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A CLINICAL STUDY ON THE EFFECT OF "*VAYASTHAPAN MAHAKASHAYA*" WITH "*GOMUTRA ARK*"IN THE PATIENTS OF CANCER

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ABSTRACT

Cancer is a major illness and a leading cause of death world over, causing suffering of large population and global economic loss worldwide. **Aim:** To assess the efficacy of "*Vayasthapan Mahakashaya"* and *"Gomutra Ark"* in reducing toxic effects of CT and RT, Inhibition of recurrence and metastasis of cancer and improve the quality of life of patient. **Method:** 30 well diagnosed patients were selected randomly from Hospital OPD & IPD, University college of Ayurveda, Jodhpur. Group A: In this group 15 registered patients received CT & RT with 2cap.twice in a day (each250mg) *Vayasthapan Mahakashaya (VM)* with 20 ml *Gomutra ark* for 60 days. Group B: In this group 2cap.twice in a day (Each250mg) *Vayasthapan Mahakashaya (VM) with 20 ml Gomutra Ark* for 60 days. **Results:** It is observed that in **group A**, Showed comparatively better improvement than **group B**. **Disscussion:** Trial drug have properties like *Tridoshahara* (Specially vayu and kapha), *dhatu prabhava* are *Mamsalekhana, Sonita sanghata Bhedana* and *Medohara, Malaprabhava* are *Malanuta, Swed/Kledahara* and *Malasodhana*. Further, *Upachayahara, Apakarshana, Lekhana* and *Srotosodhana Karmas*. These all properties and effects are just opposite to the *Samprapti* of disease *Arbuda*-cancer. **Conclusion-** Statistical the overall better results are observed in **group A** in all clinical signs and symptoms, but overall quality of life is better in **group B** indicating. The drug is safe & beneficial in the patients of cancer.

KEYWORDS: Ayurveda, *Arbuda*, Cancer, *Vayasthapana Mahakshaya*, *Gomutra Arka*.

INTRODUCTION

Changed dietary habit, pollution, industrialization, sedentary life style and stress, are the factors responsible for development of so many fatal diseases now a days. Cancer is one of the most dreadful amongst them. Many efforts have been taken but success is still far, that`s why terror of disease is bigger than the disease. Cancer is second to coronary artery disease as being the commonest cause of death in the western world. Estimated number of people living with the disease: around 2.5 million. Every year, new cancer patients registered: Over 7 lakh. Cancer-related deaths: 5,56,400. Deaths in the age group between 30-69 years.[1] Total: 3,95,400 (71% of all cancer related deaths). Men: 2,00,100. Women: 1,95,300. Cancers of oral cavity and lungs in males and cervix and breast in females account for over 50% of all cancer deaths in India.[2] A survey conducted in 33 countries, yielding a meagre 83 responses mainly from oncologists, indicated the existence of a large and heterogeneous group of complementary and alternative medicine (CAM) therapies or remedies used to treat cancer in both developed and developing countries.[3] Approximately 70% of deaths from cancer occur in low- and middle-income countries. According to Ayurveda *Acharya Sushurta* has described *Arbuda* as "The *Doshas* having vitiated in any part of the body and afflicting the *Mamsa*, produce a swelling, which is circular, fixed, slightly painful, big in size, broad based, slowly growing and does not suppurate." These properties of Arbuda are similar to cancer. When the major side effects of chemoradiotherapy are looked through an Ayurvedic perspective it appears that they are the manifestation of aggravated *Pitta dosha*. Especially under the group of disorder called *Raktapitta* (haemorrhage) or *Raktadusti* (vitiation of rakta dhatu & vascular derangement). Present study reveals trial drug is very useful in reducing complications of chemotherapy and radiotherapy and improving better quality of life of cancer patients.

AIM AND OBJECTIVE

The present study has been undertaken with the following aims and objectives.

1) To study the side effects of chemotherapy and radiotherapy.
2) To assess the efficacy of "*Vayasthapan Mahakashaya"* and *"Gomutra Ark"* in reducing toxic effects of chemotherapy and radiotherapy.
3) To improve the quality of life in the cancer patient.
4) Inhibition of recurrence and metastasis.

5) To provides a therapy which is cost effective and free from side effects of its own.

Drug Review: The drug compound selected for the study are vayasthapan mahakshaya capsule with gomutra arka.

Table 1: Ingredients of vayasthapana mahakshaya capsule are as follows.

S.No.	Name of Drugs	Latin Name	Use part	Extract
1.	*Amrita*	Tinospora cordifolia	Whole plant	25mg
2.	Haritaki	Terminalia chebula	Fruit	25mg
3.	Amalaki	Emblica officinalis	Fruit	25mg
4.	Rasna	Pluchea lanceolata	Leaves	25mg
5.	Aparajita	Clitoria ternate	Whole plant	25mg
6.	Jeevanti	Leptadenia reticulate	Root	25mg
7.	Shavatari	Asparagus recemosus	Root	25mg
8.	Mandukparni	Centella asiatica	Whole plant	25mg
9.	Shalaparni	Desmodium gangaticum	Whole plant	25mg
10.	Punarnava	Boerrhevia diffusa	Whole plant	25mg

Anupana- gomutra arka -20 ml BD.

Clinical study- After selection of patients and their distribution into two groups, the treatment was started through subjective, objective and haematological assessment was done Adverse effects were also assessed, Observation and results were presented statistically graphically and tabulation was also done.

MATERIAL AND METHODS

The material for the clinical study includes- **Grouping of patients-** 30 Clinically diagnosed and registered patients of cancer for the study were randomly divided into two groups. **Group A:** In this group 15 registered patients of cancer were receiving CT & RT was given trial drug (*Vayasthapan Mahakashaya cap.* with *Gomutra ark).* **Group B:** In this group 15 registered patients of cancer were not receiving or received CT & RT was given trial drug (*Vayasthapan Mahakashaya cap.* with *Gomutra ark).*

Grouping of the cases was done by random selection and observations documented during were analyzed and finding were evaluated by using statistical analysis to establish the efficacy.

Patients were having following inclusion criteria: Following patients have included in current trial.

(i) Patients with both stages- Primary, Secondary.

(ii) Age group of 16-70 years.

(iii)Both sexes

(iv)All diagnosed & confirmed cases of cancer. Patients were then subjected to the detailed clinical history and physical examination on the basis of specially prepared research proforma.

Exclusion criteria

i. Advanced stage.

ii. Acute toxic conditions.

Trial therapy: The compound formulations for the present study i.e. vayasthapana mahakshaya(capsule form) and gomutra (arka form) were selected in the dose of 2capsule BD(each cap. 250mg) with 20ml gomutra arka.

Criteria of assessment- The full history of the patients was recorded as per specially designed proforma. Clinical assessment was done and recorded on '0' days/ before treatment and on 15^{th} 30^{th}, 45^{th}, 60^{th} day/after treatment. The subjective parameters were measured with the help of score and grade.

The changes in subjective and objective parameters before and after treatment were considered for assessment of the efficacy of the drug.

Overall Assessment of Therapy

Total score obtained in subjective and objective parameters assessed in term of-

No improvement – 0-25%

Mild improvement – 25-50%

Moderate improvement – 50-75%

Considerable improvement – 75-100%

Cured - 100%

To establish the results statistically each sign and symptoms was given a specific score.

Observations: The observation made on 30 patients of cancer where 80 % patients were completed the trial, 17% LAMA and 3% died during the course of treatment/ trial. Maximum number of patients in the age group of 40 to 70 years. 6.67% patients belonged to the age group 16 – 30 yrs, 3.33 % belonged to the age group 30 - 40 yrs, 26.67 % belonged to the age

group 40-50 yrs, 30 % belonged to the age group 50 - 60 yrs, 33.33% belonged to the age group 60-70 yrs.

In present study 63.33 % patients were of male gender and 36.67 % patients were female. 96.67% were married, 3.33 % patients were widow and no patients were unmarried. 26.67% were uneducated, 36.67% had primary education, 36.67% were educated. 26.67% patients were in business, 33.33% patients were House wives, 30% patient were in service and 10% patients had other (farmer, labour etc.) as their occupation. 13.33% patient were from lower middle, 76.67% belong to middle, 10% were from upper middle class. 96.67% patients belonged to *Jangala pradesh,* 3.33% patients belonged to *Sadharana Pradesh*.

Among 30 registered patient 26.67% patients were suffering from head and neck cancer, 3.33% were lung cancer, 13.33% were liver / gall bladder cancer, 10% were uterus/cervix/ovary cancer, 10% were breast cancer, 3.33% were suffering from cancer of extremities whereas 33.33% patients were suffering from others like CA rectum, bone marrow cancer etc. 13.33% patients were having history of hypertension, 3.33% patients were having history of tuberculosis, 6.67% patients were having history of DM with HTN, 3.33% patients were having history of ascitis, 3.33% patients were having history of diabetes mellitus with ascitis where as, 70% patients were having no any past history. 3.37 % patients were having *Tikshana agni bala*, 20% patients of *Vishama agnibala*, 6.67% *Sama agnibala* whereas 70% patients were of *Mand agnibala*. 83.33% had vegetarian whereas 16.67% mixed dietary habits. 33.33% patients had *kroora kostha*. 56.67% patients had *Madhya kostha* and 10 % patients had *Mridu kostha.*

3.33% patients were smokers, 3.33% patients were of gutka, 3.33% patients were of smoking with gutka, 3.33% patients were of tea with gutka, 3.33% patients were of gutka with alcohol, 3.33% patients were of alcohol, 3.33% patients were of tea with smoking and alcohol, 23.33% patients were of no any addiction whereas 50% patients were of only tea.

13.33% patients were of *Vata Pitta Prakriti*, 30% of them had *Pittakapha,* whereas 56.67% were *Vata Kapha Prakrati.*73.33% patients had *Rajas manasika* setup, 13.33% had *Satwik manasik* setup where as 13.33% patients had *Tamasik* setup.76.67% of patients had *madyam sara* where as 23.33% of them had *avara sara*. 80% patients had *Madhyama samhanana* 16.67% patients had *Avara samhanana* and 3.33% had *Pravara samhanana.* 63.33% patients *madhyam satva,* 3.33% had *pravara satva,* where as 33.33% had *Avara Satva.* 96.67%

patients had Eka rasa satmya, where as 3.33% had Sarva rasa satmya. 56.67% patients were of *Madhyam vyayam shakti*, 43.33% of them had *Avara vyayam shakti*. 43.33% patients had *Madhyam abhyavaharana shakti*, 53.33% of them had *Avara abhyavaharana shakti*, whereas 3.33% were *Pravara abhyavaharana shakti*. 6.67% patients were of *pravara jaran shakti*, 40% of them had *madhyam jaran shakti*, where as 53.33 % were *avara jaran shakti*.

RESULTS

Table No. 1: Table showing Effect of therapeutic trial on clinical symptomatology in 30 patients of Cancer based on Intra Group comparison (Wilcoxon matched-pairs signed-ranks test).

Table No. 1: statistical presentation of all subjective parameters in both groups.

parameters	Gr.	Mean			Relief %	S.D.	S.E.	"p"	Result
		BT	AT	X					
General well being	A	1.538	0.6923	0.8462	55.02%	.6887	0.1910	.0039	VS
	B	1.750	0.9167	0.8333	47.62%	.7177	.2072	.0078	VS
Pain	A	1.308	0.6923	0.6154	47.02%	0.5064	0.1404	.0078	VS
	B	1.583	0.9167	0.6667	42.12%	0.4924	0.1421	.0078	VS
Loss of appetite	A	1.615	0.7692	0.8462	52.49%	0.8006	0.2221	0.0078	VS
	B	1.333	0.4167	0.9167	68.77%	0.5149	0.1486	0.0020	VS
Indigestion	A	0.9221	0.3077	0.6154	66.67%	0.7679	0.2130	0.0273	S
	B	0.7500	0.2500	0.5000	66.67%	0.6742	0.1946	0.0547	NS
Constipation	A	0.6923	0.1538	0.5385	77.79%	0.5189	0.1439	0.0156	S
	B	1.250	0.3333	0.9167	73.34%	0.6686	0.1930	0.0039	VS
Nausea & Vomiting	A	0.5385	0.3077	0.2308	42.86%	0.4385	0.1216	0.2500	NS
	B	0.08333	0.1667	-0.08333	-100 %	0.2887	0.08333	>0.9999	NS
Diarrhoea	A	0.3846	0.1538	0.2308	60.68%	0.5991	0.1662	0.5000	NS
	B	0.08333	0.1667	-0.08333	-100 %	0.2887	0.08333	>0.9999	NS
Dysphasia	A	0.3077	0.3846	-0.07692	24.99%	0.2774	0.07692	>0.9999	NS
	B	0.08333	0.1667	-0.08333	-100%	0.2887	0.08333	>0.9999	NS
Dyspnoea	A	0.5385	0.3077	0.2308	42.8%	0.5991	0.1662	0.5000	NS
	B	0.1667	0.08333	0.08333	49.99%	0.2887	0.08333	>0.9999	NS
Cough	A	0.5385	0.1538	0.3846	71.42%	0.5064	0.1404	0.0625	NS
	B	0.5000	0.2500	0.2500	50%	0.4523	0.1306	0.6500	NS
Bleeding tendencies	A	0.07692	0.1538	-0.07692	-100%	0.2774	0.07692	>0.9999	NS
	B	0.08333	0.1667	-0.08333	-100 %	0.2887	0.08333	>0.9999	NS
Leg cramps	A	0.6154	0.1538	0.4615	74.99%	0.6602	0.1831	0.0547	NS
	B	0.8333	0.08333	0.7500	90.003%	0.4523	0.1306	0.0039	VS
Burning sensation of body	A	0.4615	0.3846	0.07692	16.66%	0.2774	0.07692	>0.9999	NS
	B	0.2500	0.1667	0.08333	33.33%	0.2887	0.08333	>0.9999	NS
Vertigo	A	0.6154	0.2308	0.3846	62.50%	0.5064	0.1404	0.0625	NS
	B	0.5833	0.1667	0.4167	71.44%	0.5149	0.1486	0.0625	NS
Insomnia	A	1.000	0.3846	0.6154	61.54%	0.5064	0.1404	0.0078	VS
	B	0.6667	0.1667	0.5000	74.99%	0.5222	0.1508	0.0313	S
Headache	A	1.077	0.5385	0.5385	50%	0.5189	0.1439	0.0156	S
	B	1.083	0.2500	0.8333	76.94%	0.5774	0.1667	0.0039	VS
Pruritus	A	0.3846	0.2308	0.1538	39.99%	0.3755	0.1042	0.5000	NS

	B	0.08333	0.1667	-0.08333	-100%	0.2887	0.08333	>0.9999	NS
excessive thirst /dryness of mouth	A	0.7692	0.3077	0.4615	60%	0.5189	0.1439	0.313	S
	B	0.6667	0.1667	0.5000	75%	0.6742	0.1946	0.0625	NS
weight loss/cachexia	A	1.385	0.7692	0.6154	44.43%	0.6504	0.1804	0.0156	S
	B	0.7500	0.2500	0.5000	66.67%	0.5222	0.1508	0.0313	S
Lymphadenopathy	A	0.2308	0.3840	0.1538	-66.64%	0.5547	0.1538	>0.9999	NS
	B	0.2500	0.3333	-0.08333	-33.34%	0.2887	0.08333	>0.9999	NS
hair loss/ Alopecia	A	0.3846	0.4695	-0.07692	-20%	0.2774	0.07692	>0.9999	NS
	B	0.1667	0.2500	0.08333	49.99%	0.2887	0.08333	>0.9999	NS

(Gr.: Group, BT: Before treatment, AT: After treatment, Diff.: Difference, SD.: Standard Deviation, SE: Standard Error, P: P value, VS: Very Significant, S: Significant, NS: Non Significant).

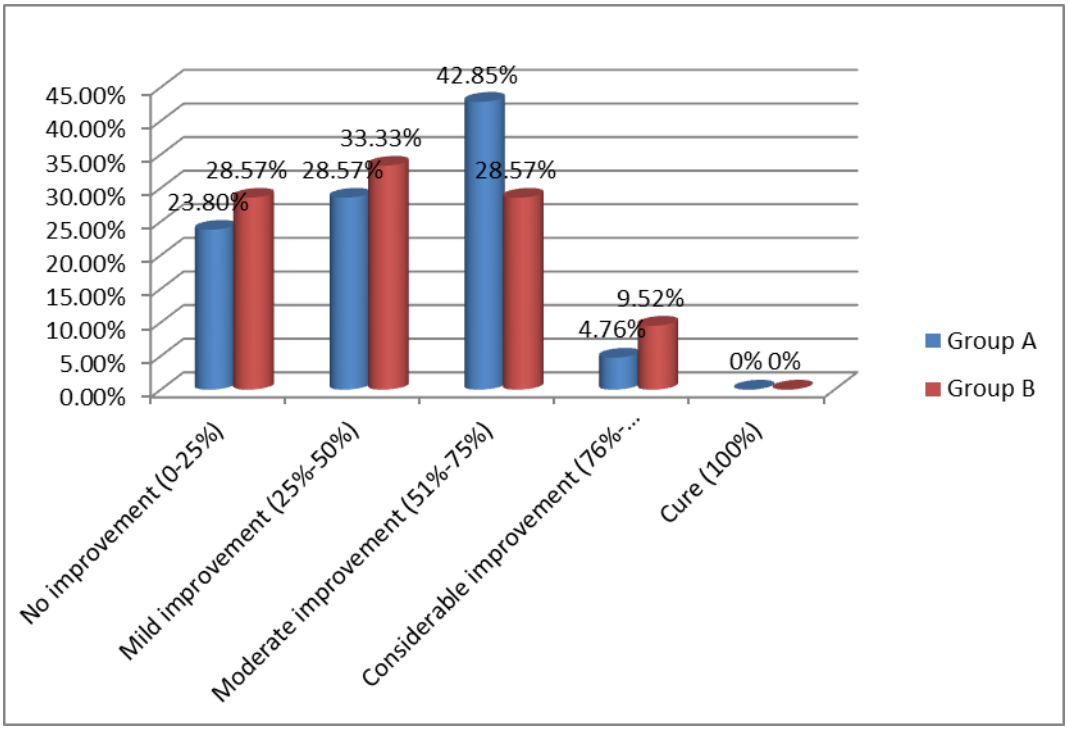
Table No. 2: Table showing Effect of therapeutic trial on lab parameters in patients of Cancer based on intra group comparison (paired t-test).

Table No. 2: statistical presentation of all objective parameters in both groups.

Parameters	Gr.	Mean BT	Mean AT	Mean X	% Relief	S.D.	S.E.	"t"	P	Result
Haemoglobin Gm %	A	11.992	12.700	-0.7077	**-5.901%**	.9376	.2600	2.721	.0186	**S**
	B	11.482	12.505	-1.023	**-8.910%**	1.225	.3692	2.770	.0198	**S**
TLC	A	8195.4	7093.8	1101.5	**13.44%**	2287.3	634.4	1.736	.1081	**NS**
	B	14795	8806.4	5988.2	**40.47%**	16590	5002	1.197	.2589	**NS**
Platelet Count	A	207823	238738	-30915	**14.88%**	43177	11975	2.582	.0240	**S**
	B	265736	285400	-19664	**7.40%**	33696	10160	1.935	.0817	**NS**
Blood Urea	A	28.173	23.625	4.548	**16.14%**	5.556	1.541	2.952	0.0121	**S**
	B	29.039	23.270	5.769	**19.87%**	5.045	1.521	3.792	.0035	**VS**
Serum Creatinine	A	0.9015	.8138	0.08769	**9.72%**	.3030	.08404	1.043	.3173	**NS**
	B	.8864	.7436	.1427	**16.10%**	.1168	.03522	4.053	.0023	**VS**
Serum Alkaline Phosphatase	A	254.85	177.68	77.169	**30.28%**	171.04	47.438	1.627	.1297	**NS**
	B	209.50	148.21	61.291	**29.26%**	53.118	16.016	3.827	0.0033	**VS**
Total Serum Bilirubin	A	1.119	1.013	0.1058	**9.45%**	0.1784	0.05150	2.055	0.0644	**NS**
	B	2.253	2.572	-0.3191	**-14.16%**	2.324	0.7008	0.4553	0.6586	**NS**
SGOT	A	37.585	33.595	3.626	**9.65%**	5.165	1.491	2.432	0.0333	**S**
	B	70.178	30.707	38.471	**58.82%**	103.86	31.314	1.229	0.2474	**NS**
SGPT	A	33.822	31.095	2.728	**8.06%**	11.829	3.281	0.8314	0.4220	**NS**
	B	60.773	29.123	31.650	**52.07%**	98.686	29.755	1.064	0.3125	**NS**
Serum Cholesterol	A	191.08	185.95	5.131	**2.69%**	17.079	4.737	1.083	0.3000	**NS**
	B	215.91	202.36	13.545	**6.27%**	41.283	12.447	1.088	0.3020	**NS**
Serum Triglycerides	A	149.29	135.75	13.542	**9.07%**	13.926	3.862	3.506	0.0043	**VS**
	B	164.77	152.26	12.509	**7.59%**	19.195	5.788	2.161	0.0560	**NS**
Random Blood	A	132.28	113.98	18.298	**13.83%**	23.024	6.386	2.865	0.0142	**S**

Sugar										
	B	97.347	91.045	6.302	**6.47%**	11.927	3.596	1.752	0.1103	**NS**

Overall effect of therapy



DISCUSSION

Discussion based on observation:- In the present series of 30 patients, 100% of patients were of Hindu religion. No conclusion can be drawn regarding the religion wise distribution, as the geographical zone has majority for the Hindu religion.

96.67% patients were married, 3.33% patients were widow and no patients were unmarried. Since responsibilities increase after the married life, stress may be the possible reason. 26.67% patients were uneducated. 36.67% patients were primary educated. 36.67% patients were educated. Lack of education renders delay in detection of the disease and worsens the condition. 33.33% patients were Housewives. 26.67% patients were doing business.30% patients were in service.10% patients were doing other works like farmer etc. This shows the relation between occupation and type of cancer. Employment in certain occupations is associated with exposure to specific carcinogens with a consequent high incidence of particular forms of malignancy. Since majority of the patients 76.67% were diagnosed with cancer were belonged to middle class, 13.33% patients were diagnosed with cancer belonged to lower middle, 10% patients were belonged to upper middle class. The study shows most of

cancer patients were belonged to middle and lower middle class, lack of education and poor hygiene may be the possible reason.

6.67% patients were belonged to the age group of 16-30 year, 3.33% patients were belonged to age group of 30-40 years, 26.67% patients were belonged to age group of 30-40years, 30% patients were belonged to age group of 40-50years, 33.33% patients were belonged to age group of 60-70years. Since majority of the patients were belonged to age group of 50-70years. This shows that as the age increases incidence of cancer increases.

According to the site of cancer 26.67% patients had head and neck carcinoma, 3.33% patients had lung carcinoma, 13.33% had liver/ gall bladder carcinoma, 10% had uterus/cervix/ovary carcinoma, 10% had breast carcinoma, 3.33% had sarcoma of extrimities, 33.33% had other cancer like CA rectum, blood cancer etc. This shows the prevalence of the head and neck cancer in comparison to other carcinoma.

Among the registered patients 13.33% patients had the history of HTN, 3.33% patients had the history of tuberculosis, 6.67% patients had the history of diabetes mellitus and HTN, 3.33% patients had the history of ascitis, 3.33% patients had the history of diabetes mellitus and ascitis,70% patients had no any past history.

63.33% patients were of male gender. 36.67% patients were female gender. The study shows males were affected more with cancer than female. May be the possible cause was use of substances of addiction, unhygienic food and males are facing pollution more than female. 33.33% patients had *Kroora Kostha.* 56.67% patients had *Madhyam Kostha.* 10% patients had *Mridu Koshta.* Among the patients registered-13.33% patients had *Vata Pitta Prakrita,* 30% patients had *Pitta Kaphaj Prakriti,* 56.67% patients had *Vata Kaphaja Prakriti*.73.33% patients had *Rajsik,* 13.33% had *Tamasik,* 13.33% had *Satvika Prakriti.* Most of patients were found of *Vata Kaphaja Prakriti* it shows that the *Vata* and *Kaphaja Dosha* involvement in tumor formation. 80% had *Madhyan Samhanana,* 63.33% patients had *Madhyam Satva,* 96.67% had *Sarva Rasa Satmya.* 76.67% had *Madhyam Sara.*

83.33% patients were vegeterian. The reason being majority of them being Hindu due to geographical location.76.67% patients had taken *Vasayana* like Gutka, Smoking, Alcohol and excessive use of tea. These all are the aetiological factors of cancer.

50% patients were irregular bowel habit, 23.33% patients were constipated. Irregular bowel habits promote pathogenesis of cancer. 96.67% patients were from *Jangala Pradesh.* The reason is being majority of them, Rajasthan is *Jangala Pradesh*. 70% patients were *Mandagni.* Its indicate that *Mandagni* promots pathogenesis of cancer. 53.33% patients had *Avar Abhyavarana Shakti*, 53.33% patients had *Avar jarana shakti*. Its indicates the involvement of food metabolism in formation of cancer.

DISCUSSION BASED ON RESULTS

Some drugs of *vayasthapana mahakshaya* like *Guduchi, Haritaki, Amalki, Mandukparni, Punarnava* having properties like antioxidant, *rasayana, balya, jeevniya, raktavardhaka* immunomodulator etc. some of *Vishaghana* **(**Removes metabolic by-products or toxins) properties Ex. *Rasna, Aparajita*. Thats why they are very significant ($p<0.01$) in maintaining general well being of patients in both groups(Group A & B). Some drugs of trial drug have *Vednasthapan*(analgesic) properties like *Giloy*, *Rasna, Aparajita, Shalparni* that`s why they are useful in reducing pain. Present study show very significant($p<0.01$) result in reducing pain. Drugs of trial drug like *Guduchi, Haritaki, Amalki, Mandukparni, Punarnava, Rasna* having properties like *Deepan, Pachana, Vatanuloman, Udarshoolhara, Rechana* thats why trial drug is very significant($p<0.01$) in reducing loss of appetite in group A but the trial drug is not significant($p>0.05$) in reducing loss of appetite in group B**.** Due to above mention properties trial drug show significant($p<0.05$) result in indigestion in group A but trial drug shows not significant($p>0.05$) in Indigestion in group B**.** Due to above mention properties trial drug shows significant($p<0.05$) result in constipation in group A and very significant($p>0.01$) result in Constipation in Group B. Some drugs of trial drug like *Shatavari, amalaki & Haritaki* having demulscent, antacid, anti-spasmodic, anti-diarrhoea properties by removing toxins and *Vatanulomana* action but the trial drug shows not significant($p>0.05$) result in maintaining nausea & vomiting and diarrhoea may be because of small sample size. *Punarnava Shalparni* has *Vata Kapha Shamak,* anti-inflammatory properties due to these properties *Punarnava* is helpful in reducing dyspnoea but the result was not significant($p>0.05$) in dyspnoea in both the groups. *Punarnava, Rasna, Amalaki, Haritaki, Shalparni, Gomutra* some of these drugs have anti-inflammatory properties some of *Tridosha Shamaka, Vatanulomana* properties due to these properties these drugs are helpful in reducing cough but the the study shows not significant ($p>0.05$) result in cough in both groups. *Amalaki, Shatavari* these drugs are *Sheet Veerya* and *Giloy* is *Tikta, Kashya Rasa Pradhana Dravya* due to these properties these drugs can do *Rakta Stmbhana* but the study

shows not significant(p>0.05) result in bleeding tendencies. *Giloy, Rasna, Aparajita, Shalparni* these drugs have *Vednasthapana* properties and *Shatavari, Punarnava* these drugs are *Rasayan* and useful in *Daurbalya* due to their properties these drugs are helpful in reducing leg cramps but the study shows not significant (p>0.05) result in group A may be toxicity level of chemo and radiotherapy is very high thats why these drugs not show the significantresult in group A but the result of trial drug is very significant (p<0.01) in group B. *Amalaki, Shatavari* they both drugs are *Sheet Veerya* drugs and *Aacharya Charak* has mentioned *Giloy* in Dahaprashmana Mahakshaya, due to these properties these drugs are useful in reducing burning sensation but may be the small sample size trial drug shows not significant(p>0.05) result in burning sensation in both groups. Some drugs of trial drug like *Mandookprni* is a good nervine tonic and *Shatavari* has *Balya, Nadibaldayak, Rasayan* properties, due to properties these drugs are helpful in reducing vertigo but the study shows not significant(p>0.05) result in both groups. Due to above mentioned properties of both the drugs(*Mandookparni, Shatavari*) and other drugs like *Rasna* and *Haritaki* have *Vatanulomana* properties, these drugs are helpful in reducing insomnia that's why present study shows very significant(p<0.01) result in group A and significant(p<0.05) result in group B in insomnia. Some other drug of trial drug like *Mandookparni* is nervine tonic, *Shatavari* has *Balya, Nadibaldayak, Giloy* has *Pitt Shamaka* property, *Amalaki, Haritaki* have *Vatanulomak, Tridosh shamaka* properties due to these properties trial drug shows significant (p<0.05) result in group A and very significant(p<0.01) result in group B in reducing headache. Some drugs of trial drug like Giloy has anti-allergic property that's why it's useful in reducing pruritus but present study shows not significant (p>0.05) result in both the groups in reducing pruritus. *Aacharya Charaka* has mentioned *Giloy* in *Trishananigrahana Mahakashaya* because *Giloy* is helpful in reducing excessive thirst. Present study reveals significant (p<0.05) result in Group A but not significant(p>0.05) in Group B in reducing excessive thirst. Some drugs of trial drug like *Punarnava, Shatavari* have *Balya, Rasayan* properties that's why they are helpful in reducing weight loss. Present study reveals significant (p<0.05) result in both the groups in reducing weight loss. Some drugs of trial like Aprajitta, Rasna, Giloy, Gomutra are helpful in reducing the size of enlarge lymphnodes but may be the small sample size present study reveals not significant(p>0.05) result in lymphadenopathy. Some drugs of trial drug like *Giloy, Haritaki, Amalaki* have *Srotoshodhaka, Vatanulomaka, Raktavardhaka* properties due to these properties, these drugs are helpful in reducing hairloss But the present study reveals not significant(p>0.05) result in both the groups.

Discussion based on effect of trial on objective parameter

Some drugs of trial drug like *Giloy, Punarnava, Gomutra* have *Raktavardhaka* property and *Amalaki* has Vit.C alkaloid that is useful in absorption of iron, due to these properties trial drug is helpful in increasing Haemoglobin and Platelet count. Present study reveals significant ($p<0.05$) result in both the groups in increasing haemoglobin and platelet count but study shows not significant ($p>0.05$) result in TLC. Some drugs of trial drug like *Rasna, Aprajita* have *Vishghna* (Detoxifying) property they are helpful in reducing urinary problems that's why present study reveals significant ($p<0.05$) result in Blood Urea in group A and very significant ($p<0.01$) result in group B but the present study shows not significant($p>0.05$) result in reducing serum creatinine in group A and very significant($p<0.01$) result in group B in reducing Serum Creatinine level. Some drugs of trial like *Giloy, Haritaki, Amalaki, Mandookparni, Punarnava* have hepatoprotective action thast's why these drugs are helpful in maintaining liver functions. Present study reveals not significant ($p>0.05$) result in group A and very significant ($p<0.01$) result in group B in reducing Serum alkaline phosphatase. Study reveals Not significant ($p>0.05$) result in reducing Serum bilirubin total and SGPT in both the groups. May be the toxicity level of CT/RT is very high sample size is very small that's why present study shows not significant ($p>0.05$) result in these parameters but present study reveals significant($p<0.05$) result in reducing SGOT in group A and not significant ($p>0.05$) result in group B. Some drugs of trial drug like *Haritaki* have hypolipidamic properties thats why may be the trial drug show very significant ($p<0.01$) result in reducing Serum triglycerides in group A but not significant($p>0.05$) in group B. Trial drug reveals not significant ($p>0.05$) result in both groups in serum cholesterol. Present study reveals significant ($p<0.05$) result in group A but not significant ($p>0.05$) result in group B in reducing Random blood sugar may be the reason is chemo-radio drugs also have hypoglycaemic effect and trial drug also contents like *Amrita, Aprajita, Rasna, Amalaki, Hariaki, Mandookparni, Gomutra* these drugs are *Tikta Kshaya Rasa Pradhana* drugs that's why trial drug also have hypoglycaemic properties.

PROBABLE ACTION OF DRUG

In *Ayurved*, the action of a drug is understood by the properties of its basic factors. The factors are *Rasa, Guna, Virya, Vipaka* and *Prabhava* of the drug; these primarily affect the *doshas* and determine their *dosha shamaka* activity; this intern correct the vitiated *doshas* and thus, maintain the *doshic* equillibrium. This is the basic principle of the treatment. As, widely described in drug chapter that most of drugs of trial drug (*Vayasthapana Mahakshaya* and

Gomutra ark) like *Amrita*[4], *Haritaki*[5], *Amala, Rasna*[6], *Aprajita*[7], *Shatavari*[8], *Mandookparni, Shalparni*[6], *Punarnava*[9] and *Gomutra* are possessing mainly *Tikta* and *katu Rasa* which are effective to control the cell-metabolism, in another words decreases the rate of *dhatupusti*, specially the *dhatus* of *kapha* group like *Meda, Mamsa* etc., are comparatively affected more than others. Moreover these *Rasas* are considered as the best *Rasas* for *Aamhara, Kaphahara, Medohara* and in the manifestation of *Arbuda, Kapha, Mamsa* and *Meda* play an important role. Further, on the basis of *Gunas,* some drugs of trial drug like *Haritaki, Aprajita, Mandookparni, Punarnava* and *Gomutra* these drugs consists of *Laghu, Tikshana, Ruksha, Sara* and *Ushna,* because of its *Ushnatva,* it subsides the *Vayu,* which is responsible for growth and pain. Due to *Sara Guna* it relieves *Mala* and *Pitta*. It enters in each cell and *Srotas* of the body, because of the presence of *Laghu Guna* corrects the *Dusti* of *Srotas* and *Dhatus* by its actions like *Sodhana, Pachana, Kledaprasadana, Sothahara, Ropana* etc. Some drugs of trial drug like *Amrita, Abhya* and *Gomutra* have good *Agnideepana.* Hence these are increases the actions of main therapy also. Regarding *Virya,* some drugs of trial drug like *Amrita, Haritaki, Rasna, Shalparni, Punarnava, Gomutra* are having *Ushna Virya,* so it digest the *Ama* and increases the *Agni,* similarly relieves the *kapha* and *Vata Dosha*. Because of *Katu Vipaka* of some drugs like *Rasna, Aprajita, Gomutra* further trial drug is helpful in alliviation of *Ama* and *kapha. Dosha prabhava* of trial drug most of drug like *Amrita, Haritaki, Amala, Punarnava, Aprajita* and *Gomutra* have *Tridoshahara* (Specially vayu and kapha), *dhatu prabhava* are *Mamsalekhana, Sonita sang hata Bhedana* and *Medohara, Malaprabhava* are *Malanuta, Swed/Kledahara* and *Malasodhana*. Further, *Upachayahara, Apakarshana, Lekhana* and *Srotosodhana Karmas* are considered as general body effects of trial drug. These all properties and effects are just opposite to the *Samprapti* of disease *Arbuda*-cancer. The trial drug possesses all the properties just anti to above *Gunas*. Similarly the *Dusti* of *Mamsa, Meda* and *Rakta* are also corrected by its pharmacological actions. *Srotodusties (Sanga And Siragranthi)* are removed and purified by *Laghu, Tikshana, Ushana, Sara, Lekhana* and *Srotosuddhi* properties. Some drug of trial drug like *Amrita, punarnava* and *Gomutra* have *Raktavikargna* and *Raktaprasadaka* properties are also beneficial for disintegration of the *Doshadushya Sammurchana* as well as to maintain the quality and quantity of *Rakta.* Hence, on the basis of above said synergistic properties, the anti-*Arbuda* actions can be explained and discussed from the *Ayurvedic* view point.

CONCLUSION

The *Vayasthapana Mahakshaya* (Trial drug) with *Gomutra Ark* is found to be effective in providing relief in symptoms of general well being, pain, loss of appetite, indigestion, constipation, leg cramp, insomnia, headache, excessive thirst and weight loss in the patients of cancer. The trial drug is found to be effective in improving lab. Parameters like Haemoglobin, Platelet count, Blood urea, Serum creatinine, Serum alkaline phosphate, SGOT, Serum triglycerides and RBS in the patients of cancer. The *Vayasthapana Mahakshaya*(Trial drug) with *Gomutra Ark*, when used along with conventional therapy (CT/RT) is helpful in reducing toxic effect of these therapy. The trial drug *'Vayasthapana Mahakshaya'* with *'Gomutra Ark'* is found to be effective in improving quality of life of patients of cancer. In group A where the trial drug was used in patients who have received CT & RT, Showed comparatively better improvement in symptoms. The trial drug has not any side effects so we can conclude in nut shell that the trial drug can be used as adjuvant with conventional therapy as well also in the patients whom chemo or radiotherapy can't be given but overall quality of life is better in group B indicating. The drug is safe & beneficial in the patients of cancer.

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