HISTOPATHOLOGICAL PROFILE OF LIVER LESIONS IN AUTOPSY EXAMINATION- A HOSPITAL-BASED STUDY
Ratan Konjengbam1, Anupama Devi Khuraijam2, Jaya Ningthoujam3, Kaushik Debnath4

1Associate Professor, Department of Pathology, Regional Institute of Medical Sciences, Imphal.
2Postgraduate Trainee, Department of Pathology, Regional Institute of Medical Sciences, Imphal.
3Postgraduate Trainee, Department of Pathology, Regional Institute of Medical Sciences, Imphal.
4Professor, Department of Pathology, Regional Institute of Medical Sciences, Imphal.

ABSTRACT

BACKGROUND
Liver is the main site of various primary and secondary diseases including variety of external agents. Most of the chronic liver diseases remained asymptomatic even in the late stage. In apparently healthy persons, many liver lesions are detected incidentally following a postmortem examination.

MATERIALS AND METHODS
The present study was done for a period of 5 years in a tertiary hospital to evaluate the histopathological profile of liver specimen in autopsy examination. Haematoxylin and Eosin sections of liver specimen were studied. A total of 352 samples were evaluated with male predominates the female sex in the ratio of 5.2:1.

RESULTS
The most common lesion was fatty liver (19%) followed by cirrhosis (11.8%), venous congestion (11.5%), portal triaditis (10.9%), chronic hepatitis (6.2%), granulomatous hepatitis (2.1%), autolysis (16%) and others (0.96%). Liver finding was normal in 14% of the cases.

CONCLUSION
Silent liver diseases are a quite regular finding in autopsy cases and thereby may implicate a common occurrence in general population. Autopsy examination of liver is a must for detection of silent liver diseases like fatty change, cirrhosis and chronic hepatitis.

KEYWORDS
Liver, Histopathology, Autopsy, Fatty Changes, Cirrhosis.

MATERIALS AND METHODS
A retrospective descriptive study was done for a period of 5 years from 2011 to 2016 in the Department of Pathology and Forensic Medicine, RIMS, Imphal. Haematoxylin and Eosin sections of autopsy liver specimen were studied and special staining was done when required. A total of 352 liver samples were evaluated for the study.

RESULTS AND OBSERVATION
A total of 352 liver specimens were studied. Male predominated female sex in the ratio of 5.2:1. The age ranges from infant to 70 years. The commonest liver lesion was fatty liver (19%) and it was most commonly found in the age group 20-40 years (52%) followed by 30% in 41-60 age group. The second commonest lesion was cirrhosis of liver (11.8%), common in age group 35-45 years (57%) and 28.5% in 46-55 years age group. Other liver lesions were venous congestion (11.5%), portal triaditis (10.9%), chronic hepatitis (6.2%), granulomatous hepatitis (2.1%), autolysis (16%) and others (0.96%). Liver finding was normal in 14% of the cases.

Table 1. Distribution of Liver Lesion in % Wise

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Liver Lesions</th>
<th>No. of Cases (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Fatty liver</td>
<td>19</td>
</tr>
<tr>
<td>2.</td>
<td>Cirrhosis</td>
<td>11.8</td>
</tr>
<tr>
<td>3.</td>
<td>Hepatitis</td>
<td>6.2</td>
</tr>
<tr>
<td>4.</td>
<td>Venous congestion</td>
<td>11.5</td>
</tr>
<tr>
<td>5.</td>
<td>Steatohepatitis</td>
<td>3.5</td>
</tr>
<tr>
<td>6.</td>
<td>Granuloma</td>
<td>2.1</td>
</tr>
<tr>
<td>7.</td>
<td>Portal triaditis</td>
<td>10.9</td>
</tr>
<tr>
<td>8.</td>
<td>Cholestasis</td>
<td>3.2</td>
</tr>
<tr>
<td>9.</td>
<td>Coag. necrosis</td>
<td>0.28</td>
</tr>
<tr>
<td>10.</td>
<td>Hepatic necrosis</td>
<td>0.56</td>
</tr>
<tr>
<td>11.</td>
<td>Normal</td>
<td>14</td>
</tr>
<tr>
<td>12.</td>
<td>Autolysis</td>
<td>16</td>
</tr>
<tr>
<td>13.</td>
<td>Hamartoma, submassive necrosis, metastasis</td>
<td>0.96</td>
</tr>
</tbody>
</table>

Table 2. Distribution of Fatty Liver Changes by Age

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Age Group (Yrs.)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>&lt;20</td>
<td>10%</td>
</tr>
<tr>
<td>2.</td>
<td>20-40</td>
<td>52%</td>
</tr>
<tr>
<td>3.</td>
<td>41-60</td>
<td>30%</td>
</tr>
<tr>
<td>4.</td>
<td>&gt;60</td>
<td>8%</td>
</tr>
</tbody>
</table>

DISCUSSION
Chronic liver diseases as some may remain silent and diagnosed only at the time of autopsy. Histopathology is the most important and useful way of diagnosing these silent liver lesions. The importance of silent liver disease cannot be over emphasised in the overall perspective of pathology and clinical medicine.

The present study have shown that fatty liver (19% of cases) is the most common silent liver disease. Alcohol consumption is major causative factor for developing fatty change. Regular intake of alcohol between 40-80 grams increases the liver weight, frequency of fatty change and cirrhosis. Consumption of junk foods and sedentary habit maybe other significant agents. In other study, Patel PR et al found similar finding, commonest being fatty liver (35.69%) cases followed by cirrhosis of liver (2.44%) cases. Fatty change was more common in age group of 50-70 years of age as reported by Thamil RS et al. But, in our present study, age group of 20-40 years showed higher cases of fatty change, which comprised 52%. Alcohol and junk food consumption are high in this age group.

In the study by Devi PM et al,6 cirrhosis was the commonest finding comprising 25% of the cases followed by chronic hepatitis 22%. Cirrhosis in our study was found in 11.8% of cases. It was more common in 35 to 45 years of age group comprising of 57%. Bal MS et al7 from Patiala showed 14% cases having cirrhosis, which was slightly higher than the present study. Liver cirrhosis was coincidentally diagnosed in 13.5-40% of patients at autopsy by Iwamura K and Inaba R.8 Bethke BA and Schubert GE9 showed that in a fifty-year autopsy series on 22000 cases, 0.4-7.2% of cases had cirrhosis.

Chronic hepatitis was found in 6.2% of our present study and commonly in young adults. In our study, hepatitis viral serology was not performed. In the study by Saha MK et al,10 they found a high prevalence of hepatitis C virus infection (HCV=92%) and hepatitis B virus infection (HBV=100%) among Manipuri couples whose husbands were intravenous drug users and HIV positive. Similarly, Ray G et al11 also found HBV to be the commonest cause of chronic liver disease in eastern India. Thamil SR reported 13.9% of cases having hepatitis, while in study of Bal MS, hepatitis was found in 3% cases.

Venous congestion (11.5% cases in our study) of liver is terminal end stage following death and is seen in most of the liver autopsies. Copeland et al12 reported congestion with fatty change in 3.4% of liver autopsies of alcoholics who died suddenly and Bal MS reported congestion with fatty change in 9% of cases.

In this study, portal triaditis was found in 10.9% of the cases. Tassaduq I et al13 in their study of liver pathology that nonspecific portal inflammation was the commonest finding accounting for 65% of the cases, which was much higher than our present study. As details about the history of drug intake could not be obtained from the cases in the present study, there is a possibility that the portal inflammation could be the result of intake of certain drugs like antitubercular drugs especially rifampicin. Rakha EA et al14 in their study observed that both alcoholic fatty liver disease and nonalcoholic fatty liver disease have portal inflammation, which were a common histologic finding and could also be an another probable cause.

In the study by Cunnigham D et al,15 they have detected granuloma in 2-10% of liver biopsies in large series. Similarly, higher incidence of granulomas (42%) was...
observed by Amarapurkar A and Agarwal V. Granulomas are found in virtually all patients with disseminated tuberculosis. Granulomas found in 2.1% of cases in our study and their existence will capture the attention of pathologists and clinicians. However, Sotoudehmanesh R et al. observed granulomatous hepatitis in only 0.2%, which was lower as compared to our study.

Autolysis was found in 16% of cases in the present study and could not come to any form of diagnosis (excluded). In the study, liver finding was normal in 14% of cases. In summary, asymptomatic fatty liver might be the most common silent liver disease among the general population of this region followed by cirrhosis of liver, chronic venous congestion and hepatitis.

CONCLUSION
In clinical practice, diagnostic liver biopsy is only performed for highly selected patients. Therefore, cannot reflect the true prevalence of silent liver diseases in the general population. Autopsies are certainly better sources for determination and are more reliable. Silent liver diseases are a frequent finding in autopsy examination and they should seriously be considered as an important threat to the health of the general population. Autopsy examination of liver is a must for detection of silent liver diseases like fatty change, cirrhosis and chronic hepatitis.

REFERENCES