

Role of Liv.52 in Hepatomegaly associated with childhood tuberculosis (A clinico-histopathological study)

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INTRODUCTION

Hepatomegaly is a very common feature amongst children admitted in our hospital. In our country malnutrition and Indian Childhood Cirrhosis are two common causes of hepatomegaly. In chronic infections of the respiratory and gastrointestinal tracts, it is not infrequent to find enlargement of the liver, particularly during infancy and early childhood. However, in a number of cases hepatic enlargement is associated with childhood tuberculosis of varied manifestations.

In view of these probabilities and possibilities a study of liver biopsies seemed worthwhile. The cases in this study were in the paediatric age group and had different types of tuberculosis infection, with hepatomegaly. To elucidate the incidence and type of histopathological changes in the liver and to evaluate the therapeutic value of Liv.52 in such cases, the present study was conducted.

MATERIAL AND METHODS

Fifty infants and children in the age group of 6 months to 12 years, suffering from different types of tuberculosis infection admitted to the Hospital for Children of the Patna Medical College from February 1972 to February 1974 with hepatomegaly formed the material for study in this series. All the cases underwent thorough clinical check-up, routine investigations, a Mantoux test and skiagram of the chest. Investigations like gastric lavage, sputum examination, other radiological examinations, C.S.F. etc., were also done depending upon the individual needs of the case. Liver biopsy was performed by using the Vim-Silverman needle. Sections were stained with hematoxylin and eosin. Ziehl Neelsen staining was done in 10 cases. Lymph node biopsy was performed in all cases of cervical lymphadenopathy. After confirming the clinical diagnosis of tuberculosis by various routine investigations, liver biopsy was performed in every patient.

The patient were divided into two groups: Group A — Control (those who received streptomycin and Isonex along with other supportive therapy). Group B — Trial Group (Those who received streptomycin and Isonex plus Liv.52 along with other supportive therapy).

Detailed analysis of the patient's symptomatology was made and progress followed up at monthly intervals till the end of therapy. A comparison of the results observed in each group was then made.

Irrespective of the type of tuberculosis all patients in the trial group were put on the following regime of Liv.52 besides getting anti-tuberculous treatment in the usual dosage.

Upto 2 years	Liv.52 drops	— 10 drops twice a day
2 to 5 years	Liv.52 drops	— 10 drops three times a day
Above 5 years	One Tablet	— Four times a day

RESULTS AND OBSERVATION

	Distribution of cases. Total no. of cases	Control group	Trial group
Miliary T.B.	1	1	—
Intra-thoracic T.B.	20	10	10
Intra-abdominal T.B.	6	3	3
Tuberculosis meningitis	16	8	8
Tuberculous cervical adenitis	7	3	4
	50	25	25

Clinical diagnosis	Total no. of cases	0-1 yr.	2-4 yrs.	5-7 yrs.	8-12 yrs.
Miliary T.B.	1	—	1	—	—
Intra-thoracic T.B.	20	3	10	5	2
Intra-abdominal T.B.	6	—	3	2	1
Tuberculosis meningitis	16	4	8	3	1
Tuberculous cervical adenitis	7	—	4	3	—
	50	7	26	13	4

Highest incidence of hepatomegaly was seen in the 2 - 4 years age group whereas between the age groups of 8 - 12 years the liver was enlarged only in four cases.

Palpable in mid-clavicular line	No. of cases	Control group	Trial group
Upto 2 cm	6	2	4
3 - 4 cm	30	17	13
3 - 6 cm	14	6	8
Total	50	25	25

Histopathological changes were observed in the case of miliary tuberculosis, (85%) 17 cases out of 20 cases of intra-thoracic tuberculosis, 6 cases (37.5%) out of 16 cases of tuberculous meningitis, 2 cases (28.6%) out of 7 cases of tuberculous adenitis and 4 cases (66.7%) out of 6 cases of intra-abdominal tuberculosis. Specific changes were seen only in cases of miliary tuberculosis. Specific changes were seen only in cases of miliary tuberculosis, intra-thoracic tuberculosis and intra-abdominal tuberculosis, whereas suggestive lesions were seen in 5 cases of intra-thoracic and tuberculous meningitis and in one case of tuberculous adenitis. Non-specific changes were more marked in intra-thoracic tuberculosis, tuberculous meningitis and intra-abdominal tuberculosis. Fatty infiltration predominated in intra-abdominal tuberculosis in 4 out of 6 cases (66.7%).

DISCUSSION

Fifty cases suffering from different types of tuberculosis were included in the present study. The maximum number of cases belonged to the 2 - 4 years age group. This may be due to the fact that in this young age group symptoms are more explosive and necessitate medical attention.

The largest number of cases were from the intra-thoracic type of tuberculosis (40%) and next in order of frequency was tuberculous meningitis (32%). Miliary tuberculosis was seen in only one case in the present series.

The hepatic lesions studies were classified as:

1. Specific (granulomatous lesions)
 - (a) Caseous | 10%
 - (b) Non-caseous
2. Suggestive – Histiocytic nodules | 20%
3. Non-specific:
 - (a) Fatty infiltration | 32%
 - (b) Periportal fibrosis | 14%
 - (c) Cellular infiltration | 20%
 - (d) Focal necrosis | 4%
4. Normal Histology | 40%

Table IV: Showing incidence of histopathological changes in the liver in different types of tuberculosis

Types of tuberculosis	Total no. of cases	Specific								Non-Specific							
		Caseous granulomatous lesion		Non-caseous granulomatous lesion		Suggestive lesion Histiocytic nodule		Fatty infiltration		Periportal fibrosis		Cellular Infiltration		Focal necrosis		Normal Histology	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Miliary T.B.	1	–	–	1	100	–	–	–	–	–	–	–	–	–	–	–	–
Intra-thoracic tuberculosis	20	1	5	2	10	5	25	8	40	4	20	5	25	1	5	3	15
Tuberculous meningitis	16	–	–	–	–	4	25	2	12.5	3	18.7	4	25	1	6.2	10	62.5
Tuberculous cervical adenitis	7	–	–	–	–	1	14.2	2	28.5	–	–	–	–	–	–	5	71.4
Intra-abdominal tuberculosis	6	–	–	1	16.6	–	–	4	66.6	–	–	1	16.6	–	–	2	33.3
Total	50	1	5	4		10		16		7		10		2		20	

RESULTS

Liv.52 an indigenous drug was used in 25 cases with specific anti-tuberculous drugs and the remaining 25 cases were treated only with anti-tuberculous drugs along with other supportive therapy. Out of the total of 50 cases taken for study, 2 cases belonging to the control group and one in the trial group, expired during the course of treatment. A detailed follow-up was carried out in the remaining cases, for a period of one year. A critical analysis of the results obtained in this study suggests that marked regression in the size of the liver occurred after 2 - 3 months of treatment with conventional anti-tuberculous drugs combined with Liv.52, whereas it took 5 - 6 months time to bring about comparable regression in the size of the liver in the control group which received usual anti-tuberculous treatment without Liv.52. Besides, 25 cases in the trial series had early weight gain with improvement in appetite as compared to the group treated only with anti-tubercular drugs.

It would therefore appear that besides its known efficacy in infective hepatitis and early cirrhosis, Liv.52 also plays a definite supporting role in cases of hepatomegaly associated with childhood tuberculosis in its different clinical forms.