

## Clinical trial of Liv.52 drops

**Mangalam, S.**, M.B.,B.S., D.C.H., Assistant Surgeon, Govt. Royapettah Hospital,  
**Sunderavalli, N.**, M.B.,B.S., D.C.H., A.B. (Paed.), Paediatrics Physician, Govt. Royapettah Hospital,  
Reader in Paediatrics, Kilpauk Medical College, Madras, India.

### AIM OF THE STUDY

The aim of the present study was to determine the therapeutic utility of Liv.52 as an anabolic agent in undernourished infants.

### MATERIAL AND METHODS

Patients below 2 years of age were selected at random from among the children attending the outpatient department of the Government Royapettah Hospital.

Patients belonged to both sexes and were from poor socio-economic strata of society.

Fifty seven patients were taken up for study, 12 of whom served as controls. Of the control group there were six male children and 6 female children. In the study group there were 22 male and 23 female children.

In the drug trial group 14 patients were between 6 months to 11 months of age and the remaining 31 were above 1 year but below 2 years. In the control group 6 patients were between 6 months to 11 months and the remaining 6 patients were between 1 and 2 years of age.

Liv.52 drops were used for the drug trial group. The dosage schedule was 10 drops thrice a day irrespective of the age. For the control group multivitamin drops only were given. Before starting the trial, patients were assessed with specific emphasis on height, weight, head circumference, chest circumference, appetite, alertness and activity of the child. Careful examination including laboratory investigations like blood counts, Hb, urine examination, stool examination, Mx test and Roentgenographic studies were done for detection of obvious and latent illness.

Total No. of patients	57
Patients taken up for Liv.52 study	45
Control group	12

	Male	Female
Total No. of patients	28	29
Study group	22	23
Control	6	6

Age Group	Study	Control
6 months to 11 months	14	6
1 year to 2 years	31	6

Out of 45 patients in the drug trial groups 23 patients were undernourished, 17 marasmic and 5 were kwashiorkor children. Sixteen cases had iron deficiency anaemia, 30 cases were suffering

from avitaminosis, 12 cases had worm infestation and 10 cases had primary complex and 1 had giardiasis.

In the control group 5 children were undernourished and 7 were marasmic. Of the 12, 3 cases had anemia, 3 had signs of avitaminosis, 2 had worm infestation and 4 had primary complex.

Table IV		
Nutritional status	Study Group 45	Control Group 12
Undernourished	23 (51%)	5 (41.7%)
Marasmic	17 (38%)	7 (58.3%)
Kwashiorkor	5 (11%)	

Table V		
Associated illnesses	Study Group 45	Control Group 12
Anemia (iron deficiency)	16 (35.6%)	3 (25.0%)
Avitaminosis	30 (66.7%)	3 (25.0%)
Primary complex	10 (22.2%)	4 (33.3%)
Ascariasis	12 (26.7%)	2 (16.6%)
Giardiasis	1 (2.2%)	

Table VI		
Increase in weight in 3 months	Study Group on Liv.52	Control Group on multivitamins
3½ kg	6.7% (3 cases)	—
3 kg	24.4% (11 cases)	—
2½ kg	17.7% (8 cases)	—
2¼ kg	8.8% (4 cases)	—
2 kg	33.3% (15 cases)	—
1 kg	6.7% (3 cases)	8.3% (1 case)
½ kg	2.2% (1 case)	16.7% (2 cases)
Average weight gain	2.3 kg	0.17 kg

All children belonging to both groups had specific treatment for the associated illnesses. The drug trial group received in addition Liv.52 drops and the control group only multivitamin drops. Dietetic advice was given for all children.

Children were individually examined every week. The period of study was for three months.

## OBSERVATIONS

The results obtained regarding weight after three months of therapy with Liv.52 drops in the study group and multivitamin drops in the control group, in addition to specific therapy for associated illness, are shown in Table VI.

In the drug trial group increase in weight was noticed in 87% of cases within 3 weeks of treatment. The increase was ½ kg and more. All 45 cases showed definite weight gain after 4 weeks of Liv.52 therapy.

Among the 23 cases of undernourished children, weight gain above 3 kg was noted in 6 cases, between 2 to 3 kg in 13 cases and between 1-2 kg in 4 cases.

Of the 17 marasmic children 5 cases had weight gain above 3 kg and between 2-3 kg in 8 cases and between 1-2 kg in 4 cases.

Of the 5 kwashiorkor children 3 cases had weight gain above 3 kg and 2 cases had weight gain between 1-2 kg.

There was no significant increase in chest and height measurements and increase in head circumference was within physiological limits.

There was improvement in appetite in 93% of children.

There was no untoward side effect with the drug.

## **DISCUSSION**

Liv.52 drops is an indigenous drug preparation. Each ml contains:

Exts.	<i>Capparis spinosa</i>	17 mg.
	<i>Cichorium intybus</i>	17 mg.
	<i>Solanum nigrum</i>	8 mg.
	<i>Cassia occidentalis</i>	4 mg.
	<i>Terminalia arjuna</i>	8 mg.
	<i>Achillea millefolium</i>	4 mg.
	<i>Tamarix gallica</i>	4 mg.

(Prepared in the juices and decoctions of various hepatic stimulants).

It has been used with success in the treatment of viral hepatitis where the cases showed improvement of appetite and weight gain (Ramalingam V. *et al*)<sup>1</sup>.

Improvement in hematopoiesis and liver function tests also with Liv.52 as an adjunct in cancer cases has been reported (Gajaraj, A. *et al*)<sup>2</sup>.

## **CONCLUSION**

This small study reveals that Liv.52 acts as a potent anabolic agent without any undesirable side effects. The increase in weight in the Liv.52 group is remarkable and in the control group the increase in weight is negligible or almost nil.

There was a definite improvement in the appetite of almost all patients who received the Liv.52 drops and disappearance of pallor was noticed in all cases where it was present and alertness of the child showed definite improvement along with weight gain and better appetite.

The present study reveals that Liv.52 serves as an anabolic agent in all degrees of undernourished children without any androgenic or other side effects.

We thank Dr. M. Narayanan, M.S., Superintendent of Government Royapettah Hospital for kindly permitting us to conduct the trial and publish this article.

## **REFERENCES**

1. Ramalingam, V. *et al*, *Indian Paediatrics* (1971): 12, 839.
2. Gajaraj, A. *et al*, "Clinical evaluation of Liv.52 as an adjunct in cancer cases." *The Antiseptic* (Aug. 1972).