

Effect of Liv.52 Therapy in Malnourished Children

(Mrs.) Shakuntala Saxena, M.D., D.C.H.,

Professor and Head,

Ashok Kumar Garg,

Postgraduate Student

and

Ashok Jain, M.D. (Paed.),

Lecturer, Department of Paediatrics,

S.M.S. Medical College and Hospital, Jaipur (Rajasthan).

INTRODUCTION

Malnutrition is the commonest cause of morbidity and mortality, singly or in association with other diseases. Malnutrition is mostly prevalent in developing countries. It is commonly associated with anorexia. Liv.52 therapy in malnourished children along with dietary therapy has been found to improve their appetite and weight gain (Sheth *et al.*, 1963, Prasad *et al.*, 1969, Dayal *et al.*, 1970, Mathur *et al.*, 1974).

The present study was undertaken to assess the effects of Liv.52 therapy in malnourished children.

MATERIAL AND METHODS

Seventeen malnourished children admitted to the Medical Paediatric Ward of S.M.S. Hospital, Jaipur were studied to see effects of Liv.52 therapy. Of these, 9 children received Liv.52 along with dietary therapy (Gr. 1) and 8 children received only dietary therapy (Gr. 2). Their history and laboratory investigations were recorded on a planned pro forma. These cases were followed for five weeks. Coded bottles were used throughout the study and contents were not disclosed till the end. Results were compared after the completion of therapy. Liv.52 was given in doses of:

0-1 year	15 drops t.i.d.
1-3 years	20 drops t.i.d. or t.s.f (Syrup) t.i.d.
Above 3 years	1 tab. t.i.d.

RESULTS

Table I shows that 9 children received Liv.52 therapy along with dietary therapy while 8 children received only dietary therapy.

Cases	Males	Females	Total
Liv.52	4	5	9
Control	3	5	8

Table II shows age and sex distribution of children. Two were below 1 year of age, of which one was male and one was female. Nine children were between 1-3 years of age, of which 4 were males and 5 were females. Six children were above 3 years of age, of which 2 were males and 4 were females. The male to female ratio was 3:4.

Age	Males	Females	Total
0 - 1	1	1	2
1 - 3	4	5	9

Above 3 years	2	4	6
Total	7	10	17

Table III shows symptoms in descending order, after every week. After 2 weeks on Liv.52, 6 children out of 9 children had improvement in appetite while in control children only 2 out of 9 had improvement in appetite. Similar were the observations regarding weight gain. After 5 weeks, it was observed that the Liv.52 treated group showed recovery in all gastrointestinal symptoms, while control group failed to show recovery in loss of appetite (3 cases) and distension of abdomen persisted in 2 cases.

Symptoms and Signs	Liv.52 Group (Gr. 1)						Control Group (Gr. 2)					
	Before	No. of cases					Before	No. of cases				
		1st wk.	2nd wk.	3rd wk.	4th wk.	5th wk.		1st wk.	2nd wk.	3rd wk.	4th wk.	5th wk.
Loss of appetite	9	6	3	1	-	-	8	7	6	4	3	3
Loss of weight	9	7	3	1	-	-	8	6	6	5	5	4
Diarrhoea	5	3	1	-	-	-	3	2	2	2	2	2
Fever	4	2	1	-	-	-	4	3	2	-	2	1
Distension of abdomen	6	4	3	2	-	-	5	4	4	4	4	3
Nausea and vomiting	5	3	1	-	-	-	3	2	1	0	2	1
Pain in abdomen	3	1	1	-	-	-	3	3	2	0	2	1
Yellow-coloured urine	-	-	-	-	-	-	-	-	-	-	-	-
Jaundice	1	-	-	-	-	-	-	-	-	-	-	-
Clay coloured stools	-	-	-	-	-	-	-	-	-	-	-	-

Tables IV (a) and IV (b) show the baseline laboratory investigations and changes after various weeks of therapy. Albumin and globulin reversion ratios reverted to normal as early as first week in the Liv.52 group, as compared to control group.

Investigations	Before treatment	After treatment				
		1st week	2nd week	3rd week	4th week	5th week
S. Bilirubin	2.1 mg%	2.0	1.8	1.8	1.6	1.6
S. Transaminase						
SGOT	50.5	50.0	42.0	35.0	30.0	25.0
SGPT	70.5	60.0	35.0	30.0	30.0	15.0
Alk. Phosphatase	4.5	4.5	4.0	4.0	3.0	3.0
LFTs						
Icterus index	15.0	15.0	10.5	10.5	5.0	5.0
Thymol turbidity	3.0	3.0	2.5	2.5	2.0	2.0
Thymol flocculation	++	++	++	+	+	+
S. Total proteins	7.8 g%	7.8	7.9	7.85	7.85	7.85
Albumin	3.8 g%	3.8	3.9	4.10	4.15	4.10
Globulin	4.0 g%	4.0	4.0	3.75	3.75	3.75

Investigations	Before treatment	After treatment				
		1st week	2nd week	3rd week	4th week	5th week
S. Bilirubin	2.0 mg%	2.0	2.0	1.6	1.6	1.6
S. Transaminase						
SGOT	55.0	55.0	50.0	40.0	30.0	25.0
SGPT	60.0	45.0	40.0	30.0	30.0	20.0

Alk. phosphatase	4.8	4.5	3.0	3.0	3.0	3.2
LFTs						
Icterus index	18.0	15.0	10.5	10.5	5.0	5.0
Thymol turbidity	3.0	3.0	2.5	2.5	2.0	2.0
Thymol flocculation	++	++	++	+	+	+
S. Total proteins	7.7 g%	7.7	7.8	7.8	7.6	7.6
Albumin	3.2 g%	3.5	3.5	3.5	3.5	3.6
Globulin	4.5 g%	4.5	4.5	4.3	4.1	4.0

DISCUSSION

Malnourished children do not have a good appetite which is the main obstacle to better intake of calories and proteins. For this reason, some sort of medication is always helpful to overcome the initial anorexia. Liv.52 has definite role in improving the appetite, as is evident from our observations, probably Liv.52 acts by stimulating the complex mechanism of the liver to increase the appetite. The increase in total proteins and serum albumin can be explained on the basis of correction of hepatic function in malnourished children (Mathur *et al.*, 1974).

Fairly good response was noted in 80% of malnourished children with an increase in weight from 1 lb. to 3 lb. in 3 weeks of treatment (Prasad *et al.*, 1971). In a study by Reddy *et al.*, (1976) on 310 children it was observed that Liv.52 has a definite anabolic action both on normal, and malnourished children. Liv.52 has no side-effects and proves a valuable adjuvant in the treatment of weight loss and impaired appetite in apparently normal and in malnourished children.

In another series, the authors also studied 16 cases of Indian Childhood Cirrhosis in a controlled study on Liv.52. 9 children receiving Liv.52 along with conventional treatment showed symptomatic relief and improvement in biochemical abnormalities as compared to 7 control cases.

The authors have also carried out a double-blind study of Liv.52 therapy in 30 cases of ineffective hepatitis. 14 cases were put on Liv.52 therapy whereas 16 cases were on placebo. Therapy with Liv.52 resulted in earlier recovery and symptomatic improvement as compared to the control cases. The recovery was both symptomatic as well as biochemical.

The present study, undertaken as a double-blind study, showed that Liv.52 therapy improves anorexia, weight gain and reverts albumin and globulin ratios to normal early when given along with dietary therapy.

SUMMARY

In a double-blind study of 17 malnourished children it was observed that Liv.52 therapy along with dietary therapy improves appetite and increase in weight is greater as compared to control children. Albumin and globulin ratio reverted to normal earlier as compared to control children. So it can safely be given as an adjunct to dietary therapy in malnourished children.

REFERENCES

1. Sheth, Shantilal C., *et al.* Therapy of Anorexia with Liv.52. *Probe* (1963): 4, 137.
2. Prasad, Lala Surajnandan, Studies with Liv.52. *Probe* (1969): 1, 1.
3. Dayal, R. S. *et al.* A Clinico-pathological Study of Hepatomegaly with special reference to Liv.52 Therapy. *J. Ind. med. Prof.* (1970): 9, 7768.
4. Mathur, P.S., Chandra, I. and Khan, M. A., Clinico-biochemical Trials with an indigenous Drug - Liv.52 - In Malnutrition. *Probe* (1974): 3, 136.

5. Reddy, Y. R., Sulochana, K. S. and Mathur, Y. C., A Clinical Study on the effect of Liv.52 on the Growth Pattern of Normal and Malnourished Children in a Rural Area - 310 cases. *Paed. Clin. Ind.* (1975): 3, 157.