

**A REVIEW ON SHILAJATHVADI YOGA AND ITS CONTENT****Dr. Sreelakshmy Changath\*<sup>1</sup> and Prof. Y. K. Sharma<sup>2</sup>**<sup>1</sup>MD Scholar 3<sup>rd</sup> Year, Deptt. of Kayachikitsa, RGGPGAC Paprola HP.<sup>2</sup>Ex. Principal cum Dean, RGGPGAC Paprola HP.Article Received on  
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of Kayachikitsa, RGGPGAC  
Paprola HP.**ABSTRACT**

Shilajathvadi Yoga is a Herbo-Mineral preparation used for the treatment of Diabetes. Diabetes can be considered as one of the variant of Ayurvedic description of Prameha. The importance of over nutrition and sedentary life style is shown by the fact that over the age of 40, some 80% of patients developing diabetes are considerably over weight. Shilajatu is mentioned as one of the Shreshta Dravya<sup>[1]</sup> for Prameha. In Ayurveda, it is said that there is no curable disease that can't be cured with Shilajatu.<sup>[2]</sup> In Prameha body acquires Shaithilya and Shilajatu is able to improve the quality of body tissues. Shilajathvadi Yoga is a patent drug proprietary medicine in the form of

capsules. On Conducting Clinical study Shilajathvadi Yoga showed significant results in lowering FBS and PPBS along with reducing the symptoms of Prameha. The main content Shilajatu, being Dehadardyakara and Rasayana improves the quality of Dhatu production. Other ingredients of this drug are widely used by Ayurvedic Practitioners to treat Prameha. All other properties enable the drug to act effectively against the Prameha by breaking its Samprapti. This paper is an humble attempt to make a review on the formulation "Shilajathvadi Yoga".

**KEYWORDS:** Shilajathvadi, Yoga, Prameha, Dehadardyakara, Shaithilya, Dhatu, Samprapti.

**INTRODUCTION**

The most important weapon for a physician to cure illness is nothing but Dravya. A large number of single drug and compound drugs are mentioned in our classics in each and every disease. The prime factor to conquer a disease is the logical application of these array of drugs according to the condition of patient and the stage of disease.

The drug “Shilajathvadi Yoga” is a patent drug proprietary medicine contains thirteen drugs namely Shudha Shilajatu, Meshashringi, Saptarangi, Kutki, Asana, Jambu beej, Methika, Karavellaka, Trikatu, Trivrit, Aswagandha and Jasada Bhasma where Shilajatu is the main content. The patented Anti-diabetic drug by the name ‘Cap Diacea’ manufactured by MB LIFE SCIENCES PVT LTD, Delhi having the contents taken as ‘Shilajathvadi Yoga’.

**Table No. 1: Each hard gelatine capsule is made of following dry extract powders.**

Sl. No.	Ingredient Name	Type	Botanical Name	Part Used	In Mg/cap
1.	<b>Shudh. Shilajatu</b>	Aqueous Extract	Purified Asphaltum	Ex.	84
2.	<b>Kutki</b>	Aqueous Extract	Picrorhiza kurroa	Rz	63
3.	<b>Asana</b>	Aqueous extract	Pterocarpus marsupium	Ht. Wd.	42
4.	<b>Mesha Shringi</b>	Methanol Extract	Gymnema sylvestre	Lf	42
5.	<b>Methika</b>	Aqueous Extract	Trigonella foenum	Sd	50
6.	<b>Jambubeej</b>	Aqueous Extract	Syzygium cummini	Sd	42
7.	<b>Karavellaka</b>	Aqueous extract	Momordica Charantia	Fr	34
8.	<b>Saptrangi</b>	Aqueous extract	Salacia oblonga	St Bk	34
9.	<b>Jasada Bhasma</b>	API	API	-	42
10.	<b>Trikatu</b>	Hydro alcoholic extract	AFI	-	30
11.	<b>Trivrit</b>	Aqueous Extract	Operculina turpethum	Rt	17
12.	<b>Guduchi</b>	Aqueous extract	Tinospora cordifolia	St	25
13.	<b>Ashwagandha</b>	Aqueous extract	Withania somnifera	Rt	10

**Shilajatu:** Shilajatu is an exudation from rocks during hot sunny days. Though it may be occurring in many parts of the world but India was the first to highlight its tremendous therapeutic value for many centuries BC.

**Synonyms:** Adrijit, Adhryam, Atitih, Adrija, Adreyam, Ashmajam, Dhatu, Girih, Girija, Gaireya, Shila, Shilabhyam, Shaileyam, Shaila, Jatu.<sup>[3]</sup>

**Table No. 2: Showing Types of Shilajatu.**

Charaka <sup>[4]</sup>	Sushruta <sup>[5]</sup>	Rasa Ratna Samucchaya <sup>[6]</sup>
Svarana (Gold)	Svarna	
Rajata (Silver)	Rajatha	Gomutra Gandhi
Tamra (Copper)	Tamra	Karpoora Gandhi
Lauha (Iron)	Lauha	
	Naga	
	Vanga	

#### **Purification<sup>[7]</sup>**

Before administration of any drug, it is well instructed that the drug should undergo through a proper purification procedure so that it should be devoid of not only the external impurities or internal impurities but also it will have good potencing effect too. Regarding the Shilajatu,

different purification method have been described by different authors. Charaka has not specifically described about the purification aspect of Shilajatu although the impregnated liquid and the dosage is mentioned. It is mentioned that Shilajatu should be impregnated in the decoction of drug, which are useful in Vata, Pitta, Kapha disorders respectively as per the requirement. Vagbhata followed the concept of Charaka. Sushruta mentioned about the purification method with Salsaradi Gana drugs. In Rasa Tarangini, the author has described purification process in Shilajatu in detail, which includes not only the condition in which it is purified but also the technique to extract Shilajatu as per Suryatapi method, where the solvent used are hot water and Triphala decoction.

### Properties

Rasa, Guna, Virya, Vipaka, Karma can be considered as the properties of the drugs.<sup>[8]</sup>

**Table No. 3: Showing properties of Shilajathu.**

Shilajatu	Rasa	Virya	Vipaka
Svarna	Madhura-Tikta	Sheeta	Katu
Rajatha	Katu	Sheeta	Swadu
Tamra	Tikta	Ushna	Katu
Lauha	Tikta, Lavana	Sheeta	Katu

### Specific properties of Shilajatu

**1. Chedana:** A property which expels the Kaphadi Doshas from the Srotas. Chedana drugs are usually belong to Amla, Katu Rasa and Teekshna Guna. On the other hand Chedana serves two fold function.

- a. Amla helps is Vilayana and obstructive materials.
- b. Katu and Tikta expels the vitiated material from the Srotas.

Due to above properties Shilajatu acts as Chedana and is useful to break the Samprapti of Prameha.

**2. Virookshaneeya:** Shilajatu also has Virookshaneeya i.e. Medoghna and Chedaniya i.e. Srotovishodaneeya property. This helps in Samprapti Vighatana at the level of Bahu Abaddha Meda, Mamsa, and Shariraja Kleda.

**3. Anulomana:** Gives strength to the intestinal structures and releases the Vata from the intestine. Triphala Shodhita Shilajatu possess Ushna Virya and Anulomana properties.

**4. Hridya:** Drugs possessing Ushna Virya, Katu Rasa gives stimulation to the heart function. Shilajatu possess these properties and acts as Hridya.

**5. Rasayana:** Rasayana is one which increase the Rasa Raktadi Dhatus. Shilajatu has been explained by Acharya Charaka and Vagbhata in the context of Rasayana. It increases longetivity, resistance power and imparts rejuvenation to the body.

**6. Deepana:** The drug which stimulates gastric fire is called Deepana. Shilajatu is having the propterites of Katu, Ushna Virya and it is Laghu, so it acts as Deepana. Katu Rasa of Shilajatu stimulate the function of the Vyana. So the normalised function of the stomach also helps in digestion.

**7. Pachana:** The drug that disintegrates Ama but does not stimulate Agni is called Pachana. Shilajatu owing to Katu, Tikta, Ushna Virya helps in Pachana of Ama.

**8. Phyto-chemistry and pharmacology:** Shilajatu contains over 85 minerals in ionic form. Fulvic acid, humic acid, hippuric acid and benzopyrones. In the present time it is used as anti-diabetic, immunomodulatory, Nootropic, anti-anxiety, antiviral activity, anti-inflammatory, analgesic, protection of mast cells from degranulation, free radical scavenging and anti oxidant effect, spermatogenic and ovogenic effects etc.

#### ASANA<sup>[9]</sup>

❖ Latin name	-	Pterocarpus marsupium
❖ Family	-	Leguminosae
❖ Synonyms	-	Vijaysara, Beejaka, Peetashalaka, Priyaha Sarjaka, Bandhookapushpa.
❖ Vernacular names	-	English - Indian kino tree/ malabar kino tree Hindi - Vijaysar, Bijasal, Bia
❖ Useful parts used	-	Sara (Heart wood)
❖ Phyto constituents	-	Kino heart wood contains 70-80% of kinolainic acid, kinored, K-pyrocatechum (catechol), resin and gallic acid.

**Habitat:** A moderate to large sized, deciduous tree, upto 30 m high found mostly through out Gujarat, Madhya Pradesh, Bihar and Orissa.

**Pharmacodynamics**

- ❖ Rasa - Kashaya
- ❖ Guna - Ruksha, Laghu
- ❖ Virya - Ushna (Sita acc. To Pr. Ni.)
- ❖ Vipaka - Katu
- ❖ Doshagnata (Action on Dosha) - Kapha Vata Shamaka, Kaphahara because of Ushna Virya, Katu Vipaka and Kashaya Rasa.; Pitta Shamaka because of Kashaya Rasa; Vatahara (Ka.Ni) because of Ushna Virya.
- ❖ Rogagnata (Therapeutic indication) - Prameha, Kushta, Visarpa, Switra, Krimi, Kesavikara, Rakta Pitta, Medoroga, Galaroga
- ❖ Karma (Action) - Pramehahara, Twachya, Kesya, Krimighna, Visarpahara, Kushtaghna, Medohara, Rasayana Galadoshahara, Sthambana, Raktasodhaka
- ❖ Dosage - Kwatha (Decoction) - 40-80 ml  
Churna (Powder)-3-5g

**Phytochemistry and pharmacology:** It is a rich source of polyphenolic compounds (Mayura R.,2004). Epicatechin, a flavonoid isolated from bark (Akhtar Hussain., 2004) is assumed to be the main compound responsible for anti-diabetic activity (Ahmad F et al., 1989), other pharmacological actions include potent anti-oxidant activity, anti-diarrheal activity, anti-inflammatory activity, cardiogenic activity, memory enhancing activity.

**KUTKI**

- ❖ Latin name - Picrorhiza kurroa
- ❖ Family - Scrophulariaceae
- ❖ Synonyms - Katuka, Tikta, Katurohini, Kandruha, Matshyashakala, Krishanabheda, Shatparva, Chakrangi
- ❖ Vernacular names - English - Picrorhiza  
Hindi - Katuka
- ❖ Useful parts used - Root
- ❖ Phyto constituents - Root contains, glycoside (bitter), picrorhizin and kutkin.

**Habitat:** A perennial, more or less hairy herb common on the north-western Himalayas from Kashmir to Sikkim.

**Pharmacodynamics**

- ❖ Rasa - Tikta
- ❖ Guna - Ruksha, Laghu
- ❖ Virya - Sheeta
- ❖ Vipaka - Katu
- ❖ Doshagnata - Kaphapittahara (Action on Dosha)
- ❖ Rogagnata (Therapeutic indication) - Prameha, Kushta, (Skin disease) is Vishama Jwara, Sthanya Vikara, Kasa, Shwasa, Aruchi, Agnimandya
- ❖ Karma (Action) - Yakrit Vikara, Kamala, Prameghna, Sthanya Shodhana, Kushtagna, Dahaprashamana, Rechana, Rakta Shodaka.
- ❖ Dosage - Churna (Powder) - 3-6g (Rechanartha)

**Phytochemistry and pharmacology**

Contains 132 active ingredients from different parts of the plant such as roots, stem, leaf and seeds. Kutkin is the major ingredient. Some biological activities which have been assessed from this species are hepatoprotective, antioxidant, immunomodulatory, anti cancer, anti inflammatory, anti microbial, nephron protective, analgesic etc. Anti diabetic activity has been assessed from the rhizome of the plant (Husain et.al 2014)

**MESHA SHRINGI**

- ❖ Latin name - *Gymnema Sylvestre*
- ❖ Family - Asclepiadaceae
- ❖ Synonyms - Ajashringi, Vishaani, Madhunaashini, Putrashreni, Sarpadanshra, Vartika.
- ❖ Vernacular names - English - Periploca of the woods  
Hindi - Gurmar
- ❖ Useful parts used - Patra (Leaf) and Mula (root)
- ❖ Phyto constituents - Leaf contains gymnamine (Alkaloid)  
alananire, valine, adenine, betaine  
hentriacontane, nonacosane.

**Habitat:** A large woody, much branched, climber, with pubescent young parts, found throughout india in dry forests upto 600m.

**Pharmacodynamics**

- ❖ Rasa - Tikta, Kashya
- ❖ Guna - Ruksha, Laghu
- ❖ Virya - Ushna
- ❖ Vipaka - Katu
- ❖ Doshagnata (Action on Dosha) - Kapha-Vata Samaka; Vata Samaka because of Ushna Virya; Kaphahara due to Ushna Virya, Katu Vipaka and Tikta Kashaya Rasa.
- ❖ Rogagnata (Therapeutic indication) - Prameha, Swasa, Kasa Kushta, Aksisula, Agnimandhya, Krimi, Visa Vikara
- ❖ Karma (Action) - Mehaghna, Swasahara, Kasahara, Vranahara, Aksisulahara, Kushtagna, Dipana, Sramsana, Krimighna and Visaghna
- ❖ Dosage - Patra Churna (Leaf powder) 3 to 6gm  
Mula Kwatha (Root decoction) - 50 to 100ml

**Phytochemistry and pharmacology**

The phyto constituents responsible for sweet suppression activity includes triterpene saponins known as gymnemic acids, gymnema saponins and a polypeptide, gurmarin. The mode of action of the drug is through stimulation in insulin secretion from pancreas. It also exerts a similar effect by delaying the glucose absorption in the blood. Other activities are anti arthritic, antibiotic, antimicrobial, anti cancer, cytotoxic, anti hyper lipidemic, wound healing, immune stimulatory and hepato protective activity.

**METHIKA**

- ❖ Latin name - *Trigonella foenumgraecum*
- ❖ Family - Papilionaceae
- ❖ Synonyms - Peetabheeja, Bhodini, Deepani
- ❖ Vernacular names - English- Fenu greek  
Hindi - Methi
- ❖ Useful parts - Panchanga (Whole plant), Bija (Seed)
- ❖ Phyto constituents - Whole plant contains  $\beta$ -carotene, choline, essential amino acids, diosgenin, tigogenin,  $\beta$ -sistosterol, kaempferol, quercetin and saponins, Graecumin A,B,C, D,E,F and G seeds contain, vitexin, isovitexin, vitamins, carbohydrates, proteins, fatty acids, fenugrin Beta and cholesterol.

**Habitat:** An aromatic, 30-60 cm tall, annual herb, cultivated through out the country.

**Pharmacodynamics**

- ❖ Rasa - Katu
- ❖ Guna - Snigdha, Laghu
- ❖ Virya - Ushna
- ❖ Vipaka - Katu
- ❖ Doshagnata (Action on Dosha) - Vata-Kapha Shamaka; Vata Shamaka due to Ushna Virya Kapha Shamaka due to Ushna Virya, Katu Vipaka, and Katu Rasa.
- ❖ Rogagnata (Therapeutic indication) - Vata Vyadhi, Jwara, Aruchi, Agnimandhya, Nadidourbalya, Dourbalya, Shula, Shukra Dourbalya
- ❖ Karma (Action) - Jwaraghna, Ruchikara, Dipana, Nadibalya, Balya, Shulahara, Vrusya.
- ❖ Dosage - Bija Churna (Seed powder) 1 to 3gm

**Phytochemistry and pharmacology:** The galactomannan rich soluble fiber fraction of fenugreek may be responsible for the anti-diabetic activity of the seeds. Insulinotropic and anti-diabetic properties also have been associated with the amino acid 4-hydroxyisoleucine that occurs in fenugreek at a concentration of about 0.55%. Other uses are anti-spasmodic activity, hypolipidemic activity, immunological activity, anti-bacterial activity, anti-helminthic activity, anti-inflammatory and analgesic activity etc.

**SAPTARANGI**

- ❖ Latin name - *Salacia oblonga*
- ❖ Family - Hippocralacea
- ❖ Synonyms - Saptacakra, Swarnamula, Mehari
- ❖ Vernacular names - English - Wild cory fruit  
Hindi - Saptarangi
- ❖ Useful parts - Mula Twak (Root bark) and Phala (Fruits)
- ❖ Phyto constituents - Root bark contain two 1,3 deketones, fatty matter, daital, mangiferin, photo b-1 glycosidal-tannins and triterpens.

**Habitat:** Climbing shrub found in semi-evergreen and evergreen forests of India & Srilanka.

**Pharmacodynamics**

- ❖ Rasa - Kasaya, Tikta
- ❖ Guna - Ruksha, Laghu, Tikshna



- ❖ Virya - Ushna
- ❖ Vipaka - Katu
- ❖ Doshagnata (Action on Dosha) -Kapha-Pitta-Shamaka; Pittahara because of Kashaya and Tikta Rasa; Kapha Shamaka due to Ushna Virya, Katu Vipaka and Kasaya Tikta Rasa.
- ❖ Rogagnanta (Therapeutic indication)- Madhumeha, Yakrut Vikara, Shotha and Garbhasaya Vikara
- ❖ Karma (Action) - Madhumehahara, Yakruduttejaka, Shothahara, Anulomana, Mutra Sangrahniya and Garbhashayottejaka
- ❖ Dosage - Kwatha (Decoction) - 50 to 100ml  
Churna (Powder) - 10 to 2g

**Phytochemistry and pharmacology:** The phyto constituents of *S.oblonga* are numerous and they vary depending on the species to species and place of origin. Although *S.oblonga* roots and aerial parts have been extensively in for treatment of diabetes, but rheumatism, gonorrhoea, skin and ear diseases, itches and asthma are some of the other diseases which have also been treated by this medicinally important plant (Rao and Giri, 2010; Chopra *et al.*,1956; Vaidyaratnam,1996). It also possess antioxidant, anti-inflammatory, hypolipidemic and pancreatic lipase inhibitory activities (Rabbani *et al.*,2006; Singh *et al.*, 2009).

#### JAMBU

- ❖ Latin name - *Syzygium Cuminii*
- ❖ Family - Myrtaceae
- ❖ Synonyms - Mahaskandha, Maha rasa, Neelaphala, Megha Modin, Surabhi Patra, Nalanjanachada
- ❖ Vernacular names - English - Black plum  
Hindi - Jamun
- ❖ Useful parts used - Seeds, fruits, bark and leaves
- ❖ Phyto constituents - Stem bark yielded friedelin, Kaempferol, quercetin,  $\beta$  sitosterol, B-D, glucoside betulinic acid, gallo-tannin, ellagi tanin, eugenin, epifriedelanol, fruits yielded delphinidin-3, gentiobioside, malvidin-3, laminaribioside. Leaves contain glycine, alanine, leucine and tyrosine. Flowers yielded myricetin-3-L-arabinoside and dehydromyricetin.

**Habitat:** A large evergreen tree, attaining a height of 30 m and a girth of 3.6m, found throughout india upto an altitude of 1,800m.

### Pharmacodynamics

- ❖ Rasa - Kashaya, Madhura, Amla
- ❖ Guna - Ruksha, Laghu
- ❖ Virya - Katu
- ❖ Vipaka - Sita (Mahajambu is Ushna)
- ❖ Doshagnata (Action on Dosha) - Kapha Pitta Shamaka ; Pitta Shamaka due to Kashaya Rasa and Sita Virya and Kapha Shamaka due to Kashaya Rasa and Katu Vipaka
- ❖ Rogagnanta (Therapeutic indication)- Prameha, Atisara, Aruchi, Sthaulya, Daha, Vrana, Krimi and Swasa
- ❖ Karma (Action) - Sangrahi, Rochana, Kanthya, Vistambhi, Lekhana, Daha Shamaka, Shramahara, Krimighna, Swasahara, Mehahara
- ❖ Dosage - Swarasa (Juice) – 10-20ml  
Churna (Powder) – 3-6 gm.

### Phytochemistry and pharmacology

The active constituents isoquercetin, kaempferol, and myricetin impart multiple pharmacological activities to the plant which includes antidiabetic, anticancer, antioxidant, antibacterial, anti fungal and anti diarrhoeal activity. Singh and Gupta 2007, investigated the effects of ethanolic extract of *Syzygium cumini* seed powder on pancreatic islets of alloxan diabetic rats. They reported that ethanolic extract of seeds of *Syzygium cumini* significantly decreased blood sugar level in alloxan diabetic rats.

### KARAVELLA

- ❖ Latin name - *Momordica charantia*
- ❖ Family - Cucurbitaceae
- ❖ Synonyms - Sushavi, Katilla
- ❖ Vernacular names - English - Bitter Gourd  
Hindi - Karela
- ❖ Useful parts - Phala (Fruits)
- ❖ Phyto constituents - Fruit contains vicine, steroclal glucoside, momorcharaside, A, B, cucubitane, triterpenoides, momordicines and 11-spinasterol, stigmasterol, momordicosides I and II, diosgenin and thiocyanogen.

**Habitat:** A monoecious climber found throughout the country often under cultivation, upto an altitude of 1500 m.

### Pharmacodynamics

- ❖ Rasa - Tikta, Katu
- ❖ Guna - Ruksha, Laghu
- ❖ Virya - Katu
- ❖ Vipaka - Ushna
- ❖ Doshagnata (Action on Dosha) - Kapha Pitta Shamaka, Pitta Shamaka because of Tikta Rasa, Kaphahara due to Ushna Virya, Katu Vipaka.
- ❖ Rogagnata (Therapeutic indication)- Prameha, Kushta, Krimi, Shotha, Jwara, Visha
- ❖ Karma (Action) - Pramehaghna, Kusthagna, Dipana, Rochana.,Rechana, Krimighna, Raktasodhaka, Shothahara, Jwaraghna and Vishaghna
- ❖ Dosage - Swarasa (Juice) - 10 -20ml

**Phytochemistry and pharmacology:** Momordica mainly contains cucurbitacins, sterols, triterpenoids and vicinde. Charantin, an active fraction of M.charantia when administered to normal rabbits has been reported to produce a gradual but significant fall in blood sugar level. Pancreatectomy was found to reduce but not abolish the hypoglycemic effect of charantin indicating a dual mechanism of action.

### TRIKATU CHURNA<sup>[10]</sup>

It is a mixture of three drugs in powder form namely Pippali, Marica, and Shunti is made by adding one part of each drug powder equally

Pippali

- ❖ Latin name - Piper longum
- ❖ Family -Piperaceae
- Maricha
- ❖ Latin name -Piper nigrum
- ❖ Family -Piperaceae
- Shunti
- ❖ Latin name -Zingiber officianale

- ❖ Family – Zingiberaceae
- Synonyms** - Trayushna, Katutrika, Vyosha
- Vernacular names** -
- Pippali
- ❖ English - Long pepper
- ❖ Hindi - Pippali  
Marica
- ❖ English - Black Pepper
- ❖ Hindi - Kali mirch  
Shunti
- ❖ English - Dried ginger
- ❖ Hindi - Sund
- ❖ Useful parts used - Pippali- Fruit  
Maricha- Fruit  
Shunti-Rhizome.
- ❖ Phyto constituents - Fruit of Pippali contains Aromatic oil (0.7%), Piperine 4-5%, and pipplastine (Alkaloid). Fruit of Maricha contains piperine 5-10%, piperidine 5%, piperttine and chaviccine (alkaloid). Shunti contains carbohydrates (50-70%), lipids (3-8%) terpenes and phenolic compounds.

#### Pharmacodynamics (Table No 4).

	<b>Pippali</b>	<b>Marica</b>	<b>Shunti</b>
Rasa	Katu	Katu	Katu
Guna	Laghu, Snigdha, Teekshana	Laghu, Teekshana	Laghu, Snigdha,
Virya	Anushnashita	Ushna	Ushna
Vipaka	Madhura	Katu	Madhura

- ❖ Doshagnata (Action on Dosha) - It acts on Tridosha.
- ❖ Rogaghanta (Therapeutic indication) - Arochaka, Agnimandya, Ama dosha, Galaroga, Pinasa, Kustha, Swasa Roga, Twakroga, Gulma, Meha, Sthaulya Shlipada.
- ❖ Karma (Action) - Deepana, Shleshmaghna, Medoghna, Galamaya, Twachya
- ❖ Dosage - Churna (Powder) – 1 to 3g.

**Phytochemistry and pharmacology:** It contains various chemical category viz. alkaloids, phytosterol, triterpenes, flavonoids and various other phenolic compounds. Pharmacological activities of trikatu reportedly include hepato-protective, antioxidant, analgesic, anti-anorectic, anti-inflammatory, anti-microbial, anti-fungal, anti-helminthic, anti-arthritic, adaptogenic, anti-hyperlipidemic and antitumor activity.

### GUDUCHI

- ❖ Latin name - *Tinospora cordifolia*
- ❖ Family - Menispermaceae
- ❖ Synonyms - Amritvalli, Chinnarupa, Kundali, Mandali, Tantrika, Chakralakshanika, Maduparni, Chandrahasa, Amrita, Rasayani, Jivanti, Vayasya, Jwaranasini, Vishalya, Seema, Vatsadini
- ❖ Vernacular names - English - Gulancha tinospora  
Hindi - Giloyy
- ❖ Useful parts used - Stem
- ❖ Phyto constituents - Total plant contains tinosporide, cordifolide Unosporin, tinosporon, tinosporic acid, cordifol, heptacosanol, b-sistosterol and tinosporidone.

**Habitat:** A Perennial climber found throughout tropical India.

### Pharmacodynamics

- ❖ Rasa - Tikta, Kashaya
- ❖ Guna - Guru, Snigdha
- ❖ Virya - Ushna
- ❖ Vipaka - Madhura
- ❖ Doshagnata (Action on Dosha) - Tridosha Shamaka, Vata Shamaka because of Ushna Virya and Madhura Vipaka, Pittahara due to Madhura Vipaka and Tikta and Kasaya Rasa. Kapha Shamaka because of Ushna Virya and Tikta Kasaya Rasa.
- ❖ Rogaghanta (Therapeutic indication)- Jwara, Vatarakta, Prameha, Kustha, Agnimandya, Trsna, Daha, Kasa, Krimi, Chardi, Arsas, Netravikara, Hridroga.

❖ Karma (Action) - Jwarahara, Rasayana, Sangrahi, Dipana Amahara, Trsnahara, Dahahara, Pramehaghna, Kasahara, Kusthagna, Balya, Krimighna, Chardighna, Medhya, Hridya, Chaksusya, Vayasthapana.

❖ Dosage - Kwatha (Decoction)-50-100ml  
Satva- 0.5-2g  
Churna (Powder)-1-3g

### Phytochemistry and pharmacology

The plant has a wide array of bioactive principles in exploring nutraceuticals from plant materials. Stem and root of *T.cordifolia* contain alkaloids as active constituents. These are tembetarine, choline, magnoflorine, berberine, tinosporin, isocolumbin, palmetine, jatrorrhizine aporphine alkaloids, tetra hydropalmatine which showed anti-cancer, anti-diabetes, anti-viral, anti-inflammatory, anti-psychiatrist and immunomodulatory action.

### TRIVRUT

❖ Latin name - *Operculina turpethum*  
❖ Family - Convolvulaceae  
❖ Synonyms - Triputa, Trimandi, Trusra, Kotarvahini, Nishotha, Rechani, Sarala, Sarvanubhuti  
❖ Vernacular names - English -Indian jalap  
Hindi - Nisoth  
❖ Useful parts used - Root  
❖ Phyto constituents - Root contains a glycoside resin which includes turpentin (5%) ether insoluble glycoside. Two ether soluble glycoside namely and turpethin (8%) b-turpethin (0.5%) it also contains volatile oils, coumarin, scopoletin, Rhamnose, Vanilic acid, Turpethinic acids C,D,E,and Saponins.

**Habitat:** A large perennial twiner with milky juice and fleshy roots, found growing wild nearly throughout the country.

### Pharmacodynamics

❖ Rasa - Tikta, Katu  
❖ Guna - Ruksha, Laghu, Tikshana  
❖ Virya - Ushna  
❖ Vipaka - Katu

- ❖ Prabhava - Virechana
- ❖ Doshagnata (Action on Dosha) - Vatahara (Bh.Pr.Ni.) because of Ushna Virya, Kaphapittahara (Ka.Ni.), Pittahara because of Virechana Karma and Kapha Shamaka due to Ushna Virya, Katu Vipaka and Katu Tikta Rasa.
- ❖ Rogagnata (Therapeutic indication) - Vibandha, Shotha, Jwara, Udara Roga, Krimi, Pliha Roga, Pandu, Kustha, Kandu and Vrana
- ❖ Karma (Action) - Recana, Pitta Jwarahara, Shothahara, Udararogahara, Krimighna, Pliha Rogahara, Pandu Rogahara, Vranahara, Kusthghna, Kandughna
- ❖ Dosage - Churna (Powder) – 1 to 4 mg

### Phytochemistry and pharmacology

The roots, bark, and seeds contain cardio active glycosides, formerly designated as neriodorin, nerioderin and karabin . It also contains beta-sitosterol, alpha and beta turpethin, coumarin, scopoletin, lupeol, betulin. The root is purgative, thermogenic, carminative, anti-helminthic, expectorant, antipyretic, hepatic, stimulant, and hydragogue.

### ASHWAGANDHA

- ❖ Latin name - Withania somnifera
- ❖ Family - Solanaceae
- ❖ Synonyms - Gandhapatri, Varahkarni, Ashwakandu, Ashwavrohaka, Kanchuka, Kamrupini, Putrada.
- ❖ Vernacular names - English - Winter cherry  
Hindi - Asagandh
- ❖ Useful parts - Root
- ❖ Phyto constituents - Contain somniferine, somiferinine, withanine, withaniol (steroidal lactone), withasomnine (pyrazole alkaloid), tropine, withanolide (Steroidal lactones), anagrine. Anaferine (alkalirid), starch, b-sitosterol.

**Habitat:** A small shrub that grows to 1.5 m tall and is native to India, parts of Africa and the Mediterranean.

### Pharmacodynamics

- ❖ Rasa - Tikta, Kashaya
- ❖ Guna - Laghu, Snigdha
- ❖ Virya - Madhura

- ❖ Vipaka - Ushna
- ❖ Doshagnata (Action on Dosha) - Kapha-Vatahara; Kaphahara-because of Ushna Virya and Tikta, Rasayana. Vatahara- because of Ushna Virya and Madhura Vipaka
- ❖ Rogagnata (Therapeutic indication)- Ksaya, Vata Vyadhi, Klaibya, Shotha, Visha, Vrna, Kasa, Sopha, Kandu, Krimi, Swasa.
- ❖ Karma (Action) - Balya, Rasayana, Sukrala, Kanti Vardhaka, Nadibalya, Switraghni, Kandughna, Krimighna, Swashara, Visaghna, Vranahara, Sopha hara
- ❖ Dosage - Churna (Powder) – 3 to 5g

### Phytochemistry and pharmacology

The roots are reported to contain alkaloids, amino acids, steroids, volatile oil, starch, reducing sugars, glycosides, hentriacontane, dulcitol, withaniol, an acid and a neutral compound. It possesses anti-inflammatory activity, anti-stress activity, anti-convulsant activity, neuro-pharmacological activity, musculotropic activity, anti-oxidant activity, anti-hyperglycemic effect, hepato-protective activity, macrophage activating effect etc.

### YASADA BHASMA

It is prepared from purified zinc

- ❖ Synonyms - Jasada
- ❖ Vernacular names - English - Zinc Calx  
Hindi - Jasadha Bhasm

### Preparation of Yashada Bhasma<sup>[11]</sup>

Samanya Shodhan (General purification) of zinc metal is done by Dalana (liquefying and pouring) Method in Kanji (Sour gruel), Takra (Butter milk) Kulattha (*Dolicus bitorus*) Kwatha (Decoction), Gomutra (Cow's urine), Tila (*Sesamum indicum*) and Taila (Oil). Dalana was carried out three times in each liquid media. After, Vishesh Shodhana (Specific purification) was carried out in Churnodaka (lime water) for seven times. After Shodhana, the metal became more brittle and was then subjected to Jarana (roasting) using Apamarga Panchanga Churna (Powder of *Achyranthes aspera*). After Jarana, the metal was converted into very fine grey shining powder which was deemed fit for Marana (incineration). The powder was then subjected to Marana by triturating it with Shuddha Parada (purified mercury) and Shuddha Gandhaka (purified sulphur), both 1/4<sup>th</sup> quantity of Yashada to form a black powder from which one Bhavana (triturating in liquid media) each with Kumari Swarasa (Fresh juice of Aloe vera) and Nimbu Swarasa (Fresh juice of citrus lemon) was



given and Chakrikas (Pellets) prepared. After drying they were kept in Sharava (Casseroles) . Sandhibandhana (Sealing) was done and subjected to Gaja Puta (Heating system with 1000 dried cow dung cakes, After Gajaputas, Yashada Bhasma of yellowish colour will be obtained.

### Pharmacodynamics

- ❖ Rasa - Kashaya, Katu
- ❖ Guna - Sheeta, Snigdha
- ❖ Virya - Sheeta
- ❖ Vipaka - Katu
- ❖ Important Therapeutic use - Grahani, Prasveda, Rajayakshma, Prameha, Sveta Pradara
- ❖ Karma (Action) - Recana, Pitta-Jwarahara, Shothahara, Udara Rogahara, Krimighna, Pandu Rogahara Vranahara, Kusthghna, Kandughna
- ❖ Dosage - Churna (Powder) – 1 to 4g

### Phytochemistry and pharmacology

Zinc is one of the puti lohas (metals with low melting points e.g. lead, zinc). Its Bhasma (clax) has as its main indication, Prameha. AS early as 1930's zinc was known to be important for the integrity of the crystalline structure of insulin. In the presence of zinc with in the beta cell, insulin monomers assemble to a dimergic form for storage and secretion as the zinc crystals. Dimergic insulin assembles further into a hexamer but also improves the binding of insulin to its receptors and inhibits degradation of insulin hexamer that is relatively more stable form of insulin. Zinc not only prevents the degradation of insulin hexamer but also improves the binding of insulin to its receptors and inhibits degradation by liver plasma membranes. These reported mechanism might be working together to improve insulin action.

**Manufacturing method of Shilajathvadi Yoga:** All the ingredients are taken as Ghana Satvas (Dry extract powder) and mixed with Jasada Bhasma and Sh. Shilajatu and blended well in mass mixer and sent for encapsulation in 0 size capsule with an Avg. Wt. og 500mg.

**Dosage of the Capsule:** 2 cap twice a day before food.

### DISCUSSION

The drugs useful in treating Prameha should have Kapha, Medhohaka property to interrupt the Samprapti. Deepana-Pachana proportion to correct Agni and thus the deranged

metabolism and Rasayana property to prevent Dhatu Kshaya or complication. Thus the drug Shilajatu Yoga as a whole possess Katu, Tikta, Rasa, Laghu, Guna, Ushna Veerya, Katuvipaka and Kapha Pitta Samanathva. It is having Deepana, Pachana, Anulomana, Kledahara and Rasayana properties. Thus it becomes ideal in the Kapha, Pitta stage of Samprapti where there is Kleda Vriddhi.

Various experimental studies have been conducted on the main drug Shilajatu to evaluate its efficacy as a hypoglycemic agent. Significant hypoglycemic activity was observed in the treated groups. In another study, effect of Shilajatu on blood glucose and lipid profile in alloxan-induced diabetic rats was studied and it was concluded that Shilajitu is effective in controlling blood glucose levels and improves the lipid profile.<sup>[12]</sup>

**Action of drug based on Rasa:** Majority of the drugs in the formulation are having Katu, Tikta Rasa. Katurasa is Agni Mahabhuta predominant. It is Deepana, Pachana, Srothosodhana, Kapha Samana and causes Soshana of Kleda and Meda. Since the Samprapti begin with Kapha Prakopa and Mala Sanchaya. Kapha Shamanatva and Srothosodhana is absolutely essential to check the pathological process.

Tikta rasa being the most Laghu is mainly Deepana, Pachana. Lekhana has the property of Kleda, Meda, Vasa, Majja, Sweda, Mutra Kaphaupasoshana. It causes shamanatva of both Kapha and Pitta. Since the disease is characterized by Vriddhi of Kapha, Meda, Kleda and there is excessive production of Sweda and Mootra. Drugs with Tikta Rasa can counter the symptoms as well as the Samprati. By its Pachana property, it helps in Anna Pachana producing optimal Rasadi Dhatus.

**Action of drug based on Guna:** Majority of the ingredients of formulation possess Laghu Guna which is dominant in Akasa, Agni and Vayu Mahabhuta. It is Laghavakara, Kaphagna and Lekhana. This results in alleviation of aggravated Kapha and causes Apatarpana. It also aids to Deepana and Pachana.

**Action of drug based On Virya:** Majority of the drugs possess Ushna Virya which produces Kapha Samana. It aids in Srothosodhana, Anulomana, correction of Agni, Anna Pachana and prevents Kapha and Malasanchaya.

**Action of drug based on Vipaka:** Most of the drugs in the formulation are with Katu Vipaka which is suggestive of its action in Kapha Meda Kleda Harana.

**Action of Drug Based on Karma:** The formulation Shilajathvadi Yoga Posses Deepana, Pachana, Srotoshodana, Anulomana, Kaphapittahara, Medohara and Rasayana properties. It corrects Agni and destroys the Kleda and Malasanchaya Rasayanatva of the drug in the formulation helps in maintaining the integrity of Dhatus and prevent complications.

## CONCLUSION

Diabetes is an important human ailment afflicting many from various walks of life in different countries. In India it is proving to be a major health problem, especially in urban areas. Though there are various approaches to reduce the ill effects of Diabetes, herbal formulations are preferred due to lesser side effects.. The drug 'Shilajathvadi Yoga' is found to be effective in lowering the blood glucose level as well as relieving the symptoms of Diabetes. It is in the form of capsule which is odourless, tasteless and easy to swallow. Detailed description of ingredients of 'Shilajathvadi Yoga' has been mentioned above. The drug 'Shilajathvadi Yoga' as a whole possess Katu, Tiktha, Rasa, Laghu, Guna, Ushna Veerya, Katuvipaka and Kapha Pitta Samanathva. It is having Deepana, Pachana, Anulomana, Kledahara and Rasayana properties. Thus it becomes ideal in the Kapha, Pitta stage of Samprapti of Prameha where there is Kleda Vriddhi.

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