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Clinical and Histopathological Evaluation of Liv.52* in Cirrhosis of Liver

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(* Liv.52 is the registered Trade Mark of The Himalaya Drug Co.)

INTRODUCTION

Infantile cirrhosis of liver is observed between the ages of six months to three years. It is noticed more among Hindus than Parsees or Muslims. The two principal types are portal cirrhosis and biliary cirrhosis. In portal cirrhosis, the etiological agent appears to be carried to the liver by the portal blood stream, and the hepatic cells bear the brunt of the disease. In biliary cirrhosis, it is the bile tracts which suffer principally and the causative agent is concerned with the bile ducts. Genetic and hereditary factors, maternal toxaemias and ill-health, haemolytic diseases of the newborn, sub-clinical or clinical infective hepatitis, parental allergy, toxic actions of protozoal, bacterial and chemical agents and drugs, with or without nutritional deficiency, contribute to the causation of cirrhosis of liver. Although it is accepted that there is a proliferation of fibrous tissue and the affection of hepatic parenchyma, the exact mechanism leading to liver cirrhosis is not yet clear.

To begin with, the liver is large and soft but later on it becomes firm and hard. There may be signs of portal hypertension. Due to diminished liver function, the patient develops anaemia, hypoproteinaemia, and retention of bile salts and pigments. Gradually there may be increasing hepatic inefficiency and hepatic failure leading to hepatic coma. Any enlarged liver with gastro-intestinal symptoms, low fever, inability to thrive and increasing debility should be suspects for cirrhosis.

The standard therapy of this condition comprises of proteins, aminoacids, monosaccharides, vitamins, liver extract and lipotrophic agents. Recently encouraging results have been reported by combining the conventional therapy with an indigenous preparation Liv.52.

THE DRUG

The composition of Liv.52 per tablets is:

Capparis spinosa	64.8
Cichorium intybus	64.8
Solanum nigrum	32.4
Cassia occidentalis	16.2
Terminalia arjuna	32.4
Achillea Millefolium	16.2
Tamarix gallica	16.2
Mandur Bhasma	32.4

Liv.52 has diuretic, aperient, hepatic, stimulant, stomachic, tonic and choleretic actions. There is a definite interaction of the various ingredients, all of which have individual and synergistic action on the liver.

MATERIAL AND METHODS

The author first tried the standard line of therapy in 67 cases of cirrhosis of liver. This series acted as control while a second series of 70 cases was treated with the standard therapy plus Liv.52. Liv.52 was given in doses of 2 tab. twice or thrice daily orally. From this second series, 24 cases

were studied histopathologically, before and after therapy. The break-up was labelled as cured, relieved, no relief and expired.

FINDINGS AND OBSERVATIONS

From the control series of 67 cases the cure rate was only about 1% while on adding Liv.52 it could be increased to 21%. Table I gives the results of findings in both the series.

Table I

	No. of cases	Cured	Relieved	No Relief	Expired
Control series	67	1	11	40	15
Series with Liv.52	70	15	31	16	8

In 24 cases in which liver biopsy was done, the author found that the histopathological changes were revealing (See Table III). The cases, that did not respond, showed marked fibrosis with irregular and disorganised pattern. In some cases, necrosis was seen in the liver parenchyma. The cases that improved with Liv.52 therapy showed prior to treatment, fibrosis with liver cell damage and fair increase in the connective tissue but the fibrosis was not well marked. On Liv.52 therapy, the fibrosis was less evident and liver parenchyma showed tendency towards normalisation. There was decrease in cellular infiltration and necrotic changes were reduced. In this group of 24 cases, 7 were cured, 10 were relieved while 3 cases expired and in 4 cases the results were unsatisfactory. This series comprised of 7 cases of early cirrhosis of liver while the number of cases in intermediate and late stages were 6 and 11 respectively. Table No. 2 gives the details of clinical results.

Table II

Total No. of cases	Cured	Relieved	No Relief	Expired
24	7	10	4	3

The given charts include the clinical as well as histological details of the 24 cases in which clinical as well as histopathological evaluation was done.

SIDE EFFECTS

Liv.52 was administered to a total of 137 cases. In this series not a single untoward reaction or side-effect was observed. Liv.52 is a well-tolerated and non-toxic preparation.

DISCUSSION

From these clinical studies it is clear that Liv.52 by its hepatic stimulant, tonic, choleretic and diuretic actions can increase the cure rate in the cases of cirrhosis of liver from 1% to 21%. It causes definite clinical as well as histological improvement. The response is particularly good in the early and intermediate stages of liver cirrhosis. Liv.52 has a definite but non-specific protective action on the liver. The experimental work of Surg. Capt. Jal R. Patel *et al.,* carried out on rats and mice revealed that Liv.52 has clear-cut protective action on liver parenchyma against the toxic effects of carbon tetrachloride and ficus bengalensis. It prevented fatty infiltration and lessened congestion. The investigative study carried out by G.V. Joglekar *et al.,* on mice to compare the protective action of Liv.52, promethazine and chlorpromazine has shown that only Liv.52 could prevent the liver damage induced by carbon tetrachloride.

SUMMARY AND CONCLUSIONS

Liv.52 is an efficacious, economical as well as well-tolerated indigenous preparation with diuretic, aperient, hepatic, tonic, stomachic and choleretic actions. The experimental work carried out by Jal R. Patel *et al.*, Joglekar, *et al.,* has already established its non-specific but marked liver-protective action in mice and rat studies. The addition of Liv.52 to the conventional therapy increases the cure

rate from 1% to 21%. Considering the gratifying results obtained in clinical, histopathological and experiment studies, Liv.2 can be reckoned as a promising addition to today's therapeutic armamentarium against cirrhosis of liver.

Table III

Case No.	Age/Sex		Cause of Hepatopathy	Duration before Treatment (in days)	Initial palpability Liver/Spleen (Fingers)		Final palpability Liver/Spleen (Fingers)		Liver Biopsy Reports		Results
									Before institution of therapy	After	
1	2		3	4	5		6		7	8	9
1.	6 yrs.	M	Early Cirrhosis	50	Rt. 2½ Lt. 2 Firm +	Nil	Nil	Nil	Fatty infiltration Slight hyperplasia.	Marked Improvement	Cured.
2.	4 yrs.	M	Late Cirrhosis	120	Both 2½ Firm +++	Nil	Rt.1½ Lt.1	Nil	Fibrosis + + +. Disorganised liver pattern with necrotic changes	No damage.	Moderate relief
3.	6 yrs.	F	Intermediate stage Cirrhosis	100	Rt.1 Lt.3 Firm ++	Nil	Rt.Nil Lt.1	Nil	Fibrosis ++. Nodule formulation	Slight improvement	Marked relief
4.	7 yrs.	M	Late Cirrhosis	120	Both 2½ Firm + +	2	Both 1	Nil	Fibrosis + +. Disorganised liver pattern	No improvement	Moderate relief
5.	5 yrs.	M	Early Cirrhosis	80	Both 1 Firm +	Nil	Nil	Nil	Areas of fatty infiltration. Mild Cirrhotic change.	Marked improvement	Cured
6.	8 yrs.	M	Late Cirrhosis (from Infective Hepatitis)	120	Both 3	2	Both 1½	Nil	Fibrosis + +. Evidence of Hepatitis. Disorganised liver pattern. Necrobiotic changes in liver cells.	No improvement	Moderate relief.
7.	2 yrs.	M	Late Cirrhosis	90	Both 3 Firm +++	2	Both 2	3	Fibrosis ++. Disorganised liver pattern. Marked Necrobiotic changes in liver cells.	No improvement	No relief
8.	2½ yrs.	M	Early Cirrhosis	30	Both 2½ Firm +	Nil	Rt. Nil	Nil	Mild Cirrhotic changes	Marked improvement	Moderate relief
9.	4 yrs.	F	Early Cirrhosis (from Infective Hepatitis)	105	Both 1 Firm +	Nil	Nil	Nil	Slight Hyperplasia.	Normal	Cured.
10.	2 yrs.	M	Early Cirrhosis	70	Rt. 2 Lt. 3 Firm +	2	Nil	Nil	Areas of fatty infiltration. Congested portal canals.	Marked improvement	Cured.
11.	1½ yrs	M	Late Cirrhosis	60	4 both Firm ++	2	Rt. 4 Lt. 5	2	Marked fibrosis with irregular and disorganised liver pattern		Expired
12.	1 yr.	M	Intermediate State Cirrhosis	120	Rt. 2 Lt. 3 Firm +	1½	Nil	Nil	Mild Cirrhotic changes	Marked improvement	Cured.
13.	3 yrs.	M	Intermediate stage cirrhosis	120	Rt.2 Lt.3 Firm +	Nil	Rt. 1 Lt.1½	—	Fibrosis +. Areas of central necrosis. Cellular infiltration.	Fair improvement	Marked relief
14.	8 yrs.	M	Late Cirrhosis	120	Rt. 2 Lt. 4½ Firm ++	2 2	Rt. Nil Lt. 1½	Nil	Fibrosis with liver cell destruction. Fair increase in periportal connective tissue.	Fair improvement	Marked relief.
15.	7 yrs.	M	Intermediate stage cirrhosis	120	Rt. 1 Lt. 3½ Firm ++	Nil	Rt. Lt. 1½	Only edge	Fibrosis ++. Tendency to nodule formulation.	Slight improvement	Marked relief
16.	1 yr.	M	Late Cirrhosis	120	Both 3 Firm +++	2	Same	Same	Fibrosis ++. Disorganised liver pattern with Necrobiotic changes and mononuclear cell infiltration. Marked perilobular fibrosis.	No change.	No relief.

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