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Research Article

HINGWASTAKA CHOORNA: A REMEDY FOR PRIMARY DYSMENORRHOEA

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DOI: 10.7897/2321-6328.01310

Article Received on: 22/07/13

Accepted on: 19/09/13

Abstract

The aim of this study was to determine the clinical effect of Hingawastaka choorna on primary dysmenorrhoea. Thirty two female with complaints of primary dysmenorrhoea were enrolled in this study. All the 32 patients were assigned into a single group and were given treatment for three cycles. In the study 4 g of Hingawastaka choorna, 2 times a day before food with ghee, 1 week prior to the onset of menstruation was administered. Study has shown more effective results in pain relief which was assessed by Multidimensional pain grading scale. Based on the observations, it can be concluded that, Hingawastaka choorna is an effective herbal drug for primary dysmenorrhoea.

Keywords: Pain, Primary dysmenorrhoea, Multi dimensional pain grading scale, Hingawastaka choorna.

INTRODUCTION

Dysmenorrhoea is one of the commonest gynecological complaints and it is a major cause of class/college absenteeism. It is now estimated that almost 50 % of all women experience some degree of dysmenorrhoea while 10 % are incapacitated by it¹. Most women experience minor psychological and somatic changes for a few days preceding menstruation and during the days. Prevalence of primary dysmenorrhoea in adolescents belonging to the age group of 14 to 18 years was found to be 21 % prevalence of school absenteeism was 35 % of the dysmenorrhoeal students reported missing class as the first two days of menses². In contemporary medicine NSAIDs, antispasmodic and analgesic are used for dysmenorrhoea. It causes various side effects due to regular use. Further it is not a permanent solution to the ailment. The present study is aimed at finding out a better treatment modality without any side effects. One of the suggested herbal drugs is Hingawastaka choorna³. It contains ingredients like Trikatu, Ajamoda, two varieties of Jeeraka, Lavana and Hingu. These ingredients have Ushna Virya, Katu, Teekshna guna which is opposite to the qualities of vata dosha. It is known fact that without vitiation of vata dosha there will be no pain⁴. As pain is the prime feature in Primary dysmenorrhoea it is relieved by Hingawastaka choorna. Considering these properties of the formulation, an attempt has been made to evaluate clinical efficacy of Hingawastaka choorna in Primary dysmenorrhoea.

Aim and Objective

To evaluate the efficacy of Hingawastaka Choorna in Primary dysmenorrhoea

MATERIALS AND METHODS

Selection of Patients

Patients were selected from the OPD of Government Ayurveda Medical College and Hospital, Mysore, India and also other referrals from in and around Mysore, India were selected for the study. 32 female patients suffering from Primary Dysmenorrhoea were registered with respect to age, irrespective of caste and religion.

Inclusion Criteria

Individuals who come under Diagnostic criteria (Acc.to.ICD-10) between the ages group 15 - 30 years.

- Pain begins before one or two days of menstruation and lasting for one to two days.
- Pain in the lower abdomen and supra pubic region.
- Pain radiating to the thigh and lower back. Sometimes associated with Nausea, Vomiting, Headache, Diarrhoea, Constipation, Irritability and Faintness.

Exclusion Criteria

Patients with other systemic disorders that interfere with the study; patients with any other uterine pathology like Fibroid, Adenomyosis and Endometriosis are excluded.

Method of Study

By purposive sampling method patients were assigned to a single group consisting of 32 patients.

Drug Schedule

Hingawastaka Choorna was given orally in a dose of 4 g twice daily with Ghruta Anupana, before food for three consecutive cycles, starting from 22nd day of the previous cycle till the commencement of next cycle.

Duration of Trail

For three consecutive cycles

Follow up

Follow-up was done one cycle after the treatment.

Criteria for Assessment

Grading pattern - Pre and post interventional assessment was done. Clinical symptoms were graded and scores was given accordingly.

Data collection instrument included multi dimensional scoring pattern for assessment of pain.

Multi dimensional Scoring Pattern

0 Menstruation is not painful and daily activity unaffected. (No Symptoms)

1 Menstruation is painful and daily activity not affected. No analgesics required. (Mild)

2 Menstruation is painful and daily activity affected, analgesics were needed. (Moderate)

3 Menstruation is painful, she cannot do even her normal routine work and has to be absent from class or office during menses. She has to take analgesics but have poor effect. (Severe)

Ethics and Consent

The study protocol was approved by the Ethics committee of Rajiv Gandhi University of Health Sciences (RGUHS). Written informed consents of subjects were obtained. SRP - 2(C) (EC)/GAMC 2012-13

Statistical Analysis

Statistical analysis was performed by applying Descriptive statistics, Chi-square, Paired samples t test. Using SPSS for windows software (version 16.0). P values ≤ 0.01 were considered significant.

Observations

Demographic data and clinical data were made on 32 patients who completed the trail, and similarly the results were analyzed and are presented in Tables.

Demographic Profile

It revealed that the incidence of Primary dysmenorrhoea was higher i.e. 75 % in the age group of 15 - 20 years and 62.5 % in Hindus. All the patients were students and Unmarried. Most of patients i.e. 75 % of individuals were graduates. 81.3 % of them belonged to middle socio-economic status, 68.8 % of the patients had family history of Dysmenorrhoea, and 56.2 % of patients were on mixed diet. The incidence was more i.e. 78.1 % had vata – kapha prakrati, 81.3 % had a history of dysmenorrhoea after menarche and 78.1 % had 1-2 days painful menses.

Clinical Profile

Maximum number of patients i.e. 96.9 % were having pelvic pain and low back pain, while Nausea, vomiting, headache, diarrhoea, constipation, irritability, faintness were found in 84.4 %, 25 %, 65.6 %, 37.5 %, 18.8 %, 59.4 % and 37.5 % patients respectively.

RESULTS**Table 1: Results of Pelvic Pain**

D/O	Pelvic Pain				
	No Symptom	Mild	Moderate	Severe	Total
BT	0	0	1	31	32
	0 %	0 %	3.1 %	96.9 %	100 %
AT	20	10	2	0	32
	62.5 %	31.3 %	6.3 %	0 %	100 %
AF	10	21	1	0	32
	31.3 %	65.6 %	3.1 %	0 %	100 %
P Value 0.000					

Table 2: Results of Low back pain

D/O	Low back Pain				
	No Symptom	Mild	Moderate	Severe	Total
BT	0	0	1	31	32
	0 %	0 %	3.1 %	96.9 %	100 %
AT	23	7	2	0	32
	71.9 %	21.9 %	6.3 %	0 %	100 %
AF	10	21	1	0	32
	31.3 %	65.6 %	3.1 %	0 %	100 %
P Value 0.000					

Table 3: Results of Nausea

D/O	Nausea		
	Absent	Present	Total
BT	5	27	32
	15.6 %	84.4 %	100 %
AT	25	7	32
	78.1 %	21.9 %	100 %
AF	16	16	32
	50.0 %	50.0 %	100 %
P Value 0.000			

Table 4: Results of Vomiting

D/O	Vomiting		
	Absent	Present	Total
BT	24	8	32
	75.0 %	25.0 %	100 %
AT	30	2	32
	93.8 %	6.2 %	100 %
AF	31	1	32
	96.9 %	3.1 %	100 %
P Value 0.012			

Table 5: Results of Headache

D/O	Headache		
	Absent	Present	Total
BT	11	21	32
	34.4 %	65.6 %	100 %
AT	24	8	32
	75.0 %	25.0 %	100 %
AF	21	11	32
	65.6 %	34.4 %	100 %
P Value 0.003			

Table 6: Results of Diarrhoea

D/O	Diarrhoea		
	Absent	Present	Total
BT	20	12	32
	62.5 %	37.5 %	100 %
AT	28	4	32
	87.5 %	12.5 %	100 %
AF	27	5	32
	84.4 %	15.6 %	100 %
P Value 0.031			

Table 7: Results of Constipation

D/O	Constipation		
	Absent	Present	Total
BT	26	6	32
	81.3 %	18.8 %	100 %
AT	30	2	32
	93.8 %	6.3 %	100 %
AF	30	2	32
	93.8 %	6.3 %	100 %
P Value 0.168			

Table 8: Results of Irritability

D/O	Irritability		
	Absent	Present	Total
BT	13	19	32
	40.6 %	59.4 %	100 %
AT	25	7	32
	78.1 %	21.9 %	100 %
AF	23	9	32
	71.9 %	28.1 %	100 %
P Value 0.004			

Table 9: Results of Faintness

D/O	Faintness		
	Absent	Present	Total
BT	20	12	32
	62.5 %	37.5 %	100 %
AT	27	5	32
	84.4 %	15.5 %	100 %
AF	25	7	32
	78.1 %	21.9 %	100 %
P Value 0.115			

Table 10: Results of overall assessment

Clinical Improvement	No of Patients	Percentage	P. value
No improvement	0	0	0.000
Mild improvement	0	0	
Moderate improvement	3	9.4	
Marked improvement	21	65.6	
Maximum improvement	8	25.0	
Total	32	100.0	

DISCUSSION

Demographic Profile

Majority of the patients were in the age group 15 - 20 years, the theory postulated behind this finding is that in this age, pituitary and other endocrine gland do not attain their maturity till the age of 20. It can lead to hormonal imbalance and thus, primary dysmenorrhoea. Maximum numbers of patients were Hindus. This presentation may be because of the maximum number of Hindu patients attending the OPD. All patients were unmarried which shows prevalence of the condition in young, unmarried girls i.e. Primary Dysmenorrhoea has been found to occur more in adolescent age. In the study observed that 56.2 % were following mixed diet. It suggests the relation of non-vegetarian dietary habits with primary dysmenorrhoea. By several studies, it was found that Arachidonic acid (a type of omega-6 fatty acid) which is found in dairy products, meat, egg yolk, liver and kidneys transfer in to PGE2 and PGF2 α in the body thus increase the chances of dysmenorrhoea. A large sample study can be needed to analyse the fact. Increasing number of vata-kapha prakrati is seen in the study which may be because of the close proximity of these doshas with the disease entity. It has been observed that primary dysmenorrhoea occurs only in ovular cycles. It explains the absence of primary dysmenorrhoea in first few years following the menarche. This fact is proved by the present study, 81.3 % patients shows the pain after menarche.

Clinical Profile

The results and p. values as mentioned in tables (No. I-X) maximum per cent of relief was obtained on pelvic and low

back pain, this may be because the formulation having the ingredients containing guru guna, teekshna, ushna, shoolahara and vatanulomaka properties just opposite to the qualities of vata dosha and hence by vatahara and shoolahara property of the drug mitigates the vata dosha and relieves the pain. A good per cent of relief was obtained on various features related to gastrointestinal upsets like nausea; vomiting and diarrhoea it may be due to the drugs used in the present study mainly have the property of vata-kaphahara, deepana, pachana effect and indicated in different diseases. Example Shunthi, jeeraka, krishana jeeraka are indicated in diarrhoea.⁵ Ajamoda, krishana jeeraka are indicated in vomiting.⁶ Headache is related to vatika feature hence, the therapy based on vata shamana drugs should also relieve this symptom along with pelvic and low back pain. Vibandha is the disorder predominated by Vata. Dipana-Pachana and vatanulomana property of the drug play a very significant role. Irritability is one of the outcomes of vata prakopa, which gets mitigated by vata hara effect of drug. According to Ayurvedic principles, faintness generally considered the features of Pitta Prakopa. The drug used in the study has vata- kapha shamaka property hence result is non-significant.

Probable Mode of Action

Pippali

It contains piper longuminine, piperine and piperonaline which are natural steroid like substances and act as anti-inflammatory substance.⁷

Maricha

Contains Piperine (1-peperoyl piperidine) it was isolated from *Piper nigrum* Linn for the evaluation of anti-inflammatory activity in rats, Piperine acted significantly on early acute changes in inflammatory process thus it act as anti-inflammatory substance.

Shunthi

The extracts of ginger block the formation of inflammatory compounds such as thromboxane, leukotriene and prostaglandins. Thus act as an anti-inflammatory substance.⁸

Ajamoda

Carumroxburghianum possess combination of anti diarrheal, anti spasmodic and bronchodilatory effect.

Jeeraka

It contains essential oil which acts as both anti-inflammatory and antispasmodic.

Saindava lavana

It contains sodium chloride, in some cases; solution of sodium chloride is used to treat swelling of cornea in the eye, from this it can be infer that it may be act as anti-inflammatory substance.⁹

Hingu

Contains Ferulic acid and asaresinotannols which act as digestive, carminative, antispasmodic, analgesic, anti-inflammatory etc.¹⁰

As per the modern parlance this drug may be assumed to minimize Pain and act like a NSAID's by direct analgesic effect by inhibition of Prostaglandins synthesis mechanism in Primary dysmenorrhea.

CONCLUSION

Available evidences suggest that, the common management is based on pharmacological preparations. On the other hand use of herbs and other natural products are increasingly preferred. Regarding the effectiveness of Hingawastaka choorna, it can be used to relieve the signs and symptoms significantly on primary dysmenorrhoea.

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Cite this article as:

Divyarani, Atul Subramanian, Arhanth kumar, V.A.Chate, Shreevathsa. Hingwastaka choorna: A remedy for primary dysmenorrhoea. J Biol Sci Opin 2013;1(3):186-189 <http://dx.doi.org/10.7897/2321-6328.01310>

Source of support: Nil; Conflict of interest: None Declared