

Comparative clinical study on the efficacy of *Amaranthus viridis* Linn (Tanduliyaka) and *Symplocos racemosa* Roxb (Lodhra) on Asrugdara with special reference to Menorrhagia

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ABSTRACT : Asrugdara is a broadly classified disease; include various diseased condition of menstrual cycle. It is highly prevalent gynecological disease and can be correlated with Menorrhagia. This clinical study deals with the management of Asrugdara using *Amaranthus viridis* and *Symplocos racemosa*. Total 52 patients were selected and randomly divided into 2 groups. Group A was treated with 5g of powder of *A. viridis* and group B, *S. racemosa*, twice a day for the duration of one month. Assessment criteria was based on the improvement in the score of cardinal symptoms and other common symptoms before, during and after the treatment. There was a statistically significant reduction observed in cardinal symptoms by both the drugs at the end of the treatment period. The other common symptoms were also successfully reduced. *A. viridis* was found to be more significant in comparison to *S. racemosa*, and it is more effective to relieve and control Asrugdara.

Key words : Asrugdara, Abnormal uterine bleeding, Menorrhagia.

INTRODUCTION

In Ayurvedic texts, excessive and or irregular menstrual bleeding per vagina has been described mainly under the Asrugdara. On account of the disturbance in intake of proper diet and rest, stress and strain, with the change of the life style, this disease has become a very challenging problem for working class ladies and common in house wives. It also causes considerable morbidity.

The prevalence of excessive and / or irregular bleeding was 22.7% of the total gynecological admission and is found most commonly in women age 30 to 49 years. (Syeda Ameena, 2005)

Asrugdara can be correlated with abnormal uterine bleeding specially Menorrhagia, on the basis of pathogenesis¹. They may involve the structural or functional disturbance and are mostly associated with the complaint of subfertility.

In allopathic medicine, medical treatment is usually the 1st intent treatment in excessive bleeding. But it reduces menstrual blood loss by only 50% and up to 50% of women undergo surgical treatment within 5 years. But none of these treatments proved its definite efficacy in spite of high price and side effects. This condition presents a major financial burden in the health care services. (Herve Fernandez et al - 2003)

In the present study it has been made to evaluate the efficacy of *A. viridis* with bee's honey on Asrugdara. This drug has been selected with reference from Charaka Samhitha² It is freely available plant in Sri Lanka and the preparation of the drug is not much expensive. *S. racemosa* is a well known time tested drug with properties of Raktastambhana and Garbhashaya Shothagna³.

Hence the present study was continued to find out the efficacy of *A. viridis* and *S. racemosa* on Asrugdara and also evaluate the most effective drug among of these two drugs.

MATERIAL & METHODS

Preparation of Test drugs :

The dried roots of *A. viridis* and bark of *S. racemosa* were finely powdered separately at the pharmacy in Ayurveda teaching hospital and pharmacy in Osuki Ayurveda Center, Rajagiriya. The fine powders were stored in air tight containers separately until use. Bee's honey bought from Ayurvedic drug outlet at Rajagiriya and was tested according to Ayurvedic method.

Clinical study :

In the present study 52 patients with Asrugdara were selected from the gynecological clinic of the Ayurveda teaching hospital and Osuki Ayurveda Center, Rajagiriya. Females aged between 16 - 45 years suffering from excessive and or irregular vaginal bleeding were selected. The patients suffering from severe

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gynecological disorders, severe cardiac, hepatic, renal disorders, thyroid defects, blood disease, taking oral contraceptives, other hormonal preparations, and dependant on any other drug, Hb% less than 10g/dl and pregnant or lactating women were excluded from the research.

These patients were subjected to detailed clinical examination and Ultra Sound Scan on pelvic area.

All selected patients were randomly divided into 2 groups. Group A patients were treated with 5g of powder of *A. viridis* and group B, 5g of powder of *S. racemosa* with bee's honey twice a day in the morning and evening for one month duration continuously was given. Follow up period was 3 months. No medication was administered during the follow up period. All the pre treatment investigations were repeated after the treatment.

Assessment criteria were based on the improvement in the specially prepared scoring system of cardinal symptoms and other most common symptoms manifested by selected patients before, during and after the treatment. The cardinal symptoms are,

- duration of bleeding (Raja srava Kala)
- inter menstrual period (Artava Antharala Kala)

- ♦ Amount of bleeding (Artava Pramana)
- ♦ Pain during menstrual period (Yoni Vedana)
- ♦ General weakness (Daurbalya)

The improvement in the cardinal symptoms were compared and analyzed statistically between the end of the treatment and baseline by using student's paired 't' test. The investigations also analyzed using student's paired 't' test.

Scoring system (Assessment criteria) :

Duration of Bleeding :

Duration	Grade	score
1-5 days	Nil	0
6-7 days	Mild	1
8-9 days	Moderate	2
>9 days	Severe	3

Inter Menstrual Period (IMP) :

IMP (days)	Grade	Score
21-28	Nil	0
16-20 days	Mild	1
15 or below	Moderate	2
Irregular	Severe	3

Amount of Bleeding :

A. No of pads per cycle	Grade	Score	B. Blood loss	Grade	Score
<15	Nil	0	80g or less	Nil	0
15-19	Mild	1	81-100 g.	Mild	1
20-25	Moderate	2	101-120 g.	Moderate	2
>25	Severe	3	>120 g.	Severe	3

Pain during Menstrual Period :

Pain	Grade	Score
No pain	Nil	0
Menstruation is painful but daily activities are not affected, no need of analgesics	Mild	1
Daily activities are affected, need to take analgesics	Moderate	2
Daily activities are inhibited, pain continuous after administration of analgesics	Severe	3

General Weakness :

Weakness	Grade	Score
No weakness	Nil	0
Mild weakness	Mild	1
Weakness is severe but perform routine activities	Moderate	2
Weakness is much severe and cannot perform routine activities	Severe	3

TABLE NO. 1 : THE EFFECT OF THERAPY ON MENSTRUAL BLEEDING :

Group	No/n	Mean score		Mean / d	% relief	SD	SE	t	p
		B.T	A.T						
Duration of Menstrual Bleeding :									
A	26	2.69	0.69	2.00	74.39	1.00	0.196	10.20	<0.001
B	26	2.76	0.84	1.92	69.56	0.97	0.19	10.1	<0.001
Inter Menstrual Period :									
A	26	2.87	0.36	2.51	87	0.608	0.12	20.9	<0.001
B	26	2.28	1.07	1.71	53	0.85	0.17	11.2	<0.001
Amount of Menstrual Blood Loss :									
A	26	2.8	0.346	2.45	87.5	0.74	0.15	6.33	<0.001
B	26	2.7	1.19	1.51	55.00	0.83	0.162	9.3	<0.001
Painful Menstruation :									
A	26	1.76	0.73	1.03	59	0.53	0.15	9.8	<0.001
B	26	1.86	0.84	1.02	54	0.48	0.09	15.7	<0.001
General Weakness :									
A	26	1.8	0.38	1.42	78	0.55	0.13	10.9	<0.001
B	26	1.75	0.45	1.3	74	0.56	0.13	10	<0.001

TABLE NO. 2 : OVERALL EFFECT OF THERAPY IN EACH GROUP :

Group	No/n	Mean score		Mean / d	% relief	SD	SE	t	p
		B.T	A.T						
A	26	2.38	0.50	1.88	78.99	0.50	0.098	19.18	<0.001
B	26	2.27	0.88	1.39	61.23	0.42	0.083	17.37	<0.001

Assessment of amount of bleeding : All the pads were collected and subjected to assessment of menstrual blood loss before during and after treatment. The method used by Vaishali Shinde (2004) in India was used for this study to measure the weight of pads. No of pads were counted by using a pictorial chart, as used in previous studies by Higham in 1990 and Herve Fernandez in 2003.

OBSERVATION & RESULTS

Before treatment, among 52 patients' 28.85%, 23.08%, 15.38%, 25% had been suffering from Asrugdara for 1-6 month, 7-12 month, 1-3 years, more than 3 years respectively. When considering cardinal symptoms majority of patients (80.77%) had the duration of menstrual bleeding more than 9 days, 48.08% had irregular menstrual cycle, 82.69% had to use more than 25 pads per cycle, and 78.84% had lost more than 120g of blood.

Apart from cardinal symptoms those patients also had been suffering from following general sign and symptoms. They are Angamarda, Bhrama, Daha, Tandra, Aruchi, Alasya, Shiras shula. When considering menstrual blood, 76.09% patients were had clots and 67.7% were had offensive smell. After the treatment all above sign and symptoms were relived.

End of the follow-up period 2 patients were relapsed from both groups each. During the follow up period 2nd menstrual cycle was not presented by 8 patients, 3rd menstrual cycle was not presented by 3 patients, and 2nd and 3rd cycles were not presented by 6 patients.

DISCUSSION

Excessive and/or prolonged bleeding during menstrual period or even during inter menstrual period is known as Asrugdara⁴. According to Dalhana scanty menstruation for short duration during inter menstrual period also considered as Asrugdara. Going through the modern literature it resembles with abnormal uterine bleeding specially Menorrhagia.

In initiation of Samprapthi of Asrugdara prominent Doshas are Vata and Pitta. These Doshas have predominant role in all type of Asrugdara².

When considering *A. viridis* it pacifies Pitta due to Madhura Rasa, Sheeta Veerya and Madhura Vipaka. It is a haemostatic drug and causes stasis and condensation in the tissue fluid, exert a firming, condensing and compacting action upon the tissue and organs of the body. It stops excessive discharge and

secretion. By using this drug on Asrugdara it reduces bleeding as it promotes absorption of body fluid. Deepana, Pachana and Anulomana properties of *A. viridis* elevates the Jatharagni, Dhatvagni as well as Artavagni. Chemically this plant contain alkaloids, tannin, some reducing sugar, and resin and rich in calcium and iron⁵. Due to property of Vata Anulomana it pacifies Apana Vayu too. The samprapthi Vighatana (breaking of the pathogenesis) starts with removal of Ama and pacification of aggravation Doshas⁴. Ultimately proper formation of Rasa, Rakta Dhatu and Artava occur due to Samprapthi Vighatana by *A. viridis*. Considering modern view this plant has haemostatic action.

When considering *S. racemosa*, it pacifies Pitta Dosh due to Kashaya Rasa and Sheeta Veerya. Lodhra acts on Rakta Dhatu³. Chemical constituents of the *S. racemosa* are Loturine, Colloturine, Loturidine, reducing sugar, Oxalic acid, Phytosterol, 3-mono-glucofuranoside of 7-O-methyl leucopelarargonidine. (Nadkarni's K.M., 1982; Desilva, L.B. et al-1979.) Due to haemostatic action it reduces bleeding. When Pitta pacifies that help to remove Ama from the body which is one of the primary factors in indication of Samprapthi in Asrugdara. Due to Samprapthi Vighatana Kriya the symptoms of Asrugdara get reduced. Bee's honey has the haemostatic action too. Therefore it has enhanced the therapeutics value of the test drugs.

The effect of treatment of group A and B both showed highly significant result on all the cardinal symptoms of Asrugdara. By comparing the overall effect of therapy on all the cardinal symptoms, 78.99% of relief was observed in *A. viridis*, while 61.23% of relief was observed in *S. racemosa*. The group A has shown complete cure in all the symptoms of Asrugdara in 19.2% of the patients. Markedly improvement in the symptoms of Asrugdara in 30.8%, Moderately

improvement in 23%, improvement in 11.5% and no change in 15.4% of the patients. In group B, 7.6%, patients were completely cured, markedly improvement in 19.2%, moderately improvement in 26.9%, improvement in 23% was seen and 25% were unchanged. Thus percentage relief was higher in group A as compared to group B. By considering the properties of *A. viridis*, it may have a best Samprapthi Vighatana Kriya than *S. racemosa*. It has been proved in this clinical study that there is decrease in all the cardinal symptoms of Asrugdara and increase in the haematocrit value of the patients after treatment of *A. viridis* for one month period.

After treatment for 2nd month duration (2nd menstrual cycle in follow up) 6 patients in both groups were not presented their menstruation. In 3rd menstrual cycle in follow up 2 patients in group A and one patient in group B was not presented their menstruation. Those patients were in perimenopausal period or with polycystic ovarian disease.

CONCLUSION

It can be concluded that Tanduliyaka and Lodhra groups have shown highly significant results on all the cardinal symptoms of Asrugdara. *A. viridis* is more effective than *S. racemosa* in curing Asrugdara.

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हिन्दी सारांश

असृग्दर में तण्डुलीयक एवं लोध्र के चिकित्सकीय प्रभाव का तुलनात्मक अध्ययन

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प्रस्तुत शोधपत्र में असृग्दर (मेनोरेजिया) व्याधि में तण्डुलीयक एवं लोध्र के चिकित्सकीय प्रभाव का तुलनात्मक अध्ययन किया गया है। कुल ५२ रुग्णों को पंजीकृत करके दो समूहों में बाँटा गया। समूह 'अ' में तण्डुलीयक चूर्ण ५ ग्राम और समूह 'ब' में लोध्र चूर्ण ५ ग्राम मात्रा दिन में दो बार एक माह तक दिया गया। परीक्षण के बाद तण्डुलीयक का प्रभाव लोध्र की अपेक्षा अच्छा पाया गया।

