

Herbomineral Preparations as Adjuvants to Chemotherapy in Cancer Breast

Dr. Durgesh Kumar Acharya, M.D.,
Lecturer in Radiotherapy, M.K.C.G. Medical College & Hospital,
Berhampur, Ganjam, Orissa, India.

ABSTRACT

Herbomineral preparations like Geriforte, Liv-52, and Septilin were tried exclusively with consent on 21 study group patients receiving chemotherapy for Cancer Breast and the results were compared with another 21 Control Group patients receiving only Vitamins, Haematinics and Protein preparations.

All the patients received 6 cycles of chemotherapy at 4 weeks interval, after a full course of conventional post operative External Tele Cobalt Irradiation. The chemotherapeutic drugs used were Cyclophosphamide, Methotrexate and 5-Fluorouracil.

Remarkable difference was observed in the study group patients with regards to the sense of well being, weight gain, absence of nausea and vomiting and improved haematological picture.

It is concluded that Geriforte, Liv.52 and Septilin be given as an adjuvant to chemotherapy (CMF Regimen).

INTRODUCTION

The major problems faced by the Oncologists during the interim periods of a continuous 6 cycle course of CMF Regime in post operated cancer breast cases after a full course of external tele cobalt irradiation are the various toxic manifestations of the chemotherapeutic drugs like, prolonged nausea and vomiting, along with anaemia, leukopenia and thrombocytopenia in addition to diminished sense of well being. At times, the symptoms become so severe that it leads to discontinuance of treatment midway. Various authors after careful researchers have proved that: "Geriforte" is a comprehensive compound of Rasayana drugs, the major component of which is Chyavanprash. It also contains important nervine tonics like Madhya Rasayana i.e. Brahmi, Ashwagandha etc., herbal and mineral extracts well known in our Ancient Materia Medica to possess metabolic and tonic properties³. It contains indigenous tonic principles which are known to have a stimulating effect on the musculoskeletal systems. They have a good anabolic property and no harmful effects². It induces cellular regeneration, increases hormonal utilization, prevents arteriosclerosis and enhances protein and carbohydrate metabolism⁵. It reduces the catabolic phase resulting in earlier recovery from debilitating conditions⁹.

It is reported to produce a better feeling of physical and mental well being, increase appetite, improve digestion and bowel movements, and promote a positive nitrogen balance.⁷ It also said to possess antianaemic properties and correct anaemia without the need for iron or vitamin supplementation, prevent loss of weight and improve general resistance⁴.

"Septilin" - It helps build up resistance to infection and inhibits the growth of both gram positive and gram negative bacteria.¹ The efficacy of Septilin in granulocytopenic patients on anti cancer drug treatment was compared with the usual antibiotics like Cephalosporins and Gentamycin. There was better response with Septilin. Also since Septilin is more economical, non antibiotic and non toxic, it could be recommended for adjuvant therapy in these patients.⁸

"Liv-52" - It normalizes the appetite - satiety rhythm and improves the appetite and increases the food intake.⁶ Liv.52 stimulates and enhances the functional efficiency of the liver and reduces intrahepatic congestion. It also protects liver against the toxicity of different drugs and chemicals. It has a definite place in the treatment of malignant disease as an adjuvant to radiation therapy and cytotoxic drugs as the hepatotoxicity is evidently less. On Liv.52 there is definite weight gain and the blood picture is well maintained¹⁰.

To test the properties of the above herbomineral preparations a study was conducted on patients of cancer breast who were undergoing chemotherapy (C.M.F. Regime) after post operative irradiation.

MATERIAL AND METHODS

This study was undertaken at the Department of Radiotherapy and Radio-isotopes of the M.K.C.G. Medical College and Hospital, Berhampur, Orissa from January 1991 to January.

Forty two patients suffering from carcinoma of breast within the age group of 40 to 45 were taken into the study. All the patients had been operated (Radical Mastectomy) prior to coming to the department. All the patients received the full course of external tele cobalt irradiation to the cervico-axillary fields (4250 CGy) and 4500 CGy to the chestwall and internal mammary chest fields. Prior to the commencement of irradiation all the patients received a first cycle of anterior chemotherapy, CMF regimen and subsequently another 5 cycles of chemotherapy at 4 weeks interval. The drugs used were cyclophosphamide - 100 mg/m² of the body from days 1 to 14 orally, injection Methotrexate - 40 mg/m² of the body, on days 1 and 8 through intravenous route, and injection 5-fluorouracil, 600 mg/m² of the body on days 1 and 8, through intravenous route. Before each cycle of chemotherapy the sense of well being, recording of weight, incidence of nausea and vomiting, the haemoglobin percentage, total white cell count, total platelet counts were assessed in each patient. The sense of well being was assessed by discussing about the various problems personally and allowing the patients to mix and talk with the other patients in the wards.

The patients were divided into two groups - one study group, and one control group, each group comprising of 21 cases. The study group patients were advised to take Geriforte - two tablets orally thrice daily, Liv.52 and Septilin - two tablets orally thrice daily respectively. Whereas the control group patients were advised to take one capsule of Vitamin B-complex twice daily orally, one capsule of Haematinic, twice daily orally and one teaspoonful of protein preparation orally twice daily.

RESULTS

The results are tabulated in the Tables 1 and 2 respectively.

Abbreviations used in Tables 1 and 2:

Sl.No. = Serial number of patients; SW = Sense of well being; A = Absent; P = Present; C1 = 1st cycle of chemotherapy; C2 = Second cycle of chemotherapy; C3 = Third cycle of chemotherapy; C4 = Fourth cycle of chemotherapy; C5 = Fifth cycle of chemotherapy; C6 = Sixth cycle of chemotherapy; Wt. = Weight in Kilograms; Vm = Vomiting; +++ = Severe; ++ = Moderate; + = Occasional; O = Absent; Hb% = Haemoglobin percentage in grams; TLC = Total leucocyte count (thousands/mm); TPC = Total Platelet Count (Lakhs/Cmm.)

TABLE 1
Observations in the study group patients

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
SW	C1	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	C2	A	A	A	A	P	A	A	P	A	A	A	P	P	A	A	A	P	P	P	P
	C3	P	A	A	A	P	P	P	P	A	A	P	P	P	P	A	A	A	P	P	P
	C4	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P
	C5	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
	C6	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
WEIGHT	C1	47	43	42	50	55	48	56	48	52	52	54	58	57	56	57	56	60	56	54	54
	C2	47	43	42	50	56	48	53	52	54	58	57	56	57	56	57	56	60	56	54	54
	C3	47	44	43	50	56	48	56	48	53	52	54	59	57	56	57	56	60	56	55	54
	C4	47	44	43	50	57	49	56	49	53	52	54	59	57	56	58	57	60	56	55	54
	C5	47	45	44	50	57	50	57	45	55	52	55	55	58	56	58	57	60	57	55	54
	C6	47	45	44	50	57	50	57	49	53	52	56	59	59	56	58	57	60	57	55	54
VOMITING	C1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	C2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	C3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	C4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	C5	++	0	0	0	0	0	0	0	++	0	0	0	0	0	++	0	0	0	++	
	C6	+	0	0	0	+	0	0	0	0	0	0	0	0	0	+	0	0	0	0	
Hb%	C1	8	8.6	10	8.8	9	11	10.2	10.2	9.8	9.4	9	8.8	9	10	10.4	10.2	10.2	9	9	
	C2	8	8.6	10	8.8	9	11	10.2	10.2	9.8	9.4	9	8.8	9	10	10.4	10.2	10.2	9	9	
	C3	8.1	8.6	10	8.8	9	11	10.2	10.2	9.8	9.4	9	8.8	9	10	10.4	10.2	10.2	9	9	
	C4	8.1	8.8	10	8.8	9	11	10.2	10.2	10	9.4	9.6	9	10	10	10.4	10.2	11	9	9	
	C5	9	10	10.2	9	9	11	11	11	10	9.4	9.8	10	10	10.8	10.8	10.8	11.4	9.2	9	
	C6	9.8	10	10.8	9	9.4	11.6	12	12	10.4	9.6	10	10	10	11	12	12	12.4	9.4	9.4	
T.L.C.	C1	5	5.2	6	6	5.4	6.2	6.4	6.2	6.4	6.4	6.4	6.2	5.8	5.2	5.2	5.4	5.4	5.6	6.2	
	C2	5	5.2	6	6	5.4	6.2	6.4	6.2	6.4	6.4	6.4	6.2	5.8	5.2	5.2	5.4	5.4	5.6	6.2	
	C3	5.6	5.2	6	6	5.4	6.2	6.4	6.2	6.4	6.4	6.4	6.2	5.8	5.2	5.2	5.4	5.4	5.6	6.2	
	C4	5.6	5.8	6	6	5.4	6.2	6.4	6.2	6.6	6.4	6.8	6.8	6	5.8	5.2	5.4	5.8	5.6	6.2	
	C5	5.8	6	6.2	6.4	6	6.2	6.8	6.8	6.8	6.4	7	7.2	6.4	6.2	5.8	5.8	6.2	5.8	5.6	
	C6	6.2	6.4	6.2	6.4	6	6.4	6.8	7	7.2	7	7.4	7.4	6.8	6.8	6.2	6.2	6.4	6	6.8	
T.P.C.	C1	1.5	2	3.2	3.2	2.2	3.2	3.2	3.1	3.3	3.3	3.1	3.2	2.4	3.2	2	1.5	1.8	1.8	2.6	
	C2	1.5	2	3.6	3.1	3.2	3.2	3.2	3.1	3.3	3.3	3.1	3.2	2.4	2.2	2	1.5	1.8	1.8	2.6	
	C3	2	2	3.3	3.1	2.2	3.2	3.2	3.1	3.3	3.3	3.1	3.2	2.4	2.2	2	1.5	1.8	1.8	2.6	
	C4	2	2.4	3.2	3.1	2.2	3.2	3.2	3.1	3.4	3.3	3.2	3.4	2.6	2.4	3	1.5	2	1.8	2.6	
	C5	2.4	2.6	3.4	3.2	3	3.2	3.4	5.3	3.4	3.3	3.2	3.4	2.4	2.6	2.4	2	2	2	2.6	
	C6	2.6	2.8	3.8	3.4	3.2	3.8	3.4	3.4	3.6	3.6	3.2	3.6	2.8	2.6	2.6	2.2	2.2	2.2	2.8	

DISCUSSION

The chief toxicity of the alkylating agents like cyclophosphamide and the antimetabolites like methotrexate and 5-fluorouracil are commonly nausea and vomiting resulting in loss of appetite, anaemia, leucopenia and thrombocytopenia.

By observing the various parameters of both the groups of patients in Tables 1 and 2, it is seen that from the 2nd cycle onwards, the sense of well being gradually increased from 38% to become 100% during the 5th cycle and was maintained as such during the 6th cycle also in all the study group patients. Whereas in the control group patients, during the 4th cycle it was only 5%, which increased to a maximum of 29% during the 6th cycle.

Similarly in all the study group patients there was positive weight gain which commenced from 2nd cycle onwards. But in the control there was no such remarkable weight gain. During the 6th cycle, only 43% of cases had features of gain in weight and to the greatest surprise there was weight loss in 33% of cases during the 6th cycle, in the control group.

TABLE 2
Observations in the control group patients

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
SW	C1	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
	C2	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
	C3	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
	C4	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	
	C5	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	P	P	P	A	A	P	A
	C6	A	A	A	A	A	A	A	P	A	A	A	A	A	A	P	P	P	P	A	A	P	A
WEIGHT	C1	51	51	48	48	47	42	55	50	49	42	46	48	58	52	56	55	55	52	54	54	53	
	C2	51	51	48	48	47	42	55	50	49	42	46	48	58	52	56	55	55	52	54	54	53	
	C3	51	50	48	48	46	42	54	50	48	42	45	48	58	52	56	55	55	51	54	54	52	
	C4	51	50	48	48	46	42	54	50	48	42	45	48	58	52	56	55	55	51	54	55	52	
	C5	51	50	48	48	46	42	54	51	48	42	45	48	58	53	56	55	55	51	54	55	52	
	C6	51	48	49	48	45	42	52	52	46	42	43	49	59	53	57	56	56	50	54	56	50	
VOMITING	C1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	C2	0	+	0	0	+	0	+	0	0	+	0	0	+	0	+	0	0	++	0	0	+	
	C3	+	++	0	+	++	+	++	+++	0	+++	0	0	++	0	++	0	0	+++	0	++	++	
	C4	+	+++	0	0	+++	+	+++	++	++	0	0	+	+	+	0	0	0	++	0	+	xfg	
	C5	+	++	0	0	+++	+	++	+	+	++	+	0	+	0	0	0	+	+	+	+	++	
	C6	0	+	+	0	++	+	+	0	+	+	+	0	0	0	0	0	+	0	+	0	+	
Hb%	C1	8.2	8.8	9.4	9.2	8.4	9.2	9.6	9	9	8.4	8	8.4	9	9.4	9.6	9.8	9.8	9.8	9.8	9.8	9.8	
	C2	8.2	8.8	9.4	9.2	8.4	9.2	9.6	9	9	8.4	8	8.4	9	9.4	9.6	9.8	9.8	9.8	9.8	9.8	9.8	
	C3	8.2	8.8	9.4	9.2	8.4	9.2	9.6	9	9	8.4	8	8.4	9	9.4	9.6	9.8	9.8	9.8	9.8	9.8	9.8	
	C4	8.2	8.8	9.4	9.2	8.4	9.2	9.6	9	9	8.4	8	8.4	9	9.4	9.6	9.8	9.8	9.8	9.8	9.8	9.8	
	C5	8	8.2	9.4	9.2	8	9.2	9.2	8	9	8.2	8.2	8.4	9	9.4	9.6	9.8	9.8	9.2	9.8	9.8	9.4	
	C6	8.4	8.2	9.6	9.2	8	9.4	9.2	8	9	8.2	8.2	8.8	9	9.6	9.6	10	10	9.2	10.2	10	9.4	
T.L.C.	C1	6.2	5.8	5	5.1	5	4.1	5.2	5.8	5	5.6	4.9	5	5.2	5.3	5.5	5	5.2	5.2	5	5.8	5.4	
	C2	6.2	5.8	5	5.1	5	4.1	5.2	5.8	5	5.6	4.9	5	5.2	5.3	5.5	5	5.2	5.2	5	5.8	5.4	
	C3	6.2	5.8	5	5.1	5	4.1	5.2	5.8	5	5.6	4.9	5	5.2	5.3	5.5	5	5.2	5.2	5	5.8	5.4	
	C4	6.2	5.8	5	5.1	5	4.1	5.2	5.8	5	5.6	4.9	5	5.2	5.3	5.5	5	5.2	5.2	5	5.8	5.4	
	C5	6	5.4	5	5.1	4.8	4.1	5	5.2	5	5.2	4.9	5	5.2	5.3	5.5	5	5.2	5	5	5.8	5	
	C6	6	5.4	5	5.1	4.8	4.1	5	5.2	5	5.2	4.9	5	5.2	5.3	5.5	5	5.2	5	5	5.8	5	
T.P.C.	C1	1.5	2	1.5	1	2.2	1.1	2.1	2	1.5	2	1	1.4	1.8	1.6	1.8	1.5	1.7	1.6	1.2	1.3	1.5	
	C2	1.5	2	1.5	1	2.2	1.1	2.1	2	1.5	2	1	1.4	1.8	1.6	1.8	1.5	1.7	1.6	1.2	1.3	1.5	
	C3	1.5	2	1.5	1	2.2	1.1	2.1	2	1.5	2	1	1.4	1.8	1.6	1.8	1.5	1.7	1.6	1.2	1.3	1.5	
	C4	1.5	2	1.5	1	2.2	1.1	2.1	2	1.5	2	1	1.4	1.8	1.6	1.8	1.5	1.7	1.6	1.2	1.3	1.5	
	C5	1.2	1.4	1.5	1	1.8	1.1	1.8	1.5	1.5	1.8	1	1.4	1.8	1.6	1.8	1.5	1.7	1.4	1.2	1.3	1.3	
	C6	1.4	1.4	1.5	1	1.8	1.1	1.8	1.5	1.5	1.8	1	1.4	1.8	1.6	1.8	1.5	1.7	1.5	1.2	1.3	1.3	

The weight gain in the study group cases can be attributed to only moderate type of vomiting in 19% of cases during the 5th cycle, which gradually became occasional during the 6th cycle. But moderate to severe vomiting was observed in the control group patients during the 3rd and 4th cycle in the proportion of 48% and 33.3% respectively. The cases who had severe vomiting were to be hospitalized again, and were treated with high dose of metoclopramide injections leaving aside the risk factors. Thus in the control group the appetite of the patients was not as good as that of the study group.

The haematological values of the study group patients, there was positive rise in the haemoglobin percentage from the 4th cycle onwards in all the study group patients, whereas there was 38% fall in the haemoglobin percentage of the control group cases during the 5th cycle. The total rise of haemoglobin was only 47.6% during the 6th cycle.

Similarly, the total leucocyte count was maintained at a perfect level till the 6th cycle, in addition to the appreciable limits of total platelet count in all the study group cases. But no such dramatic rise in leucocytes and platelets was observed in the control group patients, although it remained just adequate enough for allowing them continue with their chemotherapeutic cycles.

CONCLUSIONS

The conclusions which can be drawn from the present study are: Geriforte, Liv.52 and Septilin have a definite role in improving the general sense of well being, minimizing the post chemotherapeutic nausea and vomiting, and simultaneously improving the appetite, as a result of which there is positive weight gain.

These herbomineral preparations also help in maintaining a satisfactory haematological picture as regards the rise in haemoglobin percentage, maintenance of perfect leucocyte and platelet count without any side effects after prolonged use.

Thus Geriforte, Liv.52 and Septilin, could be used routinely as an adjuvant in cancer patients who receive chemotherapeutic drugs like cyclophosphamide, methotrexate and 5-fluorouracil.

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