ORIGINAL RESEARCH PAPER

Volume-8 | Issue-6 | June-2019 | PRINT ISSN No. 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

STUDY OF INCIDENCE AND VARIOUS CAUSES OF NON-ALCOHOLIC CIRRHOSIS IN ADULT AND CHILDREN OF U.P. CENTRAL REGION.

Medicine

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ABSTRACT

Introduction: Cirrhosis of liver has multifactorial etiology Himsworth described cirrhosis of the liver as "Diffuse hepatic fibrosis and post necrotic scarring of the liver as "Diffuse hepatic fibrosis and post necrotic scarring with nodular hyperplasia". These have some relation to etiology, pathology and prognosis of cirrhosis of liver. Cirrhosis is defined anatomically as a diffuse process with fibrosis and nodular regeneration which follows hepatocellular necrosis. Although causes are many the end result is same (Anthony et al 1977). Cirrhosis of liver is said to be an irreversible condition but the process can be arrested, if the etiological factors are eliminated in many of the cases.

Material and Methods: The study was conducted on those patients who were admitted to in-patient Medical Wards of L.L.R. and Associated Hospials, Kanpur and presented clinically as well as biochemically as cirrhosis of liver. The patients were picked up from both pediatric as well as adult groups and from both sexes.

Result & Discussion : The present study showed that cirrhosis of liver is common problem in Kanpur. 61 patients were admitted in the Medical Wards of L.L.R. and Associated Hospitals, Kanpur, during period of one year from August 1989 to July 1990. The incidence of alcoholic cirrhosis was 18.03% i.e. only amonqQgst 11 patients. The remaining 50 patients were of non-alcoholic cirrhosis (81.97%). In the present study, 62% patients were in the age group 31 to 50 years with the mean age of 35.5 years. These were no patients in between the age of 3 to 10 years.

KEYWORDS

INTRODUCTION:

Cirrhosis of liver has multifactorial etiology Himsworth described cirrhosis of the liver as "Diffuse hepatic fibrosis and post necrotic scarring of the liver as "Diffuse hepatic fibrosis and post necrotic scarring with nodular hyperplasia". These have some relation to etiology, pathology and prognosis of cirrhosis of liver.Cirrhosis is defined anatomically as a diffuse process with fibrosis and nodular regeneration which follows hepatocellular necrosis. Although causes are many the end result is same (Anthony et al 1977). Cirrhosis of liver is said to be an irreversible condition but the process can be arrested, if the etiological factors are eliminated in many of the cases. An appraisal of these etiological factors and their influence on the course and prognosis is to be the central aspect of this study. This study is being undertaken to record various clinical presentations, etiological factors, course of disease, complications and prognosis of disease in the patients of non-alcoholic cirrhosis. Since Indian childhood cirrhosis is a major problem in India. Cases of Indian childhood cirrhosis have been also included in this study.

MATERIAL AND METHODS:

The study was conducted on those patients who were admitted to in-patient Medical Wards of L.L.R. and Associated Hospials, Kanpur and presented clinically as well as biochemically as cirrhosis of liver. The patients were picked up from both pediatric as well as adult groups and from both sexes. This study was only conducted over the patients of "non-alcoholic cirrhosis". The patients who had any one criteria to diagnose him as a case of "Alcoholic Cirrhosis" had been excluded from the study.

Criteria for Alcoholic Cirrhosis are -

1- Person taking more than 140 ml of pure alcohol daily for over 10 years **(Nakamutra T. et al 1959).**
2- S.G.O.T./S.G.P.T. ratio more than one and S.G.P.T. will be equal or less than 300 IU/L **(Ralphs et al 1982).**
3. On the basis of histological criteria of alcoholic cirrhosis, if liver biopsy is possible.

Diagnostic features of alcoholic cirrhosis; of the liver on histopathology are -

(i) Presence of centrilobular alcoholic hyaline body.
(ii) Large droplet steatosis.
(iii) Relative integrity of portal tract.
(iv) Pericellular fibrosis.
(v) Hypocellularcentri-portal bridging.
(vi) Fat deposition with or without granulomatous reactior in the portal tract Popper, H.(1977).

The patients of non-alcoholic cirrhosis were subjected to detailed history, physical examination, and biochemical investigations, as mentioned in the working proforma.

The patients were grouped socially into three categories:
Group A [Lower Class] includes beggars and labourers - where caloric intake is inadequate and person could not afford first class protein.

Group B [Middle Class] - factory labourers, cultivators, and clerks, school teachers - protein intake is just sufficient.

Group C [Upper Class] - high officials end businessmen - whose diet was adequate in all respects.

On physical examination special consideration was given to the nutritional status, pulse character and rate, blood pressure, jaundice, anaemia, finger clubbing, cyanosis, pedal oedema, vascular spiders, 'palmar erythema, gynaecomastia , testicular atrophy, atrophy of breast, distribution of body hair dupuytren s contracture.

Routine and Biochemical Investigations -

1-Complete haemogram. 2- Blood sugar - Fasting and post prandial. 3- L .F .T . - Serum bilirubin , S .G .0 .T . , S.G.P.T . and serum alkaline phosphatase. 4- Serum proteins - Total and differential. 5- Serum creatinine . 6- Urine for bile salts and bile pigments.

7-Stool for ova cysts and occult blood. 8- Ascitic fluid - was examined for its colour, presence of coagulum, Xanthechromia, protein and sugar and number of cells, nature of cells and if any doubt of malignancy, pappanicolao's staining was done especially in haemorrhagic ascites. 9- X-ray chest P.A. view.

Special Investigations: The special investigations include :
1- Liver biopsy. 2- Australia Antigen (HBsAg). 3- Upper G.I. endoscopy

OBSERVATION & RESULT:

Hospitals number of patients of... cirrhosis of liver admitted in Medical Wards of L.L.R . and Associated Hospitals, Kanpur during the period of one year from August 1989 to July 1990 were 61. 11 patients have not been included in this study because they followed criteria of alcoholic cirrhosis. Rest fifty patients of "non-alcoholic cirrhosis" were included in this study.

Table – 1 : Showing the percentage of alcoholic and non-alcoholic cirrhosis the liver

Total number of patients of cirrhosis	Number of alcoholic	%	No.of patients of Non Alcoholic	%
61	11	18.03	50	81.97

Table – 2 : Showing the incidence of patients of non-alcoholic cirrhosis in different age group.

Age Group	No. Of Patients	%
0-10	3	6.0%
11-20	2	4.0%
21-30	5	10.0%
31-40	11	23.0%
41-50	20	40.0%
51-60	3	6.0%
Above 60	6	12.0%

SEX - Out of 50 patients 39 patients (78%) were males and 11 patients (22%) were females. The male female ratio was 3.5:1.

Table – 3: Showing distribution of patients of non-alcoholic cirrhosis in various groups of socio-economic status.

Socioeconomic status	NO. of Patients	%
Upper Class	3	6.0%
Middle Class	17	34.0%
Lower Class	30	60.0%

Table – 4: Showing, common presenting symptoms in patients of non-alcoholic cirrhosis of liver.

Symptoms	No. of Patients	%
Distension of abdomen	44	88%
Anorexia and flatulent dyspepsia	44	88%
Swelling of the legs	40	80%
Weakness and weight loss	19	38%
Haematemesis	18	36%
Melaena	15	30%
Yellow colouration of sclera and urine	14	28%
Hepatic precoma or hepatic coma	7	14%
Bleeding piles	2	4%

Table – 5: Showing significant chronic past illness in patients of non-alcoholic cirrhosis .

Signs	**No. Of patients**	**%**
Ascites	44	88%
Splenomegaly	27	54%
Hepatomegaly	29	58%
Enlarged superficial veins of abdomen	23	46%
Hepato-splenomegaly	14	28%
Jaundice	14	28%
Encephalopathy	07	14%
Gynacomastia	05	10%
Clubbing	03	6%
Testicular atrophy	03	06%
Other signs of hepato-cellular failure like palmer erythema, vascular spiders, white nails	-	-

Table – 6: Showing significant chronic past illness in patients of non-alcoholic cirrhosis of liver.

Disease	No. of patients	%
History of infective hepatitis	15	30%
Repeated attacks of fever with chills and rigor	08	16%
Chronic diarrhea	08	16%
Pulmonary tuberculosis	08	16%
History of contact with jaundice patients	06	12%
Intestinal by-pass surgery	02	04%
Chronic exposure to hepatotoxic drug	00	0%
History of syphilis	00	0%

DISCUSSION:

The present study showed that cirrhosis of liver is common problem in Kanpur. 61 patients were admitted in the Medical Wards of L.L.R. and Associated Hospitals, Kanpur, during period of one year from August 1989 to July 1990. The incidence of alcoholic cirrhosis was 18.03% i.e. only amonqQgst 11 patients. The remaining 50 patients were of non-alcoholic cirrhosis (81.97%).

Our present series of study is similar to the observation in other parts of the India. Sherlock (1985) reported 65% patients of cirrhosis of liver in U.S.A. related to alcoholism. Stone et al (1967) reported that incidence of alcoholic cirrhosis in Britain was 33.3%. Probably, affluent society and habit of alcohol intake are reasons behind it.

Our present series of study is similar to the observations other parts of the India. **Bhattacharyya** (1957) reported, 21% reported incidence of alcoholic the cirrhosis in Assam. In Uttar Pradesh the incidence of chronic intake of alcohol is quite low, only 3.6% as reported by **Misra et al (1963).** The higher incidence of alcoholic cirrhosis in Kanpur is probably due to majority of labourers population> who are more used to alcohol intake. The Lucknow study was based on large number of patients over a two year period while present study was based only on 61 patients admitted in the inpatients of hospital during one year.

In the present study, 62% patients were in the age group 31 to 50 years with the mean age of 35.5 years. These were no patients in between the age of 3 to 10 years. This observationis similar to the observation made by the previous workers **(Bhatia et al 1961 and Visitannatb 1973)**.

Regarding the sex distribution, 78% of patients were males and 22% of patients were females. Male and female ratio is 3.5:1 while **Misra et al (1963)** reported 3:1 ratio of male and female patients **Kasliwal et al (1963)** reported an incidence of 60% of male patients and 40% of female patients.

This observation is quite similar to the observation of **Bhatia et a/ (1961)** in respect of S.G.O.T. and S.G.P.T. and **Stone et al (1967)** in respect of serum alkaline phosphatase, but serum bilirubin values in the present study are quite low than the observations of **Stone et al (1967)** and **Wroblewski et al (1958)** and probable reason behind this was that most of our patients were non-icteric during study. Therefore the serum b ilirubin level was not much raised .

In 7 patients S .G .0 . T . and S.G.P.T. ratio was more than one, probably because in all these patients disease was in more chronic stage. S.G.O.T. is a better index of chronicity than S.G.P.T., and raised S.G.P.T. indicates secondary relapse of the disease as stated by **Wroblewski et al (1958).** As a complication portal hypertension was obnserved in 84% of patients. This observation was similar to the observation of previous workers **(Lorger et al 1960, Konar et al 1957, Gupta et al 1974).**

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