



HISTOPATHOLOGICAL EVALUATION OF AUTOPSY SPECIMENS OF LIVER IN A TERTIARY CARE CENTRE IN NORTH INDIA

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ABSTRACT

Aim/Objectives: To determine the prevalence and spectrum of various pathological lesions encountered in autopsy specimens of liver.

Material and Methods: This retrospective study was carried out in the Department of Pathology over a period of one year. Autopsy specimens preserved in formalin were examined and microscopic findings were recorded in detail.

Results: Majority of patients were males. Autolysed tissue was seen in 2.5% cases. The most common pathology found in our study was Chronic venous congestion (34.6%) followed by steatosis (24.4%) and cirrhosis (12.8%). Portal Triaditis and Hepatitis were seen in 11.5% and 7.2% cases respectively. No obvious pathology was seen in 7.7% cases.

Conclusions: Histopathology examination of liver tissue is helpful in evaluation of underlying disease pathology, especially silent diseases such as Steatosis, Cirrhosis, Hemangioma and Malignant tumours.

KEYWORDS : Histopathology; Autopsy; Liver; Steatosis

Introduction:

An important role of pathologist is to study the disease process leading to death and to determine the cause of death. Examination of the body cavities forms an essential part of autopsies. Autopsy is followed by pathological examination of tissues from various organs. The tissues need preservation in fixatives such as formalin and if proper preservation is not performed, final histopathological report is often not possible. Despite pitfalls like delays in carrying out autopsies, improper sampling, improper preservation and transport, microscopy of tissues is still considered a very useful method to study the disease process in situ [1].

Liver is susceptible to a wide variety of metabolic, toxic, microbial and circulatory insults [2]. In some cases, the disease process is primary while in others, hepatic involvement is secondary to cardiac decompensation, alcoholism or extrahepatic infections [2]. Abnormal findings in liver can be congenital malformation, fatty change, hepatitis, cirrhosis, biliary cirrhosis, storage diseases, acute phosphorus poisoning, hemosiderosis, syphilis, actinomycosis, infarcts, cloudy swelling, tuberculosis, acute passive hyperemia, chronic passive hyperemia, amyloidosis, abscesses, hydatid cyst and primary or secondary malignancy [3]. These diseases may be seen as "silent liver disease" in the histological findings during autopsy.

Determination of the prevalence of silent liver diseases has become an important ongoing research. The study describes the prevalence and pattern of liver diseases in medicolegal autopsies on histopathological examination.

Material and Methods:

This retrospective study was performed in tertiary care centre in north India over a period of one year from January to December 2016. Liver Specimens from medicolegal cases sent to the department of pathology for histopathological examination during that period were included. After recording proper history, gross examination of the liver specimen was done as regards the weight, surface, capsule, colour, consistency, etc. Formalin fixed liver tissues were processed, 4 to 5 micron thickness sections were taken and stained with Haematoxylin and Eosin stain and examined microscopically. Special staining was also done wherever required. The findings were tabulated in detail.

Results:

80 cases formed the material of the study. Majority of the cases were seen in 5th decade. (Table 1). Most of the cases were males with male to female ratio of 4.7:1 (Table 1). Autolysed tissue was seen in 2.5 % cases.

On histopathological examination, normal liver histology was seen in 7.7% cases (6/78). Among cases with significant findings, chronic venous congestion was the commonest findings seen in 34.6 % cases followed by steatosis (24.4%) (Table 2). Cirrhosis was seen in 12.8% cases while portal triaditis and hepatitis were seen in 8.9% and 7.7 %

cases respectively (Table 2). Majority of the cases with steatosis and cirrhosis were seen in 5th decade (Table 3). Single case of hemangioma was also seen in our study.

Discussion:

Medicolegal autopsies are mandatory legal requirement in non natural deaths to assist the law. Autopsy is the most useful way to determine the conditions of internal organs of the body. Besides evaluating clinico-pathological variation, autopsy has a significant role in the development of new understanding about old diseases and provides opportunity to discover new diseases.

In our study, out of 80 cases, 66 were males (82.5%) and 14 females (17.5%), which is similar to the findings of Devi PM et al [4], Alagarsamy J et al [5] and Selvi RT et al [6]. This predominance of liver diseases in males may be attributed to the fact that alcohol consumption and smoking are commoner in males than females.

Chronic Venous congestion of liver is terminal end stage of the death and in our study chronic hepatic congestion was the commonest finding seen in 28 cases (34.6%) followed by hepatic steatosis (24.4%). Alagarsamy J et al [5] and Sameer MA et al [7] also reported chronic congestion as the commonest finding whereas Bal MS et al [2] reported fatty liver as the commonest finding in their study. Cirrhosis was seen in 12.8% cases in our study similar to Alagarsamy J et al [5] and Choudhury S et al [8].

In our study, Fatty liver and cirrhosis were commonest in 5th decade of life similar to previous studies [5,6]. However Alagarsamy J et al [5] and Selvi RT et al [6] observed fatty liver and cirrhosis mostly in 6th decade. High incidence of cirrhosis and fatty liver in slightly younger age group as compared to other studies may be explained by the fact that indulgence into alcohol consumption or higher incidence of viral hepatitis is seen at younger age in our area, progressing to cirrhosis.

Portal triaditis was seen in 11.5% cases in our study while hepatitis was seen in 7.7 % cases. Our results show slightly lower prevalence of these lesions similar as compared to previous studies [4,6]. Normal hepatic pathology was seen in 6 cases while single case of hemangioma was also seen.

Conclusions:

It is concluded from our study that steatosis, cirrhosis and chronic hepatitis are fairly common liver diseases in India. Silent liver diseases are very common amongst the apparently healthy individuals and if not detected early some of these conditions may lead to serious outcomes. So necessary steps need to be taken for their early detection and treatment. Autopsy findings in concurrence with other methods and investigative techniques are as valuable today as it was centuries ago, both in daily practice as well as for scientific endeavour.

Conflicts of Interest: Nil

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Tables:

Table 1: Age and Sex Distribution (N=80)

Age Group	Number	Number of Males	Number of Females
11-20	1	1	-
21-30	7	6	1
31-40	20	16	4
41-50	32	26	6
51-60	15	12	3
61-70	4	4	-
>70	1	1	-
Total	80	66	14

Table 2: Spectrum of Histopathological Findings (N=78)

Microscopic Findings	Number	Number of Males	Number of Females
Chronic Congestion	27	24	3
Fatty Liver	19	16	3
Cirrhosis	10	8	2
Portal Triaditis	9	7	2
Hepatitis	6	5	1
Normal	6	4	2
Hemangioma	1	-	1
Total	78	64	14

Table 3: Age Distribution in Fatty Liver and Cirrhosis

Age Group	Number	Fatty Liver	Cirrhosis
11-20	-	-	-
21-30	-	2	-
31-40	6	5	1
41-50	15	8	7
51-60	4	3	1
61-70	2	1	1
Total	29	19	10

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