

**REVIEW ON HERBAL PLANTS AND FORMULATIONS
RECOMMENDED IN SIDDHA LITERATURES FOR THE
MANAGEMENT OF MENORRHAGIA (*PERUMBADU*)**

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ABSTRACT

Many herbs and minerals were included in Siddha system which is effective in managing chronic diseases. They classified various female diseases and had awesome solutions for its curative measures and also managed with preventive aspects. Menorrhagia is a diseased condition which defines as bleeding per vagina in excessive amount and duration. Among all gynaecological problems menorrhagia is one of the most familiar complaints in menstruating females. In developing nation's prevalence of abnormal uterine bleeding appears to affect about 5-15% of women of reproductive age and most likely a higher percentage of women in older age groups. Approximately it affects 10 to 15% of the adult female population. It is commonly caused by conditions affecting the uterus and its vascular apparatus, rather than by any ovarian disturbance. It occurs if the bleeding surface (that is the

area of the endometrium) is increased. As per the Siddha text *Perumbadu* can be correlated with Menorrhagia. Siddha system has several preparations which comprise of herbal, poly-herbal, herbo-mineral and mineral formulations to cure Menorrhagia. In Siddha aspect a drug with styptic action is basically an astringent. It contracts the blood vessels and eventually bleeding stops. This review paper has listed out the commonly identifiable, cost effective herbs having Styptic action as per the classical Siddha literatures with lack of practical

applications may be subjected to scientific validation for future clinical practice. The intent of this review is to discuss the available therapeutics in Siddha for the management of Menorrhagia and its associated conditions.

KEYWORDS: Herbs, Menorrhagia, *Perumbadu*, Siddha medicine, Styptic.

INTRODUCTION

Women's are the ones bringing the next generation into the world. Only if they are healthy then upcoming generation will be healthy. So it is our responsibility to protect them and keep them healthy. So a special attention for women's health is crucial for forming a better Nation. Women health is established within the wider body of knowledge cited by WHO, because it places importance on gender as a social determinant of health. Apart from women's good health and reproductive health of women is considered more important within the framework of WHO. The WHO describes reproductive health as "It is a condition in which the reproductive process is accomplished in a state of complete physical, mental, social well-being and is not merely the absence (or) disorders of the reproductive process".^[1]

Menorrhagia is heavy menstrual bleeding appears at regular intervals. Objective menorrhagia indicates to regular and persistent heavy menstrual bleeding exceeding 80 ml until one menstrual cycle, while subjective menorrhagia indicates to regular and persistent menstrual bleeding that is perceived to be excessive. The word Menorrhagia is derived from Greek word, men means menses and rragia means to burst forth. It is found most common in premenopausal women.^[2] Progesterone is the responsible hormone for regular menstruation. If the ovum is not released, progesterone insufficiency will be seen, which may lead to heavy menstrual bleeding.

Menorrhagia is associated with uterine fibroid, DUB (Dysfunctional Uterine Bleeding), adenomyosis, pelvic infections, endometrial polyp, clotting defects.^[3] It represents a common gynaecological problem in women as several as 10-15% of women experience menorrhagia during their lifetime.^[4] The WHO reports that 18 million women aged 30-55 years perceive their menstrual bleeding to be high extreme.^[5] Abnormal uterine bleeding affects 10 to 30% women of reproductive age and 50% of those in perimenopause.^[6] Almost 30% of women ascribe of heavy menses and only 5% of women seek medical care for excessive menstrual bleeding.^[7] The overall prevalence of Menorrhagia was 19.24%.^[8] and its 10.6% at young

adult age.^[9] In India, the prevalence of AUB is about 17.9% and in developing countries reported the prevalence of 15% to 20%.^[10]

Menorrhagia can be classified on the basis of aetiology into systemic, local or iatrogenic disorders. Systemic conditions include endocrine disease (hypothyroidism, anovulation) or disorders of coagulation (haemophilia carriage, Von Willebrand's disease). Local conditions include endometrial hyperplasia, endometriosis, pelvic inflammatory disease, and benign (leiomyoma's, polyps) and malignant (endometrial, cervical) tumours. Iatrogenic disorders may be due to foreign bodies, such as intrauterine contraceptive devices, or poor control of anticoagulation treatment.^[11]

Menorrhagia is typically seen in teenage girls, by the reason of anovulation. In elder reproductive-age women, it is commonly due to uterine pathology including fibroids, polyps and adenomyosis.^[12] *Mahalir Maruthuvam* is one of the sections in Siddha Medicine which deals with the diseases related with women. In the Siddha text of *Pararasasekaram*, *Perumbadu* is defined as "Excessive and profuse menstrual bleeding in young aged women".^[13] It is clinically correlated with Menorrhagia in modern system of medicine with symptoms of bleeding for longer than a week, headache and lower abdominal pain; foul smell menstrual bleeding with clots, tiredness and fatigue. Siddha medicinal plants are easily available, cost effective and with lesser side effects. These plants are well documented as having potent styptic action in classical siddha literature. The aim of this present review is to discuss about the medications and herbal plants mentioned in *Siddha* system for the management of Menorrhagia.

Modern Aspect

Menorrhagia is also known as Hyper-menorrhoea. It is most common type of Abnormal Uterine Bleeding. It is defined as cyclic bleeding at normal intervals; the bleeding (> 80ml) or duration or both. The term menotaxis is often used to denote prolonged bleeding.

Causes

Menorrhagia is a symptom of some underlying pathology – organic or functional.

Organic causes

Pelvic pathology

It is due to congestion, increased surface area or hyperplasia of the endometrium.

- Fibroid uterus
- Adenomyosis
- Chronic tubo-ovarian mass
- Tubercular endometritis (early cases)
- Retroverted Uterus – due to congestion
- IUCD in-utero
- Pelvic endometriosis
- Granulosa cell tumour of the ovary

Systemic causes

- Liver dysfunction- failure to conjugate and thereby inactivate the oestrogens
- Congestive cardiac failure
- Severe hypertension

Endocrinal causes

- Hypothyroidism
- Hyperthyroidism

Blood dyscrasias

- Idiopathic thrombocytopenic purpura
- Leukaemia
- Von Willebrand's disease
- Platelet deficiency (thrombocytopenia)

Functional causes

- Due to distributed hypothalamo-pituitary-ovarian-endometrial axis

Common causes of menorrhagia

- Dysfunctional uterine bleeding
- Fibroid
- Adenomyosis
- Chronic tubo-ovarian mass.^[14]

Mechanism of menstrual bleeding

The degenerative changes are predominantly of vascular origin. Stasis of blood and spasm of the arterioles lead to damage of the arteriolar walls. Phase relaxation leads to escape of blood

out of the vessels through the damaged walls. The degenerative process is rapid and involves all the components of the functional damaged layer. The bleeding occurs from the broken arteries, veins and capillaries and also from the stromal haematoma. The blood along with the superficial functional layer is shed into the uterine cavity. The blood coagulates in the uterine cavity but soon liquefies by plasmin unless the bleeding is very brisk and rapid. The menstrual blood flow stops as a result of combined effect of prolonged vasoconstriction, myometrial contraction and local aggregation of platelets with deposition of fibrin around them. Resumption of oestrogen secretion leads to clot formation over the decapitated stumps of endometrial vessel.^[14]

Pathogenesis of Dysfunctional Uterine Bleeding

The most common cause for dysfunctional uterine bleeding is anovulation. This is seen in:

- Perimenarchial and perimenopausal age
- Polycystic ovary syndrome
- Obesity-associated anovulation

Anovulation results in a lack of progesterone and the resultant excessive proliferative response to unopposed oestrogen causes stromal cell growth that exceeds the structural integrity of its supporting matrix, and the endometrium breaks down with irregular, heavy bleeding. In the absence of normal mechanisms to limit menstrual blood loss, bleeding can be prolonged and heavy. The amount of blood loss correlates directly with the level of oestrogen stimulation.

Ovulatory cycles may also cause abnormal uterine bleeding in upto 20% of cases as proven by histological studies. Causes are:

- Persistent corpus luteum, which does not regress in 12-14 days.
- Luteal phase defect (LPD), an inadequate corpus luteal function.

Medical Management

1. Non – steroidal Anti-inflammatory Drugs (NSAIDs)

Mefenamic acid, Naproxen, Ibuprofen, Meclofenamate and Flubiprofen.

2. Anti-fibrinolytic agents

Tranexamic acid

3. Hormones

Synthetic progesterone: Norethisterone, Medroxy progesterone acetate

Progesterone impregnated Intra Uterine Devices: Levonorgestrol (Mirena)

Anti-oestrogen: Gestrinone

4. Miscellaneous agents: Desmopressin.^[15]

Surgical Management

- Endometrial resection
- Endometrial ablation
- Hysterectomy

Siddha Aspect

According to the siddha text *Perumbadu* is defined as the excessive loss of menstrual bleeding which may be increased in duration of menstrual bleeding or heavy blood flow without any changes in the cycle length.

Causes

In text book of Mahalir maruthuvam

- Tumours in uterus
- Salpingitis and Oophoritis
- Sepsis of Pelvic tumour
- Early stages of Tuberculosis
- Hormonal imbalance especially Hypothyroidism
- Endometrial Tuberculosis
- Peri-menopausal stage
- Cardiac diseases
- Psychological reasons
- Family problems

According to the text of “*Yugi Vaithiya Cinthamani*” Menorrhagia is classified into 4 types. They are *Vadha*, *Pitha*, *Kaba* and *Thirithosha perumbadu*. Symptoms of Menorrhagia are distended abdomen with reddish black menstrual bleeding, headache, abdominal pain, low back ache and hyperpigmentation of the body.^[16]

Pathology

According to Siddha system, Body is constituted by 96 thathuvaas. Normal structural and physiological state of the body is maintained by equilibrium with 3 humours in human system and 7 body constituents. As the Seven body constituents are affected by the extrinsic and intrinsic factors, there is deterioration in the structural and functional status of the body. When the causative factor affects 7 body constituents and 3 humours in human system, it results in incoordination of functions. The pathogenesis of the disease depends upon the affected Pitha and Vatha.^[17]

Styptic Medicinal Plants

Table 1: The list of styptic action of herbs from *gunapadam mooligai vaguppu*.^[18]

S.no	Herbs	English name	Botanical Name	Family
1	Asogu	Asoka tree	Saraca asoca	Caesalpiniaceae
2.	Atthi	Country fig	Ficus racemosa	Moraceae
3.	Abini	Opium	Papaver somniferum	Papaveraceae
4.	Arasu	Sacred fig	Ficus religiosa	Moraceae
5.	Arival mukkuppachchilai	Common wire weed	Sida acuta	Malvaceae
6.	Arugambul	Bermuda grass	Cynodon dactylon	Poaceae
7.	Annachip-pazham	The Pine apple	Ananas comosus	Bromeliaceae
8.	Aal	The banyan tree	Ficus bengalensis	Moraceae
9.	Itthi	Rhomboid leaved fig	Ficus microcarpa	Moraceae
10.	Impural	Chay root	Oldenlandia umbellate	Rubiaceae
11.	Lavangapattai	Bark of Cinnamon	Cinnamomum verum	Lauraceae
12.	Mul Ilavu	The Red Silk-Cotton tree	Bombax malabaricum	Malvaceae
13.	Eliyamanakku	Physic Nut	Jatropha curcas	Euphorbiaceae
14.	Odimaram	Jhingam	Lanna coromandelica	Anacardiaceae
15.	Karungali	Black catechu	Acacia catechu	Mimosaceae
16.	Kaliyana pushanikkai	White pumpkin	Benincasa hispida	Cucurbitaceae
17.	Kaasa	Iron wood tree	Memecylon umbellatum	Melastomataceae
18.	Kattamanakku	English Physic nut	Jatropha curcas	Euphorbiaceae
19.	Pannaikkeerai	Cock's comb greens	Celosia argentea	Amaranthaceae
20.	Kizhkainelli	Indian Phyllanthus	Phyllanthus amarus	Euphorbiaceae
21.	Saathikkai	Nut meg	Myristica fragrans	Myristicaceae
22.	Chayamaram	Logwood tree	Ceasalpinia sappan	Ceasalpiniaceae
23.	Sirunagapoo	Ceylon Iron wood	Mesua nagassarium	Calophyllaceae
24.	Chemparrathai	Shoe Flower Plant	Hibiscus rosa sinensis	Malvaceae
25.	Chembu	Cocoyam	Colocasia esculenta	Araceae
26.	Thippili	Long Pepper	Piper longum	Piperaceae
27.	Thenku ver	Teak tree	Cocos nucifera	Arecaceae
28.	Naaval	Indian blackberry	Sygyium cumini	Myrtaceae
29.	Nilappusini	Giant-potato	Ipomoea mauritiana	Convolvulaceae
30.	Nelli	Indian Gooseberry	Phyllanthus emblica	Euphorbiaceae
31.	Pannimonthan kizhangu	Water Chestnut	Trapa natans	Trapaceae

32.	Mantharai	Orchid tree	Bauhinia purpurea	Caesalpiniaceae
33.	Ma pisin	Mango tree	Mangifera indica	Anacardiaceae
34.	Masikkai	Magic nuts	Quercus infectoria	Fabaceae
35.	Mathalai	Pomegranate	Punica granatum	Lythraceae
36.	Vazhai	The Plantain tree	Musa paradisiaca	Musaceae
37.	Vellilothram	The Lodh-tree	Symplocos racemosa	Symplocaceae
38.	Vengai pisin	The Indian Kino tree	Pterocarpus marsupium	Fabaceae
39.	Senkeeraihandu	Red spinach	Amaranthus dubius	Amaranthaceae
40.	Kadarpassi	Sea weeds	Gracilaria lichenoides	Gracilariaceae

Most Commonly Used Plants for Menorrhagia

1. *Saraca asoca*

Saraca asoca (Caesalpiniaceae) is known as Asogu in Siddha. It is throughout in India upto 750m. The dried bark- uterine tonic (imparts healthy tone to uterus) used for Menorrhagia, bleeding files, complaints of menopause and menstrual pain. The bark yields alkanes, esters and primary alcohol. It gave n-octacosanol, tannin, catechin, cyaniding derivatives, and methyl, ethyl cholesterol derivatives.^[19] 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. *Saraca indica* dried bark, in India used as an astringent in menorrhagia, to stop excessive uterine bleeding.^[20]

2. *Ficus racemosa*

F. racemosa (Moraceae) is known as Atthi in Siddha, which has been reported to have many medicinal properties. It is widely cultivated all over India. Fruits contain sterols, triterpenoids, flavonoids, glycosides, tannins, carbohydrates.^[21] Unripe fruits are astringent, carminative, digestive and stomachic in action. It is used in diarrhoea, dyspepsia, dysentery, Menorrhagia and haemorrhages.^[19]

3. *Cynodon dactylon*

C. dactylon (Poaceae) is known as Aruganbul in Siddha. It is native to East Africa, Asia, Australia and southern Europe. *Cynodon* is a weed and has been found to possess various potential medicinal properties.^[22] The root contains a sesquiterpene ketone, articulone, which is identical to cyperone. It is astringent, diuretic, anti-diarrhoeal, anti-catarrhal, styptic and antiseptic properties. Dried fibrous root used for Menorrhagia, metrorrhagia and burning micturition.^[19]

4. *Acacia catechu*

A.catechu (Mimosaceae) is known as Karungali in Siddha. It is cultivated in Drier regions of India, particularly Punjab, Madhya Pradesh, Uttar Pradesh, Bihar, Andhra Pradesh, Orissa and Rajasthan. Cutch from wood is a powerful astringent (in urinary and vaginal discharge), anti-diarrhoeal, styptic in action used for treating excessive mucous discharges, haemorrhages, relaxed conditions of gums, throat and mouth, stomatitis and irritable bowel; Cutch contain (the concentrated extract) contains tannins 2-20%, catechin 25-30%, phlobatannins including catechutannic acid 20-50%.^[19] The water decoction of catechu can purify blood; improve skin texture and body's defence mechanism.^[23]

5. *Mesua nagassarium*

M.nagassarium (Clusiaceae) is known as Sirunagapoo in Siddha. It is widely distributed in tropical countries like India, Burma, Thailand, Indochina and New Guinea. *M. ferrea* exhibited haemostatic and astringent properties and is particularly useful in uterine bleeding. The stamens which yield the drug Iron-wood contain mesuferrone-A and B, mesuaferrol, mesuanic acid, α and β -amyrin.^[23] Flowers are astringent, haemostatic, anti-inflammatory, stomachic in action and used in cough, bleeding piles and Menorrhagia.^[19]

6. *Mangifera indica*

M.indica (Anacardiaceae) is known as Manga in Siddha. It is widely distributed in Uttar Pradesh, Punjab, Maharashtra, Andhra Pradesh, West Bengal and Tamil Nadu. Kernel is an astringent, anti-inflammatory, antibacterial, antifungal, anthelmintic, antispasmodic, anti-scorbutic in action and used in diarrhoea, diabetes and menstrual disorders.^[19] The seed kernel is rich source of protein (8.5%) and Gallic acid. It is sweet, acrid, astringent, refrigerant, anthelmintic, constipating, haemostatic, vulnerary and uterine tonic. It is useful in vitiated conditions of pitta and cough, helminthiasis, chronic diarrhoea, dysentery, haemorrhages, haemoptysis, haemorrhoids, ulcers, bruises, leucorrhoea, Menorrhagia, diabetes, heat burn and vomiting.^[25]

7. *Punica granatum*

P.granatum (Punicaceae) is known as Maathulai. It is indigenous to Iran and neighboring countries that gradually developed in central Asia regions to Himalaya, Eyalet of Anatolia, Middle East, and Mediterranean area. Pomegranate peels is due to the presence of the phenols such as ellagic tannins, ellagic acid, and gallic acid.^[26] Rind of fruit is an astringent, stomachic, digestive. Used for diarrhoea, dysentery, colitis, dyspepsia and uterine disorders.

The fruit rinds (dried) contains up to 26, stem bark 10-25, root bark 28 and leaves 11% tannin.^[19]

Siddha Formulations for Menorrhagia

Table 2: Poly-herbal nature of formulations.

S. no	Name of the formulation	Dosage with adjuvant	Indication
1	Thiribalathi kizhayam		Menorrhagia ^[27]
2	Lavangathi Chooranam	6gm, 20days with sugar	Menorrhagia, Piles ^[28]
3	Kathalipoo Rasayanam	5 to 10gm	Menorrhagia, Piles ^[29]
4	Santhaana legiyum	5 to 10gm, 40days	Menorrhagia ^[28]
5	Maga mega nei	4.2 to 8.4gm	Menorrhagia ^[30]
6	Brahmmiya nivarana nei	6.3 to 14.7gm	Menorrhagia ^[30]
7	Revalsinni Ennai	4.2 to 8.4gm	Menorrhagia ^[30]
8	Paal Ilagam	42 to 84gm	Menorrhagia ^[30]
9	Kadhali Nei	17.5 to 26.25gm	Menorrhagia, Piles ^[30]
10	Vaazhai Vadagam	2.7gm with water	Menorrhagia ^[31]
11	Naaval pazha sarbath	24gm with water	Menorrhagia, Bleeding piles ^[28]

Table 3: Herbo-mineral nature of formulations.

S.no	Name of the formulation	Dosage with adjuvant	Indication
1	Sadathaara Chenduram	130mg with Panjakowya legiyam	Menorrhagia ^[32]
2	Pattukaruppu Chenduram	2 to 4gm with Thirikadugu Chooranam	Menorrhagia ^[33]
3	Padiga Linga Chendhuram	300 to 650 mg with ghee	Menorrhagia, Dysentery ^[34]
4	Naaga Parpam	32.5 to 65 mg	Menorrhagia, Bleeding piles ^[35]
5	Aya Chendhuram	with ghee	Menorrhagia ^[34]
6	Perumbadu Nivarini	10 to 15 grains, 7days	Menorrhagia ^[35]

Table 4: Mineral nature of formulations.

S. no	Name of the formulation	Dosage with adjuvant	Indication
1	Panjakkini chenduram	130 to 260 mg	Menorrhagia ^[36]
2	Vellai Thailam	with ghee	Menorrhagia, Wound ^[30]
3	Komoothira Silasathu	65 to 390 gm with ghee	Menorrhagia ^[35]
4	Thanga Uram	65 to 230 gm	Menorrhagia ^[27]
5	Padikara Chenduram	2 to 4 mg with ghee	Menorrhagia, Dysentery ^[33]
6	Poongaavi Chenduram	5 to 15 gm with ghee	Menorrhagia, Dysentery ^[33]
7	Chandamarutha Chenduram	488mg with palm jiggery	Menorrhagia ^[37]

DISCUSSION

Menorrhagia is one of the commonest menstrual abnormalities during reproductive age group. The heavy menstrual blood loss may leads into anaemia. The Siddha formulation of styptic and haematinic drugs usually gives good relief. A styptic drug contracts tissue and

thereby the blood vessels and to stop bleeding. In Siddha aspect a drug with styptic action is basically an astringent. It contracts the blood vessels and eventually bleeding stops.

From the above mentioned formulations can be safely and effectively used for the management of Menorrhagia and its related complications. This form of medications are prescribed contain Herbal, Poly-herbal, Herbo-mineral and Mineral combination will be best to cure Menorrhagia. And also the list of the single herbs having potent styptic action is documented through this review paper. Still, a solution without side effects for menorrhagia is needed for the whole world and potentially protects women from infection and also improves health care. However, these formulations are not yet to be scientifically proved by preclinical trial, clinical trial, In-vitro and In-vivo studies so that it may be adopted by the conventional medicine and thus useful for the suffering women.

CONCLUSION

Ancient and traditional medicines have been to handle menorrhagia for many centuries. Our Siddha system of medicine is very effective and treating menorrhagia. In modern treatment is based on the hormone replacement therapy and surgical intervention with their own complication. The above mentioned formulations are styptic and astringent properties. These formulations have been routine practice for treated menorrhagia. It can be recommended as a safer and effective management of menorrhagia.

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