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Incidentally Discovered Liver Diseases- An Autopsy Study of Fifty Cases

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Abstract: ***Liver is the site of many diseases, many of which become symptomatic while some are diagnosed only on autopsy. Involvement of liver is secondary to cardiac, metabolic and social problems like alcoholism. In this autopsy study of fifty cases of liver specimens, fatty change, venous congestion, cirrhosis of liver, neoplasm and hepatitis are reported; Chronic venous congestion being the predominant finding.***

Key words: Liver, alcohol, cirrhosis, Autopsy, Fatty change

1. Introduction

Liver is vulnerable to a wide variety of metabolic, toxic, microbial and circulatory insults. In some instances, the disease is primary while in others the hepatic involvement is secondary to cardiac de-compensation, alcoholism or extrahepatic infections. Quite rightly liver is, called as "The custodian of milieu interior" Autopsy study is useful to monitor the cause of death and to plan medical strategy (1). Abnormal findings in liver autopsy can be fatty change, hepar lobatum, glycogen storage disease, acute phosphorus poisoning, hemosiderosis, syphilis, actinomycosis, infarcts, cloudy swelling, tuberculosis, acute passive hyperemia, chronic passive hyperemia, amyloidosis, abscess, hydatid cyst, malignancy, cirrhosis and acute yellow atrophy (2). Alcohol abuse generally leads to three pathologically distinct liver diseases; these are fatty liver, hepatitis and alcoholic cirrhosis. Any one or all the three can occur at the same time, in the same patient (3).

2. Materials and Methods

Fifty specimens of liver of the deceased 16-60 years of age, received in the Department of Pathology, Government Medical College Chengalpattu, were examined grossly as well as microscopically. Postmortems being done in our institution is usually, cases of road / railway accidents, burns, drowning and poisoning. Liver specimens were received either as a part of examination of multiple viscera, or only liver was taken out from the dead body from mortuary for pathological examination. Moderate to marked autolytic changes seen in the specimens as they are brought by the police & reach Pathology Department / histopathology laboratory quite late.

3. Results

37 specimens were from males and 13 from female deceased. Causes of death were RTA 35, poisoning 5, hanging 3, suspicious death 1, Myocardial infarction 2, drowning 2,burns 1 and 1 in railway while causes of death did not show any correlation with silent liver diseases26 (maximum number) livers weighed between 1500 to 2500 grams, followed by 16 normal-weight-livers, and 8 were less than 1000 grams; (Table 1).

Table 1: Liver weight and sex distribution

Liver wt in gms	*Male*	*Female*	*Total*
< 1000	8	0	8
1000-1500	6	10	16
1500-2500	23	3	26
Total	37	13	50

Observation were recorded from liver specimen by gross examination based on the colour and its cut surface; yellow green 8, yellow brown 10, red brown 13, focal spongy 3 and normal liver 16 (Table 2) and under microscopic examination were majority of the cases had Congestion 26% (Table 3), followed by Normal liver 22% Fatty changes 20%(Figure 1), Cirrhosis 16% (Figure 2), Hepatitis 10% and Benign tumour 6%.

Table 2: Gross findings

Size	Weight	Colour	Consistency	Cut surface	No	%
Reduced	<1000	Yellow green	Firm	Nodular	8	16%
Normal	1000-1500	Normal	Soft	Smooth	16	32%
Increased	1500-2500	Red brown	Soft	Nutmeg	13	26%
	1500-2500	Yellow brown	Soft	Greasy	10	20%
	1500-2500	Normal	Soft	Focal spongy grey brown areas	3	6%

Among 50 cases males are most commonly affected by liver disease (Table 3).

Table 3: Histopathological findings

Histopathology	*Male*	*Female*	*Number of cases*	*%*
Normal	8	4	11	22%
Fatty change	7	3	10	20%
Hepatitis	4	1	5	10%
Chronic venous congestion	9	4	13	26%
Cirrhosis	8	0	8	16%
Hemangioma	2	1	3	6%

The age group for affected individuals are 4th to 6th decade (Table 4 & 5).

Table 4: Cases of cirrhosis

Age	*Male*	*Female*	*Total*	*%*
51-60	4	-	4	8%
41-50	3	-	3	6%
31-40	1	-	1	2%
21-30	-	-	-	-
11-20	-	-	-	-

Table 5: Cases of fatty change

Age	*Male*	*Female*	*Total*	*%*
51-60	4	2	6	12%
41-50	2	1	3	6%
31-40	1	-	1	2%
21-30	-	-	-	-
11-20	-	-	-	-

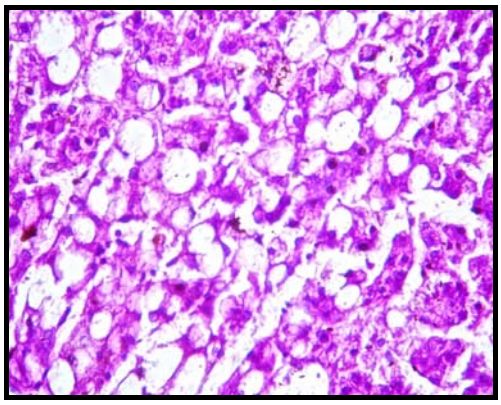

Figure 1: Fatty Change H &E

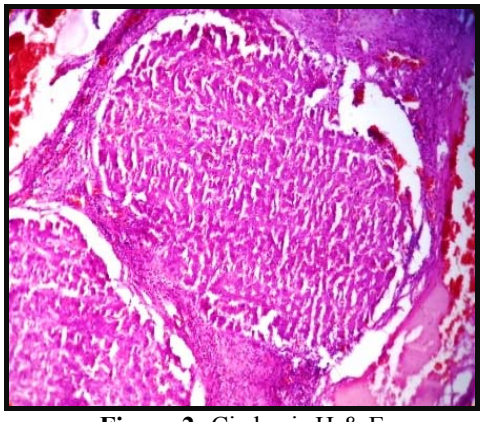

Figure 2: Cirrhosis H & E

4. Discussion

Histopathological study is an important value in improving the knowledge and diagnostic setup for clinical assessment. In this prospective study we found that liver diseases are one of the common diseases in the population of around Chengalpattu, Tamil Nadu. In this study, incidences were higher in 4th & 6th decades of life. Of 50 cases, Males were 37 & Females were 13 cases similar to Akhilesh Pathak & Mangal H.M (4), observed age & sex wise distribution of cases shows that the incidences were higher in 4th to 6th decades of life. Men were more prone to death by diseases 74% as compared to women 26% the reason being that as men were bread earners and women usually doing household work, which makes the men more alcohol consumption was reported in majority of the cases in male population, vulnerable to exposing risk factor on their respective occupation. Also men more indulge themselves in smoking and alcoholism etc. The state government trading alcohol more than a decade since lifted the prohibition in the year of 1973. So the people of lower and middle class more frequently consuming the alcohol for past 30 years.The male Population consuming alcohol increased in the recent years.

Regular intake of alcohol between 40-80 gm increases the liver weight and frequency of fatty change liver (Savolai 1993). One study in Iran (2006) 945 cases were assessed; forty nine cases were excluded due to autolysis. Out of 896 cases 777 (86.7%) cases were male and 119 (13.2%) female with mean age of 43.8 ± 19.7 years. Most of the cases were reported by RTA35% as causes of deaths and microscopic examination fatty changes 31.6% normal findings 52.1% hepatitis 5%, male gender was predominant, asymptomatic fatty liver might be the most common silent liver disease among the general population in Tehran, Iran (5). Shakoori reviewed the report of histology of 4025 liver specimens during a 5- year period; he found a 6.8% prevalence rate of chronic hepatitis (6). There are two studies were conducted by Shiratori et al., Poovorawn et al. found hepatitis was predominant in Japan and other Asian countries (7),(8). Ratziu V et al.; Kochar N et al. and Azimi K et al. (9),(10) found that cases are developed significant fibrosis, cirrhosis and hepatocellular carcinoma on follow-up and viral hepatitis is the most common cause of cirrhosis in Iran (11). 200 fold increased in risk factor for hepatocellular carcinoma by adulthood (12) and molecular origin of hepatocellular carcinoma remain unclear (13). Bal M.S, et al. (14) study was conducted in Patiala (Punjab) observed that out of 100 cases of liver specimens fatty liver 39%, normal 30%, cirrhosis 14%, congestion 9%, hepatitis and malignancy each 3% and chronic abscess 2%; male were predominate 83% and female 17%; fatty liver seen between 41- 60 years of age.

5. Conclusion

From this study, the most common findings were chronic venous congestion followed by fatty change were more prone in age of 40–60 years and starts with 40 years of age due to chronic consumption of alcohol in the Population around chengalpattu, Tamil Nadu. Incidence of common silent liver diseases is common in this study. The incidence of liver diseases is more in males as compared to females.

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