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CLINICAL EVALUATION OF SUNDARI JEEVAK SYRUP IN THE MANAGEMENT OF *KASHTARTAVA* (PRIMARY DYSMENORRHEA)

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ABSTRACT

Objectives: The present study is intended to assess the efficacy of Sundari Jeevak Syrup in the condition of *Kashtartava* (primary dysmenorrhea). **Materials and Methods:** The subjects were instructed regarding the study procedure and were advised to take 20 ml Sundari Jeevak Syrup orally thrice in a day before meal for 2 consecutive cycle. All the subjects were informed regarding the evaluation that will be carried out during the period of the study. **Result:** This study shows improvements in painful menses, irregularity, Nausea, anorexia, fatigue and intensity of flow and there duration of menses, **Conclusion:** This statistical results suggest that the treatment with Sundari Jeevak syrup is an effective way for management of *Kashtartava* (Primary dysmenorrhea), and shown improvements in painful menses, irregularity, Nausea, anorexia, fatigue and intensity, flow and there duration of menses. There were no adverse effects either reported or observed during the clinical study.

KEYWORDS: Sundari Jeevak Syrup, Primary Dysmenorrhea, *Kashtartava,* Menstruation.

INTRODUCTION

Primary dysmenorrhea is predominantly confined to adolescent girls. Dysmenorrhea is a medical condition characterized by severe uterine pain during menstruation. Most of the women experience minor pain during menstruation, but it is diagnosed when the pain is so severe as to limit normal activities, or require medication. There is no identifiable pelvic pathology in primary dysmenorrhea.[1] Dysmenorrhea shows features of different kind of pain, including sharp, throbbing, dull or shooting pain. The pain begins a few hours before or just with the onset of menstruation and mainly pain is spasmodic and confined to lower abdomen; may radiate to the back and medial aspect of thigh. Systemic discomforts like nausea, vomiting, fatigue, diarrhoea, headache and tachycardia may be associated.[2] Prevalence of dysmenorrhea reported 70.2%. Majority of the subjects experienced pain for one or 1-2 days during menstruation. 23.2% of the dysmenorrheic girls experienced pain for 2-3 days.[3] *Kashtartava*- This word can be described as- "*Kastha* means with great difficulty, so particularly the condition where *Artava* is shaded with difficulty and pain is termed as "*Kashtartava*. According to *Acharya Charaka*, *Kashtartava* is not mentioned as a disease in Ayurveda but symptom of a disease itself can constitute a disease. Coordinated work of *Vayana* and *Apana Vata* with each other, are responsible for production of *Artava*. Normal menstruation is among one of the function of *Apanavata*, so painful menstruation can be considered as *Apanavata Dushti*. In Ayurveda text it may comes under several *Yoni Vyapad* such as- *Vatala Yoni Vyapad, Udavartini Yoni Vyapad, SuchimukhiYoni Vyapad,* and *Artava Kshaya*.[4]

Dysmenorrhea itself is not a life-threatening disease but it is found have a negative impact on the daily activities and may result in unable to do work and missing school, missing participate in sports or other activity. In Ayurveda classics, there are lot of single and compound drugs available which are useful in painful menses without any adverse effect.

The present study is intended to assess the efficacy of Sundari Jeevak Syrup in the condition of *Kashtartava* (primary dysmenorrhea).

MATERIALS AND METHODS

The efficacy of Sundari Jeevak Syrup was evaluated based on clinical improvement in Painful menses, Nausea, *Chhardi* (vomiting), *Vibandha* (constipation), *Atisara* (diarrhoea), *Shrama* (fatigue), *Aruchi* (anorexia), *Shirashoola* (headache). The subjects were enrolled, and informed consent was taken. The subjects were instructed regarding the study procedure and were advised to take 20 ml Sundari Jeevak Syrup orally thrice in a day before meal for 2 consecutive cycle. All the subjects were informed regarding the evaluation that will be carried out during the period of the study.

Study Design and Procedure

The study was an open labelled, single armed, single centric study. Subjects were advised to take 20 ml Sundari Jeevak Syrup orally thrice in a day before meal for 2 consecutive cycle.

Selection of study Population

Apparently subjects of either gender between the age group of 16 years to 30 years (both inclusive).Individuals will be considered as those who have primary dysmenorrhea and do not have any acute medical condition or chronic medical/surgical condition that requires both immediate or continuous medical monitoring and treatment

Inclusion Criteria

1. Age: from 16- 30 years of female.
2. Females suffering from primary dysmenorrhea more than 3 consecutive cycles.
3. Female presenting primary dysmenorrhea with or without any of following symptoms associated with-

- Any kind of pain like headache, backache, abdominal pain, body ache.
- Nausea and vomiting
- Weakness
- Psychological symptoms- like anxiety, stress, depression, irritability, restlessness.

1. Willing to participate in the trial.
2. Readiness to sign informed consent form.

Exclusion Criteria

1. Patients having congenital anomalies, patient is suffering from acute infections, cervical stenosis etc.
2. Patients with chronic illness, patient using an intrauterine contraceptive device, and patient with menorrhagia or any uterine pathology (fibroid, adenomyosis, endometriosis etc.) will be excluded from the study.
3. Lactating female.
4. Individual participating in any other clinical trial

Test Product

Sundari Jeevak Syrup

Test Product and Dosage

Sundari Jeevak Syrup- prepared by Multani Pharmaceuticals Ltd.

Methods: 14 days after menstruation till the commencement of next cycle for two consecutive cycles.
Dose- 20 ml before meal thrice a day orally.

Dosage form: Syrup (Internal use).

Content of Sundari Jeevak Syrup.

Table 01: Composition of Sundari Jeevak Syrup.

Each 10 ml prepared from-				
S. No.	**Ingredients**	**Latin name**	**Part used**	**Qty (in mg)**
	Decoction of;			
1.	*Shatavari*	*Asparagus racemosus*	Root	35
2.	*Ashoka*	*Saraca asoca*	Stem bark	215
3.	*Lodhra*	*Symplocos racemosa*	Stem bark	750
4.	*Gokshuru*	*Tribulus terrestris*	Fruit	320
5.	*Shweta Musali*	*Chlorophytum tuberosua*	Root Tuber	250
6.	*Punarnava*	*Boerhaavia deffusa*	Root	215
7.	*Bala*	*Sida cordifolia*	Root	320
8.	*Ashwagandha*	*Withania somnifera*	Root	150
9.	*Brahmi*	*Bacopa monnieria*	Whole plant	320
10.	*Palash Pushpa*	*Butea frondosa*	Flower	35
11.	*Vacha*	*Acorus calamus*	Rhizome	100
12.	*Kantkari*	*Solanum surratense*	Root	290
13.	*Dhataki*	*Woodfordia floribunda*	Flower	100
14.	*Yashtimadhu*	*Glycyrrhiza glabra*	Root	65
15.	*Gambhari*	*Gmelina arborea*	Root bark	65
16.	*Gudhal*	*Hibiscus rosasinensis*	Flower	65
17.	*Daruharidra*	*Berberis aristate*	Stem bark	100

18.	*Anant moola*	*Hemidesmus indicus*	Root	430
19.	*Nilofar*	*Nymphea alba*	Flower	35
20.	*Shankhapushpi*	*Convolvulus pliricaulis*	Whole plant	320
21.	*Gorakhmundi*	*Sphaeranthus indicus*	Whole plant	65
22.	*Manjishta*	*Rubia cordifolia*	Root	430
23.	*Sugar base*			
A.	*Gud*	*Saccharum officinarum*		4.5 g
B.	*Sugar*	*Saccharum officinarum*		1.5g
C.	*Citric acid*			1
D.	*Self generated alcohol*			Not more than 6%
24.	*Preservative*			
A.	*Methyl Paraben*			30
B.	*Propyl Paraben*			3
C.	*Sodium Benzoate*			25

Study Objectives

Primary objectives

Improvement in painful menses condition

Secondary objectives

Improvement in other symptoms of dysmenorrhea.

Assessment Plan

In order to evaluate the efficacy of Sundari Jeevak Syrup, subjects aged between 16 to 30 years were enrolled into the study.

All Subjects were advised to taken Syrup, 14 days after menstruation till the commencement of next cycle for two consecutive cycles. Dose- 20 ml before meal thrice a day orally. The follow up period was ~90th days after the 3 cycle of menstruation.

Adverse effects if any were noted down. The subjects were free to withdraw from study if they so desired. No other medication intended for same use as study medication was allowed for these subjects. Clinical parameters were assessed at Day 0, Day~30th, Day~60th and on follow up day (Day~90th).

Assessment of Subjective parameters

The clinical parameters were assessed at pre-treatment (Day 0), Day~30th Day~60th and on follow up (Day~90th). Out of a total of 51 subjects, only 50 subjects completed the trial. The clinical assessment is recorded for the 50 subjects. The clinical parameters are Painful menses, Nausea, *Chhardi* (vomiting), *Vibandha* (constipation), *Atisara* (diarrhoea), *Shrama* (fatigue), *Aruchi* (anorexia), *Shirashoola* (headache).

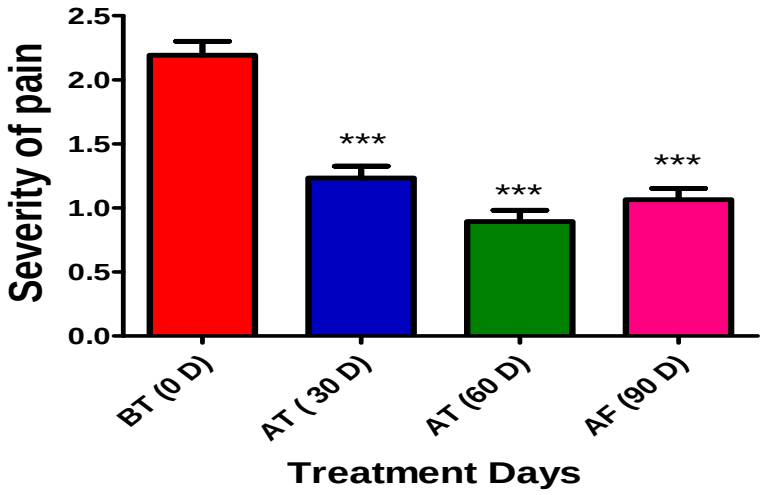
Table 02: Clinical Parameters Analysis.

Parameter	Response	Before Treatment	After Treatment 1	After Treatment 2	After Final Treatment
Severity of pain	0	0 (0%)	4 (8.5%)	11(23.40%)	7 (14.89%)
	1	9 (19.14%)	29 (61.70%)	30(63.82%)	30 (63.82%)
	2	20 (42%)	13 (27.65%)	6 (12.76%)	10 (21.27%)
	3	18(38.29%)	1 (2.12%)	0 (0%)	0 (0%)
Duration of pain	0	0 (0%)	2 (4.25%)	5 (10.63%)	6 (12.76%)
	1	9 (19.14%)	27 (57.44%)	31(65.95%)	30 (63.82%)
	2	25 (53.19%)	15 (31.91%)	10(21.27%)	10 (21.27%)
	3	13 (27.65%)	3 (6.38%)	1 (2.12%)	1(2.12%)
Artava Pramana	0	35 (74.46%)	39 (82.97%)	41(87.23%)	41 (87.23%)
	1	6 (12.76%)	8 (17.02%)	6 (12.76%)	6 (12.76%)
	2	6 (12.76%)	0 (0%)	0 (0%)	0 (0%)
	3	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Rajasrava Avadhi	0	16 (30.04%)	31 (65.95%)	37(78.72%)	34 (72.34%)
	1	24 (51.06%)	15 (31.91%)	09(19.14%)	12 (25.53%)
	2	7 (14.89%)	1(2.12%)	01 (2.12%)	01(2.12%)
	3	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Praseka (nausea)	0	19 (40.42%)	22 (46.80%)	26(55.31%)	28 (59.57%)
	1	14 (29.78%)	17 (36.17%)	19(40.42%)	17 (36.17%)
	2	9 (19.14%)	6 (12.76%)	2 (4.25%)	2(4.25%)
	3	5 (10.63%)	2(4.25%)	0 (0%)	0 (0%)
Chhardi (vomiting)	0	42 (89.36%)	44 (93.61%)	46(97.87%)	46 (97.87%)
	1	3 (6.38%)	3(6.38%)	1(2.12%)	1(2.12%)

	2	2(4.25%)	0 (0%)	0 (0%)	0 (0%)
	3	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Vibandha (constipation)	0	44 (93.61%)	46 (97.87%)	46(97.87%)	46(97.87%)
	1	2 (4.25%)	1(2.12%)	1(2.12%)	1(2.12%)
	2	1(2.12%)	0 (0%)	0 (0%)	0 (0%)
	3	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Atisara (diarrhea)	0	36 (76.59%)	37 (78.72%)	37(78.72%)	37(78.72%)
	1	2(4.25%)	5 (10.63%)	5(10.63%)	4(8.51%)
	2	5(10.63%)	5(10.63%)	4 (8.51%)	4(8.51%)
	3	4 (8.51%)	0 (0%)	1(2.12%)	2 (4.25%)
Shrama (fatigue)	0	15 (31.91%)	17 (36.17%)	23(48.93%)	22 (46.80%)
	1	19 (40.42%)	21 (44.68%)	19	21 (44.68%)
	2	11 (23.40%)	8 (17.02%)	5 (10.63%)	4(8.51%)
	3	2(4.25%)	1(2.12%)	0 (0%)	0 (0%)
Aruchi (loss of appetite)	0	21 (44.68%)	22 (46.80%)	24(51.06%)	24 (51.06%)
	1	5(10.63%)	12 (27.27%)	14(29.78%)	13 (29.54%)
	2	12 (27.27%)	11(23.40%)	7 (14.89%)	8 (17.02%)
	3	9 (19.14%)	2(4.25%)	2(4.25%)	2(4.25%)
Shirashula (headache)	0	43 (91.48%)	43 (91.48%)	43(91.48%)	43 (91.48%)
	1	1(2.12%)	2(4.25%)	3(6.38%)	2(4.25%)
	2	2(4.25%)	2(4.25%)	1(2.12%)	2(4.25%)
	3	1(2.12%)	0 (0%)	0 (0%)	0 (0%)
Vankshana Shula, (tenesmus of the bladder), Kati shula, Janu Shula	0	0 (0%)	1(2.12%)	7 (14.89%)	6 (12.76%)
	1	3(6.38%)	27 (57.44%)	28(59.57%)	30 (63.82%)
	2	27 (57.44%)	16 (34.04%)	12(27.27%)	11(23.40%)
	3	17 (36.17%)	3 (6.38%)	0 (0%)	0 (0%)

OBSERVATION AND RESULT

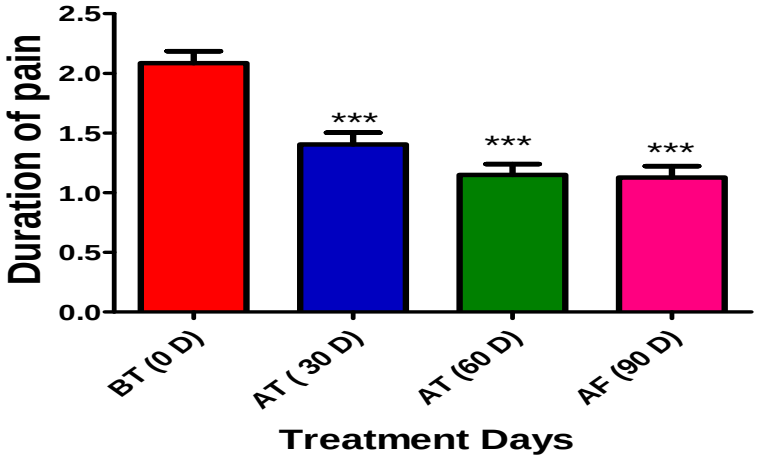
The changes Improvement severity of pain in *Kashtartava* (Primary dysmenorrhea)



Graph - 01

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on intensity of pain is analysed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Intensity of pain is found to be significantly reduced ($p< 0.05$) at 30th day & 60th day of treatment (t=10.27 & t= 13.92). Further, there is non-significant difference in the intensity of pain between after treatment (AT 30D, AT 60D) at 30th & 60th day and at follow up day (AF 90D) at 90th day (t=1.825; t= 1.825).

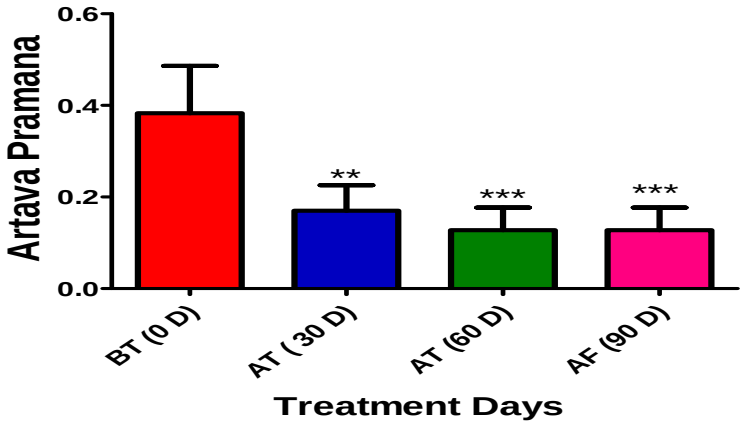
Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on duration of pain in *Kashtartava* (Primary dysmenorrhea)



Graph - 02

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on duration of pain in *Kashtartava* (Primary dysmenorrhea) is analysed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Duration of pain is found to be significantly reduced (p< 0.05) at 30th day & 60th day of treatment (t=9.527 & t= 13.10). Further, there is non-significant difference in the Duration of pain between after treatment (AT 60D) at 60th day and at follow up day (AF 90D) at 90th day (t=0.2977).

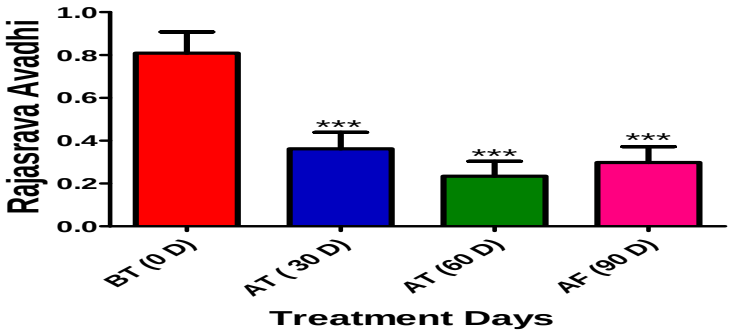
Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Artava Pramana



Graph – 03

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Artava Pramana is analysed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Artava Pramana is found to be significantly reduced (p< 0.05) at 30th day & 60th day of treatment (t=3.852 & t= 4.623). Further, there is non-significant difference in the Artava Pramana between after treatment (AT 30D, AT 60D) at 30th & 60th day and at follow up day (AF 90D) at 90th day (t=0.7704; t= 0.00) respectively.

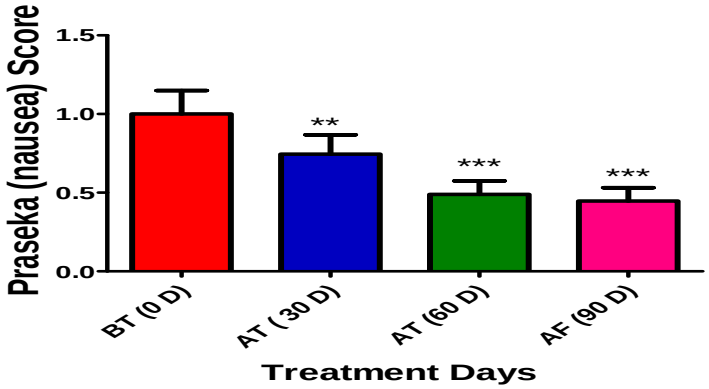
Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Rajasrava Avadhi



Graph – 04

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Rajasrava Avadhi is analysed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Rajasrava Avadhi is found to be significantly reduced (p< 0.05) at 30th day & 60th day of treatment (t=6.278 & t=8.072). Further, there is non-significant difference in the Rajasrava Avadhi between after treatment (AT 30D, AT 60D) at 30th & 60th day and at follow up day (AF 90D) at 90th day (t= 0.8969; t= 0.8969) respectively.

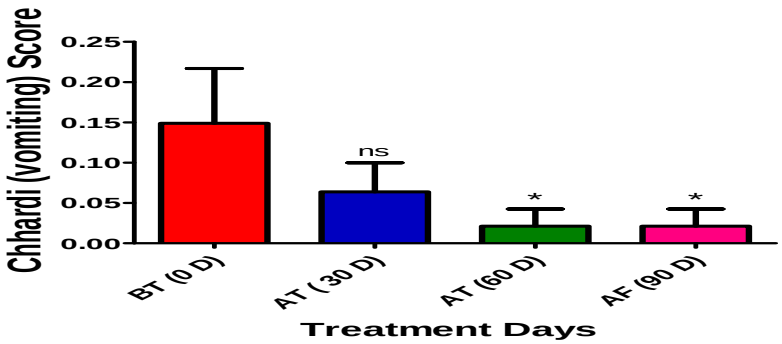
Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Praseka (nausea)



Graph - 05

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Praseka(nausea) is analysed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Praseka(nausea) is found to be significantly reduced (p< 0.05) at 30th day & 60th day of treatment (t= 3.231 & t=6.463). Further, there is non-significant difference in the Praseka(nausea) between after treatment (AT 60D) at 60th day and at follow up day (AF 90D) at 90th day (t= 0.5386).

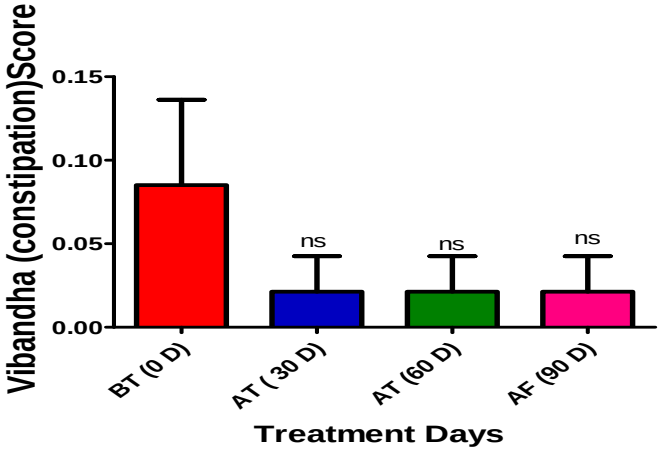
Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Chhardi (vomiting)



Graph – 06

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Chhardi (vomiting) is analyzed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Chhardi (vomiting) is found to be significantly reduced ($p< 0.05$) at 60th day of treatment (t= 2.854). Further, there is non-significant difference in the Chhardi (vomiting) between after treatment (AT 30D, AT 60D) at 30th & 60th day and at follow up day (AF 90D) at 90th day (t=0.9513; t=0.000) respectively.

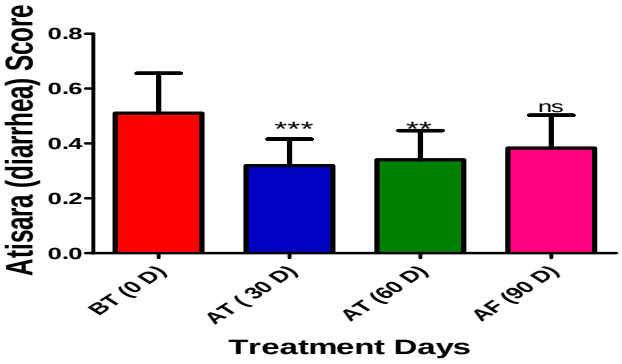
Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Vibandha (constipation).



Graph – 07

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Vibandha (constipation) is analyzed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Vibandha (constipation) is found to be non-significantly reduced ($p< 0.05$) at 30th day & 60th day of treatment (t=1.914). Further, there is non-significant difference in the Vibandha (constipation) between after treatment (AT 30D, AT 60D) at 30th & 60th day and at follow up day (AF 90D) at 90th day (t=0.000) respectively.

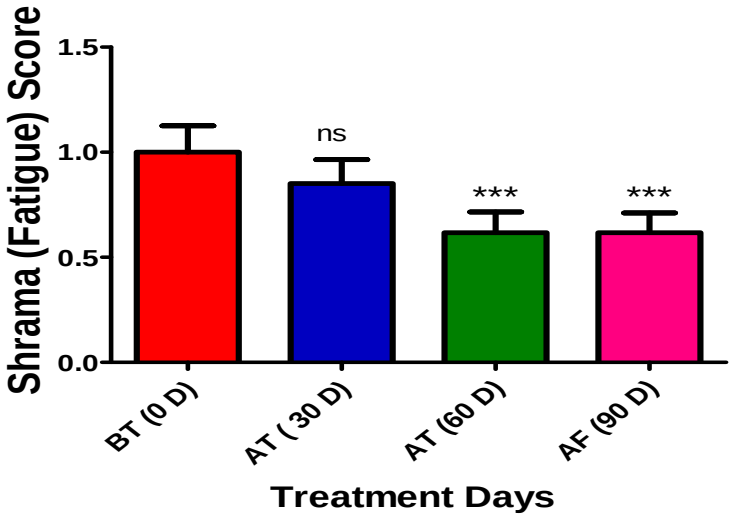
Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Atisara (diarrhea)



Graph – 08

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Atisara (diarrhea) is analysed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Atisara (diarrhea) is found to be significantly reduced ($p< 0.05$) at 30th day & 60th day of treatment (t=3.927 & t=3.490). Further, there is non-significant difference in the Atisara (diarrhea) between after treatment (AT 30D, AT 60D) at 30th & 60th day and at follow up day (AF 90D) at 90th day (t= 1.309; t= 0.8726) respectively.

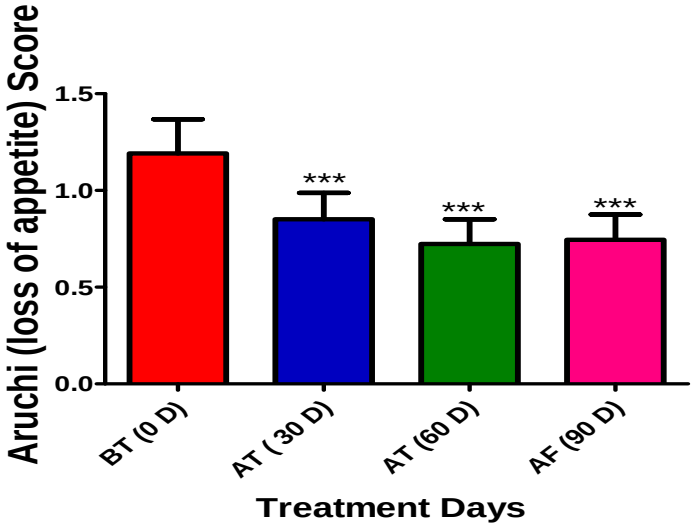
Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Shrama (fatigue).



Graph – 09

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Shrama (fatigue) is analysed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Shrama (fatigue) is found to be significantly reduced (p< 0.05) at 60th day of treatment (t=5.495). Further, there is non-significant difference in the Shrama (fatigue) between after treatment (AT 60D) at 60th day and at follow up day (AF 90D) at 90th day (t= 0.000).

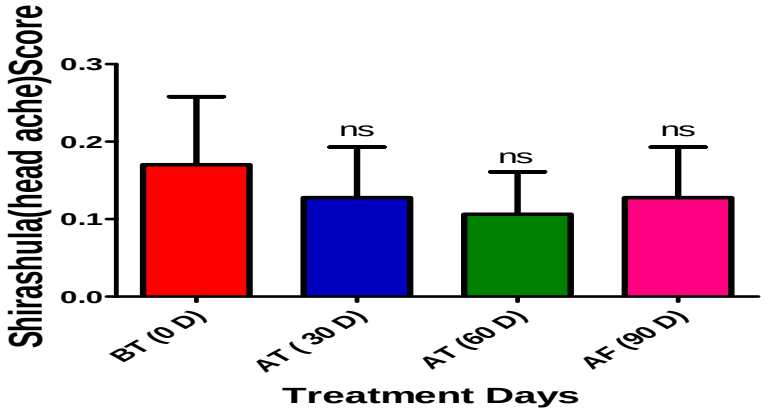
Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Aruchi (loss of appetite)



Graph – 10

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Aruchi (loss of appetite) is analysed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Aruchi (loss of appetite) is found to be significantly reduced (p< 0.05) at 30th day & 60th day of treatment (t= 4.983 & t=6.851). Further, there is non-significant difference in the Aruchi (loss of appetite) between after treatment (AT 30D, AT 60D) at 30th & 60th day and at follow up day (AF 90D) at 90th day (t=1.557; t=0.3114) respectively.

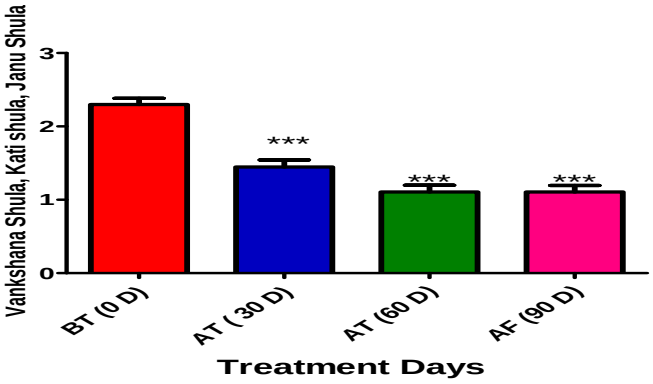
Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Shirashula (headache)



Graph - 11

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Shirashula (headache) is analysed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Shirashula (head ache) is found to be non- significantly reduced ($p< 0.05$) at 30th day & 60th day of treatment (t= 1.269 & t=1.903). Further, there is non-significant difference in the Shirashula (head ache) between after treatment (AT 30D, AT 60D) at 30th & 60th day and at follow up day (AF 90D) at 90th day (t=0.0; t=0.6343) respectively.

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Vankshana Shula, (tenesmus of the bladder), Kati shula, Janu Shula



Graph – 12

Efficacy of Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) on Vankshana Shula, (tenesmus of the bladder), Kati shula, Janu Shula is analysed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30th day & 60th of treatment. Vankshana Shula, (tenesmus of the bladder), Kati shula, Janu Shula is found to be significantly reduced ($p< 0.05$) at 30th day & 60th day of treatment (t= 11.00 & t=15.40). Further, there is non-significant difference in the Vankshana Shula, (tenesmus of the bladder), Kati shula, Janu Shula between after treatment (AT 30D) at 30th day and at follow up day (AF 90D) at 90th day (t=0.0).

DISCUSSION

Sundari Jeevak Syrup is a polyherbal Ayurvedic formulation which contains herbs that have been proved effective in dysmenorrhea.

Shatavar (Asparagus racemosa)- The chemical constituents of *Shatavari* are Steroidal saponins, known as Shatavarins I-IV. It comes under group of phytoestrogens, which have ability to effect estrogenic effect in the human body.[5]

Asparagus also regulate the hormone secretions.

Ashoka (Saraca asoka)-Acharya *Charak* has been described Ashoka in *Vednasthapana Mahakashaya* (Group of herbs that help to relieve pain).[6]

Lodhra (Symplocos recimosus)- The main contain of *Lodhra* is loturine alkaloid and spinosteral which shows anti-inflammatory activity. Alcoholic fraction of *Lodhra* reduced the frequency and intensity of the contraction both pregnant, non-pregnant uteri of some animals.[7] It is suggested that *Lodhra* might have influenced the

endometrial prostaglandin apparatus, there by acting effectively in the control of dysfunctional uterine bleeding.

Ashwagandha (Withania somnifera)- Ashwagandha prevents premature menopause and it also used in the treatment of amenorrhea (delay or absence/decreased bleeding of menstruation) and menorrhagia (excessive menstrual bleeding).[8]

Bramhi (Bacopa monniera)- primary contains of *Bramhi* are triterpenoid, saponins, which have therapeutic action, saponon acts like natural steroids, thus it can regulate the hypothalamo- pituitary-ovarian axis and helps in ovulation. So it is recommended for the treatment of amenorrhea.[9]

Palash (Butea monosperma)- Its flower contains triterpene butrin, isobutrin, sulphurein, steroids, flavonoids. Its seeds have hormone balancing effect.[10]

Vacha (Acorus calamus)- Antispasmodic effect on the invouluntary muscle tissuein rabbit and dogs, is produced by oil of Acorus calamus rhizome. The alcohol extract showed relaxation of the smooth muscles in an isolated prepration of rat intenstine and caused negative inotropic action on frog.[11]

Dhtaki (Woodfordia fruticosa)- Bioactive coumpound like tannins, flavonoids and polyphenols have been isolated from this species. These flowers are useful in the leucorrhea, menorrhagia and blood disorders.[12]

Yashtimadhu (Glycyrrhiza glabra)- it is composed of active ingradients including flavonoids and triterpenoids. It has antimicrobial activity, anti tussive, estrogenic and anti-androgenic effects and even decreases serum prolactin.[13]

CONCLUSION

Sundari Jeevak syrup in the management of *Kashtartava* (Primary dysmenorrhea) is found to be significantly reduced intensity of pain, duration of pain, Artava Pramana**,** Rajasrava Avadhi, Vankshana Shula, (tenesmus of the bladder), Kati shula, Janu Shula; Praseka (nausea), Aruchi (loss of appetite), Atisara (diarrhea) analysed between before treatment (BT 0 D) at 0 day and After Treatment (AT 30D & AT 60D) at 30^{th} day & 60^{th} of treatment. Futher these physiological effects are non-significantly differ after treatment (AT 30D) at 30^{th} day and at follow up day (AF 90D) at 90^{th} day. This staststical results suggest that the treatment with Sundari Jeevak syrup is an effective way for management of *Kashtartava* (Primary dysmenorrhea), and shown improvements in painful menses, irregularity, Nausea, anorexia, fatigue and intensity, flow and there duration of menses. There were no adverse effects either reported or observed during the clinical study.

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