Bulletin of Pure and Applied Sciences
Zoology (Animal Science), Vol.43B, No.2S,
July-December 2024: P. 930-937

Print version ISSN 0970-0765
Online version ISSN 2320-3188

Original Research Article
Content Available online at: www.bpasjournals.com

MANAGEMENT OF DYSMENORRHEA (*SOOTHAGAVALI*) THROUGH TRADITIONAL SIDDHA *VARMAM* THERAPY - A CASE SERIES

Mangaleshwari Baskaran[1*], Siva Annamalai[2], Elamathi Srinivasan[3] and Velaman Dharuman[4]

1. PG Scholar (Alumni), Department of *Varma Maruthuvam* (Siddha Special Medicine), National Institute of Siddha (Affiliated with The Tamil Nadu Dr. MGR Medical University), Tambaram Sanatorium, Chennai, Tamil Nadu, India. (ORCID: https://orcid.org/0009-0007-6771-7101)
2. Research Associate (Siddha) – II, Department of Clinical Research, Siddha Regional Research Institute (under Central Council for Research in Siddha, Ministry of Ayush, Govt. of India) Kuyavarpalayam, Puducherry, India. (ORCID: https://orcid.org/0000-0003-0601-8490)
3. PG Scholar (Alumni), Department of *Nanju Maruthuvam* (Siddha Toxicology), National Institute of Siddha (Affiliated with The Tamil Nadu Dr. MGR Medical University), Tambaram Sanatorium, Chennai, Tamil Nadu, India. (ORCID: https://orcid.org/0009-0006-8006-2077)
4. PG Scholar (Alumni), Department of *Gunapadam* (Siddha Pharmacology), National Institute of Siddha (Affiliated with The Tamil Nadu Dr. MGR Medical University), Tambaram Sanatorium, Chennai, Tamil Nadu, India.

Corresponding Author
Mangaleshwari Baskaran,
PG Scholar (Alumni),
Department of Varma Maruthuvam (Siddha Special Medicine),
National Institute of Siddha (Affiliated with The Tamil Nadu Dr. MGR Medical University),
Tambaram Sanatorium, Chennai, Tamil Nadu, India,
Email: mangaleshwarib@gmail.com

Abstract

Dysmenorrhea is a common gynaecological disorder characterized by painful menstrual cramps, affecting millions of women worldwide. A painful or cramping feeling in the lower abdomen is one of the symptoms of dysmenorrhea, and it is often accompanied by other symptoms like headache, fatigue, nausea, vomiting, and diarrhoea. *Varmam*, a traditional Siddha medicine technique, has been used to manage various health conditions, including pain management. Four women with primary dysmenorrhea were treated with *Varmam* therapy, consisting of specific pressure point stimulations, for three consecutive menstrual cycles. The WaLIDD (working ability, location, intensity, days of pain, dysmenorrhea) scale score was used to evaluate the participant's symptoms both before and after treatment. There is a significant reduction in WaLIDD scores were observed post-treatment, indicating improved symptoms and quality of life. Pain intensity, duration, and associated symptoms showed

marked decreases. The observations infer that *Varmam* manipulation has significant benefits treatment for managing Dysmenorrhea (*Soothagavali*). To investigate the safety and effectiveness of *Varmam* therapy in larger populations, more research is required.
Keywords: Dysmenorrhea, *Soothagavali*, Siddha, Varmam Manipulation, WaLIDD scores.

Introduction

Dysmenorrhea is one of the commonest gynaecological disorders in women of childbearing age characterized by severe cramps originating from uterus. Dysmenorrhea may be symptomized by a pain or cramp-like sensation in lower abdomen that can occur before or during menstruation among others. Other biological signs such as fatigue, sweating, headaches, nausea, vomiting and diarrhoea are also frequently observed [1]. It can be primary or secondary. In cases of painful and spasmodic menstruation without any gynaecological pathology, it is known as primary dysmenorrhea. Since this is a malfunction of ovulating women, it first manifests itself 6 to 2 months after menarche, when the ovulatory cycles are already well established.

The most prevalent condition among female adolescents and adults [2]. Secondary dysmenorrhea, resulting from an underlying pelvic ailment, is characterized by more acute pain throughout the menstrual cycle and onset several years after menarche (for females over 24). The most common causes of secondary dysmenorrhea are endometriosis (33.5%), pelvic inflammatory diseases, uterine myoema, uterine polyps, cervical stenosis, pelvic adherences, intrauterine device use, congenital abnormalities of the genital tract's development (mainly the obstructive ones), and ovarian cysts [3]. Clinical features in females that distinguish secondary dysmenorrhea from initial dysmenorrhea include resistance to treatment, an enlarged uterus compared to normal, and pain during sexual activity (vaginismus) [4, 5]. In the end, pelvic pain arises due to hypersensitisation of pain fibres causes by this [6, 7]. The common treatments for dysmenorrhea are oral contraceptive pills, NSAIDs and hormone therapy.

Varmam is an ancient healing art that has been practiced for centuries as a crucial aspect in Siddha medicine. This age-old approach entails accurately manipulating determined pressure points on the body aiming at restoring homeostasis, relieving discomforts and improving overall wellness. By these vital points' stimulation, *Varmam* seeks to restore balance to elemental energies within the body experientially much enhancing circulation, flexibility relieving stress popularizing relaxation employing relaxation and supporting natural healing processes.

2. Case Presentation

2.1. Case 1

A 25 years old women with major complaints of moderate cramping of lower abdomen during menstruation, breast tenderness, exhaustion and mood swings consulted in the Outpatient Department (OPD) of Ayothidoss Pandithar Hospital (Dept of Varma Maruthuvam), National Institute of Siddha, Chennai. Had past history of taking NSAIDS on and off under medical supervision. Other USG Report and thyroid profile are normal. WaLIDD (Working Ability, Location, Intensity, Days of Pain, Dysmenorrhea) Score was 8/12.

2.2. Case 2

A 25 years old women with major complaints of severe cramping of lower abdomen and lower

back region, heavy bleeding, Fatigue and Lower back pain consulted in the Outpatient Department (OPD) of Ayothidoss Pandithar Hospital (Dept of Varma Maruthuvam), National Institute of Siddha, Chennai. Had past history of taking NSAIDS on and off under medical supervision. Other USG Report and thyroid profile are normal. WaLIDD (Working Ability, Location, Intensity, Days of Pain, Dysmenorrhea) Score was 11/12.

2.3. Case 3

A 32 years old women with major complaints of mild cramping of lower abdomen during menstruation, breast tenderness, mood swings, bodyache and fatigue consulted in the Outpatient Department (OPD) of Ayothidoss Pandithar Hospital (Dept of Varma Maruthuvam), National Institute of Siddha, Chennai. Other USG Report and thyroid profile are normal. WaLIDD (Working Ability, Location, Intensity, Days of Pain, Dysmenorrhea) Score was 5/12.

2.4. Case 4

A 19 years old women with major complaints of severe cramping of lower abdomen during menstruation, breast tenderness, exhaustion, mood swings, loss of appetite and inability to concentrate on day to day activity consulted in the Outpatient Department (OPD) of Ayothidoss Pandithar Hospital (Dept of Varma Maruthuvam), National Institute of Siddha, Chennai. Had past history of taking NSAIDS on and off under medical supervision. Other USG Report and thyroid profile are normal. WaLIDD (Working Ability, Location, Intensity, Days of Pain, Dysmenorrhea) Score was 10/12.

3. Varmam Manipulation

3.1. Intervention: Varmam therapy for three consecutive menstrual cycles.

3.2. Varmam Procedure:

Following a thorough examination, the patient was treated with Varmam. It is carried out in accordance with the SOP outlined in the Varmam literature [8]. The *Varmam* points stimulated for Dysmenorrhea (*Soothagavali*) are give in Table 1 and Figure 1.

3.3. Varmam method:

Position: Lying position
Site: abdomen and low back region
Pressure: ½ Mathirai
Duration: 15 Minutes

Table 1. The *Varmam* points stimulated for Dysmenorrhea (*Soothagavali*)

S. No	*Varmam* Name	Location	Manipulation Technique	Duration
1.	*Unthi Varmam*	In umbilicus	Use the middle 3 fingers to press and rotate in clockwise and anticlockwise direction 3 times.	20 seconds

2.	*Porthu Adangal*	From umbilicus four finger breathe lower in central axis	Use the thumb fingers to press and rotate clockwise direction 3 times.	20 seconds
3.	*Nangana Puttatangal*	In the sacro iliac dimples	Use the thumb fingers over each points to press and rotate in clockwise and anticlockwise direction 3 times.	20 seconds
4.	*Navari Adangal*	L5 – S1 joint	Use the middle 3 fingers to press and rotate in clockwise and anticlockwise direction 3 times	20 seconds
5.	*Ayakala Adangal*	Four finger breath away from L5 – S1 joint	Use the thumb fingers over each points to press and rotate in clockwise and anticlockwise direction 3 times.	20 seconds
6.	*Sanguthiri Adangal*	One finger lower from L5 – S1 joint in central line	Use the thumb fingers to press and hold in upward direction 3 times.	20 seconds
7.	*Putti Poruthadangal*	In ischial tuberosity	Use the thumb fingers over each points to press and hold in upward direction 3 times.	20 seconds
8.	*Muzhangal Adangal*	In popliteal fossa	Use the thumb fingers over each points to press and hold in upward direction 3 times.	20 seconds
9.	*Manai Adangal*	In origin and end of calf	Use the thumb fingers over each points to press and hold in upward direction 3 times.	20 seconds
10.	*Kaal Kavuli Adangal*	The web area between the great toe and second toe	Use the thumb fingers over each points to press and hold in upward direction 3 times.	20 seconds

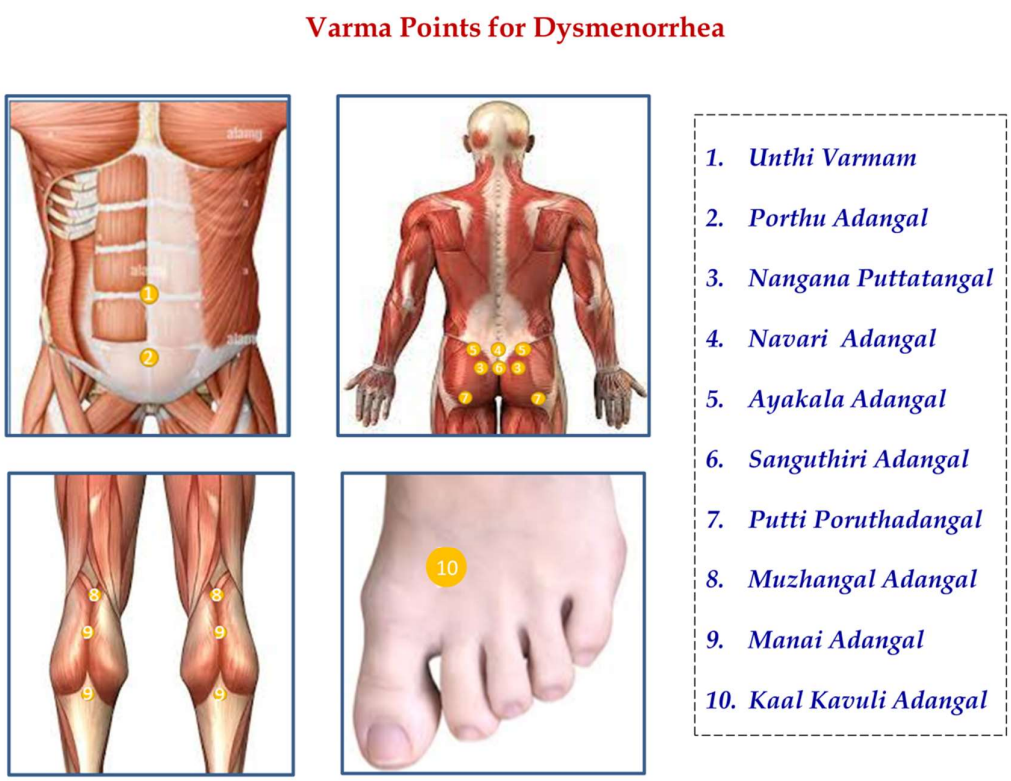

Figure 1. The *Varmam* points stimulated for Dysmenorrhea (*Soothagavali*)

4. WaLIDD Scale

Dysmenorrhea was diagnosed using the WaLIDD (working ability, location, intensity, days of pain, dysmenorrhea) scale, which was created by Teherán et al.2018 [9]. This four-item measure has a maximum score of three and a minimum score of zero for each of the following four items: pain restriction, pain range, pain location, number of days of pain duration, and disability. The scale's overall minimum and maximum scores are 0 and 12, respectively.

4.1. WaLIDD Variables

The WaLIDD variables are given in Table 2.

Table 2. The WaLIDD variables

Working Ability	Location	Pain Intensity	Days of Pain
0 – never	0 – 0 site	0 – no pain	0 – 0 days
1 – almost never	1 – 1 site	1 – mild pain	1 – 1-2 days
2 – almost always	2 – 2 to 3 sites	2 – moderate pain	2 – 3-4 days
3 - always	3 – 3 to 5 sites	3 – severe pain	3 – more than 5 days

The following classifications of dysmenorrhea severity are based on the overall WaLIDD score: 0 – no dysmenorrhea;Mild dysmenorrhea (1-4); moderate dysmenorrhea (5-7); and severe dysmenorrhea (8–12). The WaLIDD variables for cases before and after treatment are given below in Table 3 and Figure 2.

Table 3. The WaLIDD variables for cases before and after treatment

WaLIDD Score	Case 1		Case 2		Case 3		Case 4	
	BT	AT	BT	AT	BT	AT	BT	AT
Pain Intensity	2	1	3	2	1	0	3	1
Location	2	1	3	2	1	0	2	2
Days of Pain	2	1	2	1	2	1	2	2
Activity Limitation	8	1	3	1	1	1	3	2
Total	**8**	**4**	**11**	**6**	**5**	**2**	**10**	**7**

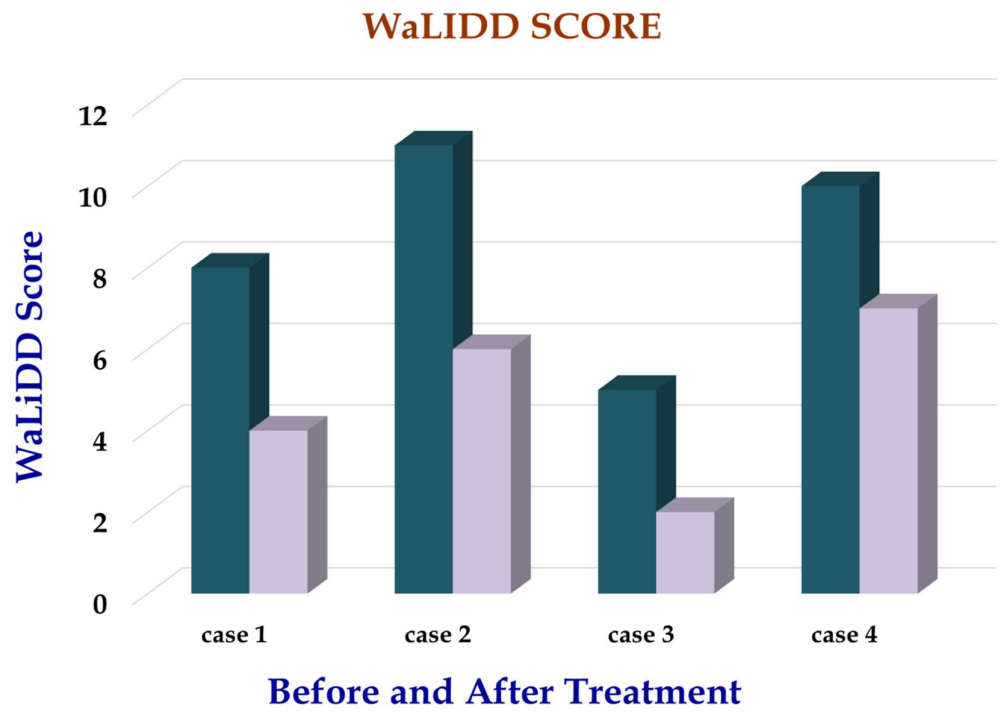

Figure 2. The WaLIDD Score for cases before and after treatment

5. Discussion

The case series demonstrated a significant reduction in WaLIDD scores after *Varmam* therapy, indicating an improvement in dysmenorrhea symptoms. Before *Varmam* therapy, WALIDD scores were fairly high but dropped significantly afterward, indicating a reduction in dysmenorrhea symptoms. The mean WALIDD score went down from 9.5/12 to 5.25/12 which is a 44.7% reduction on severity of the symptoms. In individual cases, however, the range varied between 33.3% and 50% reductions with both Case 1 and Case 3 showing a 50% decrease in WALIDD scores (from 8/12 to 4/12), Case 2 recorded a 45.5% decrease (from 11/12 to 6/12) while Case 4 showed a 36.4% reduction rate (from 11/12 to 7). These findings suggest that using *Varmam* as therapy may alleviate dysmenorrhea symptoms such as intensity of pain duration and daily life impact significantly. The various mechanisms through which *Varmam* is said to help reduce prostaglandin alpha (PGF2α) levels may account for this popularity. Stimulation of specific pressure points associated with uterine meridian and ovarian one by using *Varmam* regulates prostaglandin levels leading to low PGF2α concentration. The hormonal balance is influenced by *Varmam* through hypothalamic–pituitary–ovarian axis stimulation that subsequently decreases PGF2α production. Another pathway through which *Varmam* therapy decreases PGF2α release is by relaxing uterine muscles; this happens in addition to pain relieving neurotransmitters production increase like endorphins, serotonin, dopamine which all aid in reducing perception of pain thus leading to drop in PGF2α levels.

Varmam also modulates any inflammatory reaction by reducing pro-inflammatory cytokines and thus lowering PGF2α concentrations. In addition, *Varmam* therapy enhances blood perfusion and oxygenation of the pelvic region, which reduces these two conditions and consequently results in a lower output of PGF2α. The information provided has been reported to induce a decrease in PGF2α production and ultimately leads to a reduction in symptoms such as dysmenorrhoea by bringing about relief from uterine contractions and spasms, alleviating pain severity, increasing menstrual flow rate and improving one's general wellness.

6. Conclusion

In conclusion, *Varmam* therapy demonstrates potential as a complementary approach for managing primary dysmenorrhea symptoms. Research has shown that *Varmam* treatment can help relieve dysmenorrhea by controlling production of prostaglandins, bringing about hormonal and balance as well as relaxing uterine muscles (indicated by decreased WALIDD scores and PGF2α levels). Moreover; by promoting pain relieving neuro-transmitters, influencing inflammation response and improving blood supply to an area, *Varmam* therapy can provide additional therapeutic benefits. The efficacy of *Varmam* therapy should be examined through further studies with larger sample sizes and control groups for primary dysmenorrhea. Nevertheless, this series of cases indicates that *Varmam* might serve as a complimentary approach for women suffering from dysmenorrhea through its non-pharmacological and non-invasive manner hence improving their quality of life while managing the symptoms. Further research with a larger sample size and control group is needed to confirm the efficacy of *Varmam* therapy for dysmenorrhea.

Patient Perceptive

The patient expressed a high quality of life that had greatly improved while also experiencing

a large reduction in pain, indicating that they were very pleased with their treatment.

Informed Consent

The patients provided written consent in written form prior to treatment initiation.

Acknowledgement

The authors would like to thank Prof. Dr. R. Meenakumari, the director of the NIS team of the Department of *Varma Maruthuvam* at Ayothidoss Pandithar Hospital, National Institute of Siddha, Chennai, for her invaluable advice and steadfast assistance.

References

1. Bahrami A, Sadeghnia H, Avan A, Mirmousavi SJ, Moslem A, Eslami S, Heshmati M, Bahrami-Taghanaki H, Ferns GA, Ghayour-Mobarhan M. Neuropsychological function in relation to dysmenorrhea in adolescents. European Journal of Obstetrics & Gynecology and Reproductive Biology. 2017 Aug 1;215:224-9.
2. Iacovides S, Avidon I, Baker FC. What we know about primary dysmenorrhea today: a critical review. Human reproduction update. 2015 Nov 1;21(6):762-78.
3. Sharghi M, Mansurkhani SM, Larky DA, Kooti W, Niksefat M, Firoozbakht M, et al. An update and systematic review on the treatment of primary dysmenorrhea. *JBRA Assist Reprod.* 2019;23:51–7.
4. Osayande AS, Mehulic S. Diagnosis and initial management of dysmenorrhea. *Am Fam Physician.* 2014;89:341–6.
5. Burnett M, Lemyre M. No. 345: primary dysmenorrhea consensus guideline. *J Obstet Gynaecol Can.* 2017;39:585–95.
6. Mendiratta V, Lentz GM. In: *Comprehensive gynecology.* 7th ed. Lobo RA, Gershenson DM, Lentz GM, editors. Philadelphia (PA): Elsevier Inc; 2017. Primary and secondary dysmenorrhea, premenstrual syndrome, and premenstrual dysphoric disorder; pp. 815–28.
7. Bernardi M, Lazzeri L, Perelli F, Reis FM, Petraglia F. Dysmenorrhea and related disorders. *F1000Res.* 2017;6:1645.
8. Dr.T.Kannan rajaram, Rajaram's Varma Points and Pressure Methods on The Basis of Adankal Therapeutic Techinques in Varma Therapy (Practical Handbook for Learners of Varmam Therapy- 2) , A.T.S.V.S Siddha medical college and hospital, Munchirai, Kanniyakumari, 3rd edition, 2015. 57,64,78,90,131,102,134,136,138,194.
9. Teherán, A., Pineros, L. G., Pulido, F., & Guatibonza, M. C. M. (2018). WaLIDD score, a new tool to diagnose dysmenorrhea and predict medical leave in university students. *International Journal of Women S Health*, *Volume 10*, 35–45.