

## Liv.52 in infective Hepatitis

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Infective hepatitis is one of the important causes of jaundice in children in this country. It is endemic in the city of Bhopal. There is no specific therapy yet available for this viral disease. Corticosteroids have a place in the treatment of infective hepatitis, specially in cases having deep jaundice, marked hepatomegaly and impending coma. It was considered desirable to ascertain the effect of Liv.52 an indigenous drug on infective hepatitis as published reports have shown some beneficial effects.

Composition of Liv.52 drops:

*Capparis spinosa* (Kabra)

*Cichorium intybus* (Kasni)

*Solanum nigrum* (Makoi)

*Cassia occidentalis* (Kasondi)

*Achillea millefolium* (Gandana)

*Tamarix gallica* (Jhau)

*Terminalia arjuna* (Arjun)

Prepared in the juices and decoctions of various hepatic stimulants.

### MATERIAL AND METHODS

Forty eight cases of infective hepatitis admitted to the Department of Paediatrics, Gandhi Medical College, Bhopal, were taken up for study. Of these 16 served as controls; 32 cases were given Liv.52.

A detailed history of each case was taken. After a thorough physical examination; urine examination and specific liver function tests (including serum bilirubin, Van den Bergh reaction, thymol turbidity and serum alkaline phosphatase) were carried out. Urine examination and liver function tests were repeated in every case.

Liv.52 drops were given in the following schedule for a period of 4 to 6 weeks and detailed clinical assessment was recorded regularly:

#### *Dosage Schedule*

Infants:

10 drops thrice a day

Children:

2.5 cc thrice a day — 2 to 5 years

5.0 cc thrice a day — over 5 years

### OBSERVATIONS

The following observations were recorded.

<b>Table I: Showing age and sex incidence</b>						
Age group	Liv.52 group			Control group		
	No. of cases	Sex		No. of cases	Sex	
		M.	F.		M.	F.
Below 1 year	1	0	1	0	0	0
1 – 3 years	6	5	1	3	2	1
3 – 6 years	13	10	3	6	3	3
6 – 9 years	5	3	2	3	2	1
9–12 years	7	4	3	4	3	1
Total	32	22	10	16	10	6

<b>Table II: Showing symptomatology</b>			
Symptoms	Control group	Liv.52 group	
		No. of cases	Percentage of cases
Fever	14	30	93.75
Jaundice	16	29*	90.62
Anorexia	12	27	84.37
Nausea/Vomiting	10	24	75.00
Abdominal pain	8	22	68.75
Constipation	5	16	50.00
Irritability/Headache	4	8	25.00
Abdominal distension	3	6	18.75
Diarrhoea	1	3	9.37
Pruritus	1	2	6.25
Epistaxis	–	1	3.12

\* In 3 cases Jaundice was not present on admission but appeared in the course of a few days

<b>Table III: Showing hepatic enlargement on admission</b>		
Liver size cm in the midclavicular line	No. of cases	
	Liv.52 group	Control group
Up to 2 cm	5	4
2 – 4 cm	20	7
4 – 6 cm	7	5

<b>Table IV: Showing consistency of liver</b>		
Consistency	No. of cases	
	Liv.52 group	Control group
Soft	18	11
Firm	14	5
Total	32	16

<b>Table V: Showing improvement in appetite</b>		
Improve in appetite	No. of cases	
	Liv.52 group	Control group
Very good	11	3
Good	13	5
Fair	4	5
No change	4	3
Total	32	16

Note: On an average, change in appetite was noted in the Liv.52 group on the 5<sup>th</sup> day (earliest 3<sup>rd</sup> day) and in the control group on the 19<sup>th</sup> day.

<b>Table VI: Showing average weight gain per week in the Liv.52 group</b>
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Weight gain	No. of cases	%
Upto 100 g	5	15.6
100 – 200 g	14	43.75
200 – 300 g	7	21.9
300 – 400 g	1	3.13
400 – 500 g	1	3.13
No increase in weight	4	12.5
Total	32	

There was no weight gain in the controls.

<b>Table VII: Showing disappearance of icterus from sclera</b>				
Time duration	No. of cases			
	Liv.52 group		Control group	
	No. of cases	%	No. of cases	%
Within 1 week	2	6.2	Nil	–
1 – 2 weeks	6	18.7	3	18.8
2 – 3 weeks	7	21.9	5	31.2
3 – 4 weeks	7	21.9	4	25.0
4 – 5 weeks	6	18.7	2	12.5
Persisted beyond 6 weeks	3	9.3	2	12.5
Deaths	1	3.1	–	–

<b>Table VIII: Showing regression of liver size to normal</b>				
Time duration	No. of cases			
	Liv.52 group		Control group	
	No. of cases	%	No. of cases	%
Within 1 week	2	6.2	Nil	–
1 – 2 weeks	4	12.5	3	18.8
2 – 3 weeks	11	34.00	3	18.8
3 – 4 weeks	7	21.90	4	25.0
4 – 5 weeks	6	18.70	4	25.0
5 – 6 weeks	1	3.13	2	12.2
Remained enlarged	1	3.13	–	–
Total	32		16	

<b>Table IX: Showing change in consistency of liver in the cases who had a firm liver</b>		
Time duration	No. of cases	
	Liv.52 group	Control group
0 – 10 days	4	0
10 – 20 days	5	2
20 – 30 days	3	3
Liver remained firm beyond 30 days	2	Nil
Total	14	5

<b>Table X: Showing serum alkaline phosphatase levels</b>		
S. Alk. Phosphatase (in K.A. units)	No. of cases	Returned to normal (in days)
0 – 10	–	–
10 – 20	5	10
20 – 30	7	22
30 – 40	7	24
40 – 50	6	25
50 – 60	1	30
60 – 70	4	32
70 – 80	2	More than 32 days
Total	32	

Note: In the control group it took much longer on an average for return of serum alkaline phosphatase levels to normal.

<b>Table XI: Showing initial serum bilirubin levels</b>
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	No. of cases	
	Liv.52 group	Control group
1 – 2 mg%	12	3
2 – 3 mg%	6	2
3 – 4 mg%	5	3
4 – 5 mg%	1	2
5 – 6 mg%	4	2
More than 6 mg%	4	4
Total	32	16

**Table XII:** Showing return of serum bilirubin level to normal in the Liv.52 group

Initial Serum Bilirubin	Returned to normal					Total
	Within 2 wks	Within 3 wks	Within 4 wks	Within 5 wks	Remained high beyond 5 wks	
1 – 2 mg%	3	3	4	1	1	12
2 – 3 mg%	–	3	3	–	–	6
3 – 4 mg%	–	1	3	1	–	5
4 – 5 mg%	–	1	–	–	–	1
5 – 6 mg%	–	1	0	3	–	4
More than 6 mg%	–	–	2	–	1	3
Death	–	–	–	–	–	–

The levels in the Control group took much longer, on an average, to return to normal.

## DISCUSSION

Main presenting features of infective hepatitis were fever, jaundice and anorexia in majority of the cases, 81.4% had hepatic enlargement of more than one inch. In 43.8% cases the liver was firm in consistency. Improvement in appetite and disappearance of nausea was observed by the 5<sup>th</sup> day (average), whereas in control it took 19 days. Disappearance of jaundice was noted by the end of the 3<sup>rd</sup> week in half of the cases. Dave (1972)<sup>1</sup>, Deshpande *et al.* (1972)<sup>2</sup> and Jaffari *et al.* (1969)<sup>3</sup> noticed improvement in appetite, relief of nausea and vomiting much faster in cases of infective hepatitis receiving Liv.2 therapy. Dave found disappearance of jaundice by the 18<sup>th</sup> day whereas Jaffari records the 23d day as the average period.

Of the 14 cases who had firm liver, change in consistency to normal was noticed in 28.4% cases in less than 20 days. In the control group it took much longer.

A very satisfactory gain in weight was noticed in a majority of the cases of the trial group (Table VI).

## CONCLUSION

Improvement in appetite was observed by the 5<sup>th</sup> day on an average. Jaundice cleared earlier than in the control group. There were no complications seen and the course of the disease was uneventful. Hepatomegaly subsided faster and liver function tests returned to normal earlier. It is believed that Liv.52 stimulates hepatic function, reduced intra-hepatic congestion and has some anti-inflammatory action. By virtue of these properties the drug has a definite place in the treatment of infective hepatitis.

## SUMMARY

1. Thirty two cases of infective hepatitis in children are studied.
2. Detailed clinical and laboratory studies are made.
3. Results of therapy with Liv.52 are assessed and compared with a Control group.
4. Available literature is reviewed and data discussed.

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