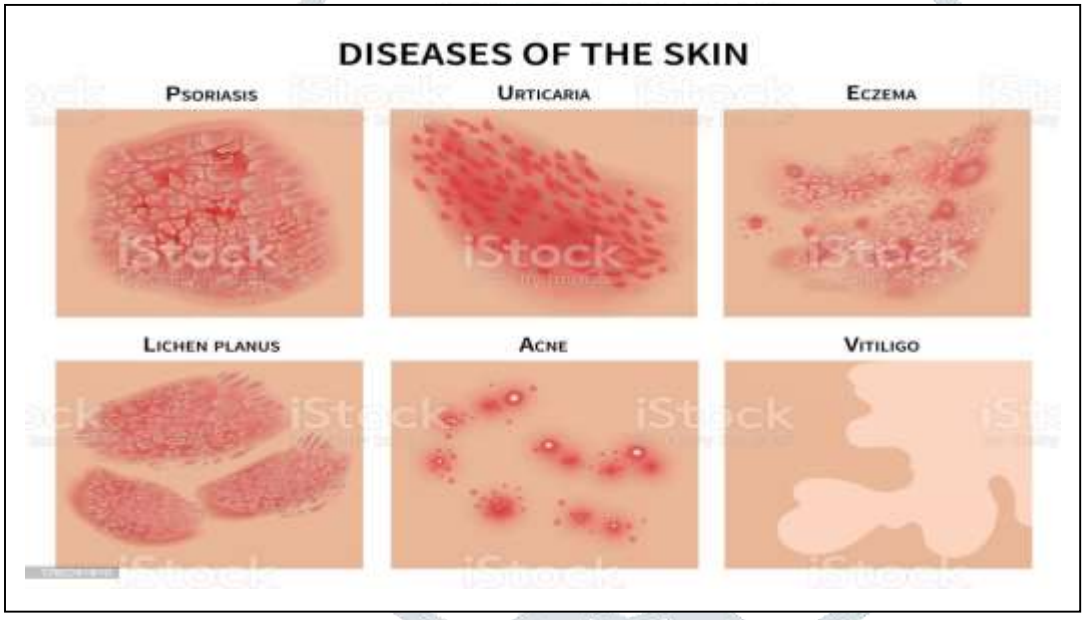

Fig. 17 Ashok used to control Skin Diseases

N. Dermato protective activity of Ashok.

In classical text references are available about Saraca asoca to improve skin complexion. Lot of researches has been performed on Ashok plant extracts and reported that the root, bark and seed extract of S. asoca useful in the treatment of skin complications such as eczema, psoriasis, acne, dermatitis, herpes- kushta/ visarpa, scabies, pruritis, tinea pedis and skin cancer. The flower extract of S. asoca contain flavonoids, has been shown to reduce the skin tumours induced by 7, 12- dimethyl benzanthracene. It also improve skin complexion, induce quick healing of skin injuries, and reduce freckles and external inflammation of the skin.

8. Ashok as Home remedies

In Pradara Roga of females, Ksheerapaka of its 6 gm bark powder should be taken. it is so effective in all types of abnormal discharges per vagina. Ksheerapaka is also beneficial in uterine inertia, uterine pain, urinary calculus, dysurea. In pain, its paste of bark should be applied on that site. The womenfolk of Chhattisgarh boil the bark of *Ashoka* in cow's milk, add sugar and consume it once a day for three days and repeat the course after three months to prevent gynecological disorders. In India married Hindu women eat the flower buds of *Saraca asoca* on the "Ashok Shasthi day" to guard their children against grief and sorrow. The persons suffering from mental disorder are advised to take bath under the shade of Ashok tree. For mental piece, the natives prepare special Herbal Mala using root pieces of Sita Ashok and give it to the patients. The patients are advised to put the powdered seeds inside the Pan (Betel vine) and eat it empty stomach. It is general recommendation by the healers to boil the bark with cow's milk and take the milk. For taste, sugar can be added. The healers suggest every female native to take this milk once in a day, upto three days, in every 3 months, as preventive to gynecological troubles. In case of menorrhagia, the healers boil the bark in water and prepare a decoction. In this decoction many other herbs are added. This decoction is given every morning to the patients. Many healers boil the bark in milk also. The decoction is also used externally for washing. In case of Safed Pani (Leucorrhoea), the healers boil the bark in mixture of milk and water. When water evaporates, the combination is given to the patients

Conclusion:

Saraca asoca is regarded as a universal panacea in the classical Indian text. Ashok is used to treat feminine disorders since ages, such as menorrhagia, leucorrhoea, dysfunctional uterine bleeding bleeding, haemorrhoids etc. There are lot of references found in the Ayurvedic literature that, Ashok is the drug of choice in female troubles as it is endowed with large scale of pharmacological activities such as, anti-cancer, anti-menorrhagic, anti-microbial, larvicidal, anti-oxidant, anti- tumour, CNS depressant, anti-diabetic, anti- estrogenic, anti-progestational, dermatoprotective, anti-mutagenic, genoprotective. It is used extensively in Ayurveda, Unani and Homeopathic science of medicine. This versatile plant is the source of many phytochemical compounds such as, flavonoids, tannins, saponin, glycosides, proteins, steroid etc. Beyond this important characteristic of Ashok some lacunae remains in the research studies of Ashok plant like lack of comprehensive modern scientific investigations like spectroscopy, spectrometry, metabolomics, molecular and physio-chemical-based research studies for its known pharmacological value. Also purpose oriented, rapid, scientific standardization for evaluation of raw material and quality control processes are required to develop more effective and safer therapeutic natural products from this important medicinal plant. Ashok cell culture techniques are also essential to study different aspect of its metabolite production. Ashok is the well-known source of new and host plant – associated bioactive secondary metabolites. Pharmaceutical bioprospecting of Saraca asoca associated endophytes provide a new dimension to expand the pharma worth of this plant.

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