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A Clinical study of infective Hepatitis treated with Liv.52

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ABSTRACT
The improvement with Liv.52 in patients with infective hepatitis was statistically significant. It abated the symptoms more rapidly, reduced the duration of jaundice and restored appetite. It was beneficial in the treatment of infective hepatitis. No untoward side effects attributable to the drug were observed.

INTRODUCTION
In children, liver disorders such as infective hepatitis or cirrhosis of the liver are quite common. Of these, the incidence of infective hepatitis is relatively high. Infective hepatitis is a viral disease which, though mild and self-limiting in many cases, often runs an acute, fulminating and fatal course or results in severe, chronic and irreparable hepatic damage.

There is so far no specific therapy for infective hepatitis. But Liv.52 has been reported by many workers to be effective in the treatment of infective hepatitis, by shortening the course of the disease and the duration of jaundice as well as by improving appetite and preventing complications.

The present study was undertaken to assess the effectiveness of Liv.52 (The Himalaya Drug Co.) an indigenous compound, in cases of infective hepatitis. Each 2.5 ml of Liv.52 syrup contains:

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

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

MATERIAL AND METHODS
A study of 70 cases of infective hepatitis treated with Liv.52 was conducted in the Department of Paediatrics at Sheth Vadilal Sarabhai General Hospital and Smt. N.H.L. Municipal Medical College, Ahmedabad. The results obtained were compared with an earlier series of 60 cases studied in the same Department. The earlier cases had been treated with Vitamins B-complex and C and sometimes antibiotics and/or steroids.

Detailed history and physical findings were recorded as per detailed *pro forma*. The cases were treated as outdoor as well as indoor patients depending upon the severity of the disease.

The following investigations were done on the day of admission and then repeated after two weeks of the therapy:
1. Urine examination for bile salts and pigments.
2. Serum bilirubin estimation.

3. Serum alkaline phosphatase.
4. Thymol turbidity.
5. S.G.P.T.
6. Routine haemoglobin estimation.

Liv.52 syrup was given in the following dosage:

6 months to 5 years — 1 tsf, b.i.d.
6 years to 12 years — 1 tsf, t.i.d.

In very severe and fulminant cases which were in a state of impending hepatic coma, prednisolone and other measures were used as indicated.

On discharge, the patients were followed-up regularly in the outpatient department at weekly intervals for one month and at two-weekly intervals for the next two months.

OBSERVATIONS

Age Incidence

A higher incidence of infective hepatitis was observed in age group of 1-6 years i.e. the pre-school age group.

The ratio of Male: Female incidence was observed to be about 2 : 1.

Seasonal Incidence

A high incidence of infective hepatitis was seen during late summer and the monsoon.

Clinical Manifestation

The commonest symptoms on admission (Table 1) were fever, anorexia, jaundice and passing of dark-coloured urine. The complaints of nausea and/or vomiting, abdominal pain, enlargement of abdomen were next in the order of frequency.

Table I

	Trial group		Control group	
Manifestations	Cases	%	Cases	%
Jaundice	70	100.00	60	100.00
Dark coloured urine	61	87.14	60	100.00
Fever	52	74.28	57	95.00
Anorexia	34	48.57	46	76.66
Vomiting and/or nausea	23	32.86	34	56.66
Abdominal pain	16	22.85	7	11.66
Enlargement of abdomen	7	10.00	4	6.66
Diarrhoea	5	7.14	6	10.00
Altered state of consciousness	5	7.14	7	11.66
Constipation	3	4.28	—	—
Oedema	1	1.42	5	8.33
Jaundice:				
Mild (upto 5 mg%)	51	72.85	32	53.33
Moderate (5-10 mg%)	15	21.43	20	33.33
Severe (more than 10 mg%)	4	5.72	8	13.33
Enlarged liver:				
Not palpable	51	72.85	32	53.33
Upto 3 cm	15	21.43	20	33.33
More than 3 cm	4	5.72	8	13.33
Enlarged spleen	1	1.42	7	11.66

Jaundice was observed in all the cases.

The liver was palpable in all the cases except one patient; and it was tender in 83.85% of them. The consistency was soft in all cases.

Splenic enlargement was present in 8 cases.

Clinical recovery was judged by duration of symptoms (Table II). In almost all cases of the trial group the average duration of jaundice, after starting the treatment was 10 days and in the control group it was 15 days. Fever and anorexia persisted upto 1 week in the trial group while in the control group they persisted upto two weeks.

Table II: Showing clinical recovery — symptom-wise

Symptom	1 Week				2 Weeks				More than 2 Weeks			
	Liv.52 Cases	%	Control Cases	%	Liv.52 Cases	%	Control Cases	%	Liv.52 Cases	%	Control Cases	%
Fever	10/52	19.23	24/56	42.86	50/52	96.15	35/56	62.5	52/52	100	56/56	100
Anorexia	25/34	73.53	33/46	71.74	32/34	94.12	35/46	76.10	34/34	100	38/46	82.61
Nausea/	20/23	86.96	10/34	29.41	22/23	95.65	29/34	85.30	23/23	100	33/34	97.06
Vomiting			11/34	32.35			27/34	79.41				
Jaundice	44/70	62.86	32/56	57.14	57/70	81.43	33/56	58.93	64/70	91.43	41/56	73.21
In the Control Group 4 patients expired, two on the day of admission and two patients two days after admission												

Table III: Liver function tests before treatment

Tests		Trial group		Control group	
		Cases	%	Cases	%
Serum bilirubin (in mg%)	upto 5	51	72.85	32	53.33
	5 - 10	15	21.43	20	33.33
	more than 10	4	5.72	8	13.33
S.G.P.T. (I.U.)	0 - 45	7	10.00	—	—
	46 - 100	28	40.00	10	16.66
	101 - 200	21	30.00	16	26.66
	more than 200	14	20.00	34	56.66
Thymol turbidity (Units)	0 - 8	13	18.58	41	68.33
	8 - 12	51	72.85	14	23.33
	more than 12	6	8.57	5	8.33
S. Alkaline phosphatase (K.A.U.)	upto 15	42	60.00	—	—
	15 - 60	24	34.28	43	71.66
	more than 60	4	5.72	17	28.33
Urine: Bile salts & pigments	Present	62	88.57	57	95.00
	Absent	8	11.43	3	5.00

Nausea and vomiting subsided within 5 days in the majority of patients in the trial group and within two weeks in the control group.

In almost all patients in the trial group, the liver receded within 2 to 4 weeks whereas in the control group it receded within 2 to 8 weeks.

The average weight gain was 0.6 kg in two weeks in the trial group.

As compared in Table IV, serum bilirubin returned to normal level in 85.72% of the patients in the Liv.52 group, while in the control group in 57.15% of the patients. This showed that serum bilirubin

remained high in the patients of the control group even after two weeks of treatment. At the end of two weeks, 26.78% of the control group continued to have high level of thymol turbidity, whereas in the trial group only 12.85% had high levels. In the trial group 22.85% and in the control group 30.35% showed abnormal level of S.G.P.T.

Table IV: Liver function tests two weeks after treatment

Tests		Trial group		Control group	
		Cases	%	Cases	%
Serum bilirubin	Normal value	60	85.72	32	57.15
	Raised value	10	14.28	24	42.85
S.G.P.T.	Normal value	54	77.15	39	69.65
	Raised value	16	22.85	17	30.35
Thymol	Normal value	61	87.15	41	73.22
	Railed value	9	12.85	15	26.78
S. Alkaline phosphatase	Normal value	61	87.15	—	—
	Raised value	9	12.85	—	—
Urine: Bile salts & pigments	Absent	70	100.00	56	100.00
	Present	—	—	—	—

DISCUSSION

When the above two series are compared, it is seen that clinical improvement was more rapid and symptoms subsided earlier in the patients treated with Liv.52.

Tenderness and size of the liver seemed to persist longer in the control than in the trial group.

Liver function tests have shown that Liv.52 brings down the level of serum bilirubin much earlier than in patients treated without Liv.52.

Ramalingam V., Sundaravalli N. (1971); Gupta (1972); Kulkarni (1971) and Mazumdar (1974), in their clinical studies noticed that Liv.52 has been effective in the treatment of infective hepatitis by decreasing its morbidity and the duration of jaundice as well as improving appetite and weight gain.

Patel (1963) and Joglekar (1970) showed its effects on liver cell regeneration and protection against hepatotoxicity.

No untoward side effects of Liv.52 therapy were seen during the trial.