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Part I

Studies on Liv.52 in hepatic disorders

Part I: Viral Hepatitis — 58 Cases

Sharma, N.L., M.D., D.C.H. (Lond.), F.R.S.T.M.& H. (Eng.), D.T.M., D.P.H. (Cal.),
Professor and Head of the Department of Pediatrics
Lahori, U.C., M.D., D.C.H., Research Scholar and
Mehta, S.K., B.Sc., M.B.,B.S., D.C.H., Research Scholar,
King George's Medical College, Lucknow, U.P., India.

Liver diseases continue to be one of the major causes of morbidity and mortality in children. The treatment of most of the diseases remains non-specific, expensive and unrewarding. With this background the effectiveness of Liv.52 was evaluated in 155 cases of different hepatic disorders in childhood.

MATERIAL AND METHODS

The present study was carried out at the Department of Pediatrics, K.G. Medical College, Lucknow. 155 patients with various liver disorders were personally examined and observed and the data were collected on a previously prepared proforma. The clinical and laboratory observations and progress were noted from time to time.

The diagnosis of all these cases was made on the basis of clinical features, routine investigations of blood, urine, stool and other special investigations like serum biochemistry, liver function tests (L.F.T.), X-rays and liver biopsy etc. In spite of all attempts it was possible to carry out liver biopsy in 16 cases and in only one case of infective hepatitis. Most of the patients were unwilling to submit to this procedure after improvement and others were too low to allow this procedure.

Liv.52 was administered in the following dosage:

Below 3 years	10-15 drops q.i.d.
3-5 years	20 drops q.i.d.
Above 5 years	2 tablets t.i.d.

GROUP I

Viral Hepatitis — 58 cases

In this group we included cases of neonatal hepatitis, infective hepatitis, and serum hepatitis. In four cases the diagnosis of neonatal hepatitis was confirmed on clinical examination and the laboratory findings of initial normal coloured stools becoming acholic after several weeks, persistent conjugated hyperbilirubinaemia, positive tests for urobilinogen in urine and stools and the findings of bile salts and pigments in the urine and high levels of blood bilirubin. Four cases were included in the present study as they satisfied these criteria. Out of the 54 cases of viral hepatitis, two cases gave a history of blood transfusion and the onset was insidious hence were labelled as serum hepatitis cases. Fifty two cases were probably of infective hepatitis although a definite history of contact was present in 32 cases. In these cases the onset was with fever, gastro intestinal symptoms like anorexia, nausea, vomiting, upper abdominal distress and pain, constipation or diarrhoea following contact with a patient of viral hepatitis. On examination, there was jaundice with enlarged, soft and tender liver and liver function tests suggestive of acute viral hepatitis.

Table I: Symptoms and signs				
			Total No. of Viral Hepatitis cases = 58	
			Number with positive signs & symptoms	%
1.	Fever		40	68.96
2.	Anorexia		46	79.31
3.	Vomiting		24	41.38
4.	Diarrhoea		2	3.45
5.	Constipation		8	13.79
6.	Abdominal distension		6	10.34
7.	Jaundice		54	93.10
8.	Irritability		2	3.45
9.	Oedema		Nil	—
10.	Underweight		8	13.79
11.	Anaemia		6	10.34
12.	Lymphadenopathy		5	8.62
13.	Liver Size:–	Upto 3 cm	48	82.76
		3-5 cm	10	17.24
14.	Spleen:–	Upto 3 cm	10	17.24
		3-5 cm	Nil	—

The cases were divided into two subgroups.
Sub-group A — With Liv.52:
Viral hepatitis treated with Liv.52
plus minerals and vitamins 32 cases

Sub-group B — Without Liv.52:
Viral hepatitis treated only with
minerals and vitamins 26 cases

The cases were followed up regularly. Signs and symptoms and their progress were observed and the laboratory findings were noted in each group.

OBSERVATIONS AND RESULTS

In Group I — Viral Hepatitis—58 cases

The majority of cases were between one month to 14 years: 36 were males and 22 were females. The drug was found equally effective in all the categories of cases and the response was encouraging in all of them (Table II). There was quicker symptomatic improvement in the form of increase in appetite, general well-being and gain in weight. Fever responded earlier, jaundice and tenderness of the liver disappeared earlier and there was quicker improvement in gastrointestinal symptoms. There was substantial improvement in liver function tests in all cases (Tables III and IV).

Table II: Improvement in clinical features with Liv.52 in cases of viral hepatitis as compared to controls					
Clinical Features		Improvement in Days with Liv.52*		Improvement in Days in Controls•	
		Near Average	Range	Near Average	Range
1.	Fever	2	1-3	4	2-6
2.	Anorexia	4	1-8	10	4-18
3.	Vomiting	2	1-3	3	2-5
4.	Constipation	3	1-6	4	2-7
5.	Diarrhoea	2	2	—	—
6.	Jaundice	15	5-45	22	8-50

* Excluding three patients who died within a short period.
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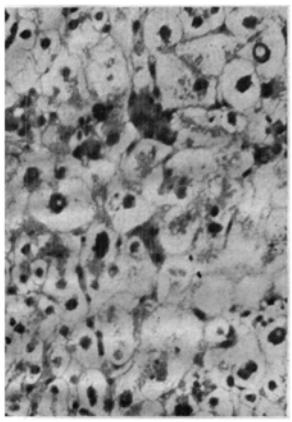
Table III: L.F.T. in cases of viral hepatitis receiving Liv.52 (32 patients)															
Time	No. of patients	Serum protein in g%					Serum bilirubin in mg%				Alkaline phosphatase (K.A. Units)			Thymol turbidity	
		Upto 4	4–5	5–6	6–7	Over 7	Upto 2	2–5	5–10	More than 10	3–13	14–30	31–50	1–4	5–8
Initially	32	—	3	7	19	3	2	5	19	6*	2	18	12	26	6
After 2 weeks	31	—	2	6	18	5	15	6	5	5•	6	16	9	27	4
After 4 weeks	24	—	—	1	20	3	19	5	—	—	15	9	—	24	—
After 6 weeks	22	—	—	—	16	6	21	1	—	—	20	2	—	22	—
After 7 weeks	20	—	—	—	13	7	20	—	—	—	20	—	—	20	—
* One died in Hepatic Coma. • Two patients died.															
On some patients it was not necessary to continue to repeat the laboratory tests after satisfactory progress.															

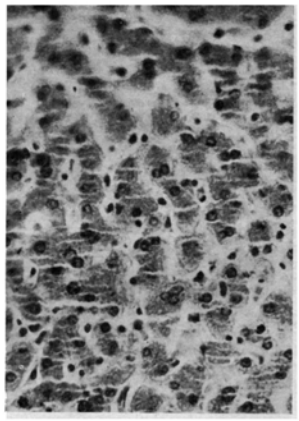
Table IV: L.F.T. in cases of viral hepatitis receiving no Liv.52 tablets (26 patients)															
Time	No. of patients	Serum protein in g%					Serum bilirubin in mg%				Alkaline phosphatase (K.A. Units)			Thymol turbidity	
		Upto 4	4–5	5–6	6–7	Over 7	Upto 2	2–5	5–10	More than 10	3–13	14–30	31–50	1–4	5–8
Initially	26	—	3	8	12	3	2	6	12	6*	4	11	11	18	8
After 2 weeks	25	—	2	8	12	3	8	4	9	4●	3	11	9	19	6
After 4 weeks	19	—	+	8	11	—	11	6	1	1	7	8	4	16	3
After 6 weeks	18	—	—	3	15	—	14	4	—	—	10	7	1	15	3
After 8 weeks	16	—	—	3	13	—	16	—	—	—	16	—	—	15	1
* One patient died. • Two patients died.															
On some patients it was not necessary to repeat the laboratory tests on progress.															

The duration of illness and convalescence were shortened considerably (by about 10 days).

Liver biopsy findings in neonatal hepatitis showed giant cell transformation of hepatic parenchyma, only minor evidence of portal fibrosis and bile duct proliferation. However, no repeat biopsy could be done. Biopsy findings in seven cases of infective hepatitis showed centrilobular hepatic cell necrosis, infiltration with inflammatory cells like polymorphonuclear leucocytes, lymphocytes, macrophages and plasma cells, diffuse reticuloendothelial reaction and proliferation of bile ducts in the perilobular portal areas with bile stasis. Repeat biopsy in one case treated with Liv.52 showed liver tissue within normal limits (*see photographs)*.



Case of Viral Hepatitis before treatment with Liv.52 shows infiltration and bile stasis



Case of Viral Hepatitis 6 weeks after treatment with Liv.52 shows liver tissue within normal limits

SUMMARY

1. Considerable earlier improvement in general health and well-being along with symptomatic relief was seen in cases of viral hepatitis with Liv.52 as compared to controls without Liv.52. Relatively early improvement was also observed in liver function tests in cases of viral hepatitis treated with Liv.52.
2. (i) Liv.52 was very effective in viral hepatitis.
   (ii) There were no toxic effects.

(iii) Observations and results obtained in 97 cases of infantile cirrhosis and miscellaneous conditions will be presented in Part II of this paper, in the next issue.