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RESEARCH ARTICLE

EVALUATION OF GHRIT KUMARI SWARASA IN THE MANAGEMENT OF KASHTARTAVA

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ABSTRACT

Ghrit Kumari Swarasa (*Aloe barbadensis* Miller's juice) is popular preparation these days which is indicated as hepatoprotective, appetite enhancer, wound healer, rejuvenator, beneficial for skin and in gynaecological disorders. The present clinical study was done on 15 patients of Kashtartava by getting the reference from bhaishjyatnavali where this drug is mentioned as bhawana dravya of rajahpravartini vati. Each patient was given fresh prepared juice in the dose of 25 ml tid for three menstrual cycles. There was significant relief in intensity of pain (t=3.500) and associated symptoms like giddiness, nausea, vomiting and anorexia but insignificant relief in duration of pain and increase in amount of flow. These results are may be due to rasayana effect of the drug and thus increasing pain threshold and giving best nutrition to the body, also katu vipaka dilates the pathway and liquefy the clots. It also decreases synthesis of prostaglandins. It can be recommended to weak and poor patients as this is a cheap product, easily available, easy to prepare and itself a balanced diet and rasayana drug resulting in good management of Kashtartava.

INTRODUCTION

Ghrit kumari is a popular plant since long time and its popularity is increasing day by day as a result it has become a family member of people and seen in their yards It is a beautiful plant as it looks like ornamental plant but it is of great importance medicinally. Application of Kumari juice with Jiraka has been indicated to pacify the burning sensation and suppuration in Lingapaka (Rasaratnasamuchya, chapter 25, shalok18). Kumari Swarasa with Nisha Churna has been indicated for Pliha roga and Apachi (Sharangdhara sahmita, Madyama khanada, chapter1, shalok 1). Kanyasara and Kumari Swarasa both have been mentioned as the components of Rajahpravartini Vati which is indicated for amenorrhea and dysmenorrhoea (Bhaishajya Ratnavali, Yonivyapada Chikitsa, shalok 57-58). Krishna Rama Bhatta has advocated using Kumari Swarasa in epilepsy and palpitation of heart along with Madhuka Kwatha (Sidhbhesajmanimala, Apasmara chikitsa, shalok40). In China the juice of Aloes was used to wipe out all rashes (Baldwin Gertrude et al). In "De Materia Medica" Dioscorides gave the first detailed description of the Aloe vera and attributed to its juices "the power of binding and inducing sleep" (Baldwin Gertrude et al). Dioscorides further observed that the whole leaf, when pulverized, could stop the bleeding (Baldwin Gertrude et al). V. P. Filatov of Russia reported that boiled aloe juice was a very effective treatment of a skin diseases caused by parasites whereas Aloe juice was an effective treatment for many types of lung disorders (Aloeria.co.uk et al). Researchers, Julian J. Blitz, D.O. reported that Aloe vera emulsion (sap and gel mixed with mineral oil) orally was used to treat 18 patients with peptic ulcers (Aloeria.co.uk et al). Dr. Eugene Zimmerman and the Baylor College of Dentistry performed an extensive study on the use of Aloe vera as a treatment for dental-related disorders and its ability to kill or control various organisms including: Staphylococcus Aureus, Streptococcus Viridaus, Candida Albicans, Corynebacterium and the five strains of Streptococcus Mutant. Researchers concluded that Aloe is a very powerful anti-inflammatory agent and it kills broad spectrum of micro-organisms(Aloeria.co.uk et al). M. El Zawahry, M.D, M. Rashad Hegazy, M.D, M. Helal, B.Ph., researchers of Cairo, Egypt proved that Aloe vera (combination of sap and gel) was highly effective against seborrhoea, acne, alopecia, chronic leg ulcers, vulgarise and hair loss (Aloeria.co.uk et al). John Heggers, University of Chicago Burn Centre; reconfirmed the presence of aspirin-like compound i.e. salicylic acid in Aloe which explains anti-inflammatory, anti-microbial and analgesic actions of Aloe. Dr. O.P. Agarwal, M.D., F.I.C.A, UP, India recorded that fresh Aloe juice had virtually eliminated heart disease, stress related disorders and diabetes. Ph.D. student Jeffrey Bland of Linus Pauling Institute reported that Aloe vera juice improves protein digestion, helps to normalize bowel habit, control yeast

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infections, promotes proper balance of digestive bacteria and relieves indigestion, irritable bowel syndrome, colitis and acid stomach without toxic effects (Aloeria.co.uk et al). Researchers from Okinawa, Japan reported in the Japanese Journal of cancer research, that Aloe contained at least three anti-tumor agents, emodin, mannose and lectin. The researchers concluded that Aloe controls pulmonary carcinogenesis and is effective in the treatment of leukaemia and sarcoma(Aloeria.co.uk et al).. The mucilage of its leaves is clinically and experimentally proved anti-diabetic (Abdul Ahmad et al). Its juice contains vitamins, folic acid, choline, amino acids, enzymes, calcium, chromium, selenium, magnesium, zinc, copper, iron, potassium, phosphorus, sodium, carbohydrates, anthraquinones, fatty acids, salicylic acid (Baldwin Gertrude et al). which shows juice of this plant is itself a balanced diet and can increase immunity if taken regularly. This drug makes the females like its name Kumari which means a beautiful, virgin and healthy female. As it improves her skin's complexity, improves her reproductive system and immunity.

Selection of drug

Ghrit kumari swarasa is Bhawana Dravya (Drug with which all the ingredients are macerated) of the formulation named as Rajah pravartani vati which is mentioned to cure Kashtartava.

Collection of drug

Aloe barbadensis Miller's leaves were collected after complete identification of species by botanists of herbal garden Jogindernagar.

Preparation of drug

Kumari swarasa was prepared by peeling off the rind and sap from the leaves and pulp was then pulverized. It was prepared fresh for every patient

Selection of patients

Patients were selected from OPD/IPD of R.G.G.A. Hospital after careful examination and by taking written informed consent

Criteria for Selection

Inclusion Criteria

- Patients having pain during menstruation as chief complaint.
- Patients under the age group 15 – 35 years and having their own will for trial.
- *Exclusion Criteria*

- Patients suffering from congestive dysmenorrhoea, Polymenorrhoea or menorrhagia.
- Patients having other associated diseases like severe anaemia, diabetes mellitus, hypothyroidism etc.
- Patients having intrauterine contraceptive device and any pelvic or uterine pathology.
- Patients of urinary tract infection.

Study design

Study was done on fifteen patients of primary dysmenorrhoea by giving Ghrit kumari swarasa (orally*)* in the dose 25 ml TID for three menstrual cycles. Follow up was done just after completion of trial and after Completion of one menstrual cycle following trial.

Criteria for assessment

Subjective:-Grading and scoring system was adopted for assessment of each symptom before the commencement and after completion of trial.

Overall score of each symptom was recorded as follows:

Absence of symptom ----------0
Presence in mild degree ----------1
Presence in moderate degree ----------2
Presence in severe degree ----------3

Table-1. Cardinal symptoms

GRADING	0	1	2	3
Intensity of pain	No pain	Mild	Moderate	Severe
Duration of pain	No pain	Up to 24hrs	24to < 48hrs	48 < 72hrs

Table 2. Premenstrual symptoms

GRADING	0	1	2	3
Amount of flow	Scanty	Moderate	Heavy	-
Nausea	Nil	Mild	Moderate	Severe
Vomiting	Nil	Once a day	2-3times/day	>3times/day
Breast Tend.	Nil	Mild	Moderate	Severe
Headache	Nil	Mild	Moderate	Severe
Giddiness	Nil	Mild	Moderate	Severe
Loose stool	Nil	1-2times/day	3-4times/day	>4times/day
Anorexia	Nil	Mild	Moderate	Severe
Irritability	Nil	Mild	Moderate	Severe
Constipation	Nil	Mild	Moderate	Severe

Statistical analysis

All the observations were analyzed statistically in terms of mean (x), standard deviation (S.D.) and standard error (S.E.), paired t test was carried out at $P < 0.05$, $P < 0.01$ & $P < 0.001$ levels.

$P < 0.05$ - Significant
$P < 0.01$ - Highly Significant
$P < 0.001$ - Extremely significant

Percentage relief in treatment was calculated by the method-
Relief % = BT-AT/BT%

Overall results

Markedly improved: >75% relief in total symptoms

Moderately improved: 51%- 75% relief in total symptoms

Improved: 25%- 50% relief in total symptoms

Unimproved: <25% relief in total

Table 3. Statistical analysis of effects of the therapy on cardinal symptoms

Symptoms	Mean score		Relief		Paired –t test			
	B.T.	A.T	Diff	% age	S.D.±	S.E. ±	T	P
Intensity of Pain	2.0	1.53	0.46	23.33	0.516	1.333	3.500	<0.05
Duration of Pain	1.73	1.46	0.26	15.38	0.593	0.153	1.740	>0.05

Table 2. Statistical analysis of effects of the therapy on associated symptoms

Symptoms	Mean score		Relief		Paired –t test			
	B.T.	A.T.	Diff	% age	S.D.±	S.E. ±	T	P
Amount of flow	0.53	0.66	-0.13	-24.99	0.3518	0.9085	1.468	>0.05
Nausea	0.40	0.20	0.20	50.00	0.4140	0.069	1.871	>0.05
Vomiting	0.13	0.06	0.06	50.00	0.258	0.066	1.000	>0.05
Breast tend.	0.8	0.6	0.2	25.00	0.414	0.107	1.871	>0.05
Headache	0.133	0.06	0.06	50.00	0.258	0.066	1.000	>0.05
Giddiness	0.4	0.13	0.26	66.67	0.46	0.118	2.256	<0.05
Loose stool	0.2	0.26	-0.06	-33.35	0.2582	0.066	-1.00	>0.05
Anorexia	0.466	0.0	0.466	99.9	0.1652	0.1123	2.824	<0.05
Irritability	0.866	0.46	0.4	46.15	0.507	0.1309	3.055	<0.05
Constipation	0.466	0.06	0.4	85.7	0.736	0.1902	2.103	=0.05

RESULTS

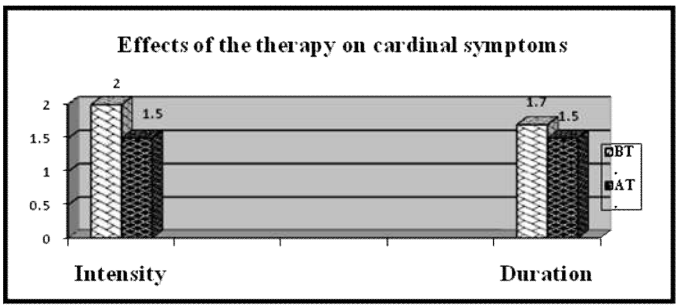

Figure 1.

Effects of the therapy on cardinal symptoms

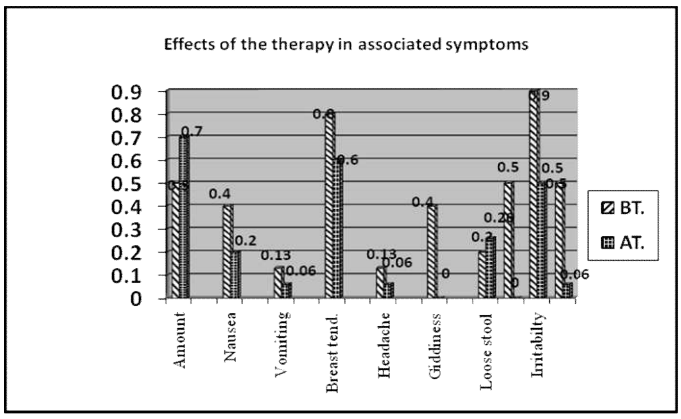

Figure 2.

Effects of the therapy on associated symptoms

Cardinal Symptoms

- ***Intensity of pain:*** The initial mean score was 2.00 before treatment and reduced to 1.533 after treatment. Relief was 23.33% which is significant at p<0.05 (t = 3.500).
- ***Duration of pain:*** The initial mean score was 1.733 before treatment and was reduced to 1.466 after treatment. The percentage of relief was 15.38% which is not significant at p>0.05 (t= 1.740)

Associated Symptoms

- ***Amount of flow:*** Mean score before treatment was 0.533 which was increased to 0.666 after treatment. The percentage increase in amount of flow was 25%, which is not significant at p>0.05 (t=-1.468).
- ***Nausea:*** The mean score before treatment was 0.40 which was reduced to 0.20 after treatment. The percentage of relief was50%, which is not significant at p>0.05 (t = 1.871).
- ***Vomiting:*** The mean score before treatment was 0.133, which was reduced to0.667 after treatment. The percentage of relief was 50% which is not significant at p>0.05 (t=1.000).
- ***Breast tenderness:*** The mean score was 0.8 (B.T.) which was reduced to 0.6 after treatment. The relief of percentage was 25% which is not significant at p>0.05 (t=1.871)
- ***Headache:*** Mean score before treatment was 0.133, which was reduced to 0.066 after treatment. Percentage of relief was 50% which is not significant at p>0.05 (t=1.000).
- ***Giddiness:*** The mean score before treatment was0.4 which was reduced to 0.133 after treatment. Relief in percentage was 66.6% which is significant at p<0.05 (t=2.256).
- ***Loose stool:*** The mean score before treatment was 0.2, which was increased to 0.266 after treatment. Increase in percentage was 33.35%, which is significant at p = 0.05 (t=-1.000).
- ***Anorexia:*** Mean score before treatment was 0.466, which was reduced to 0.0 after treatment, with percentage relief of 99.9% which is significant at p<0.05.
- ***Irritability:*** Mean score before treatment was 0.866, which reduced to 0.466 after treatment. Percentage was 46.6%, which is significant at p<0.05 (t=3.055).
- ***Constipation:*** Mean score before treatment was 0.46, was reduced to 0.066, with percentage relief of 85.7%, which is significant at p=0.05 (t=2.103).

DISCUSSION

Kashtartava is the disease where apana vayu gets detracted and changes its pathway to opposite direction resulting in difficult and painful menstrual flow. It is specifically characterised by immediate relief in pain by expulsion of Artava (clots). This pathology is caused due to agnimandya and imbalanced diet resulting in dhatu dushti and as a result improper formation of rasa dhatu and artava. Hence formed Artava will have predominance of Kapha which will cause obstruction in passage. Contraction and expansion of uterine muscles will also be hampered by vitiation of vata dosha. Vitation of vatta dosha, imbalanced diet and agnimandya will also decrease pain threshold of the patient. Ghritkumari swarasa contains Madhura, Tikta rasa which nourishes Saptdhatus and it's by products directly and by improving digestion respectively. Thus helps in formation of Shudha Artava (menstrual blood) so clot formation will be less and also increases pain thresh hold; its katu vipaka dilates the pathway and liquefy the clots. Hence there will be no obstruction in the path of Apana vayu, there will be rhythmic movements of muscles and increase in pain threshold will result in painless and easy menstrual flow. Ghrit Kumari Swarasa contains all the vitamins, minerals, carbohydrates etc. which provides best nutrition to patient, increase pain threshold and also decreases synthesis of prostaglandins (Panda et al), hence this drug can cure the dysmenorrhoea.

Conclusion

Ghrit Kumari Swarasa showed significant results in intensity of pain and associated symptoms like giddiness, nausea, vomiting and anorexia but insignificant results in duration of pain and increase in amount of flow. It can be recommended to weak and poor patients as this is a cheap product, easily available, easy to prepare and itself a balanced diet and rasayana drug resulting in good management of Kashtartava.

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