



INCIDENTAL HISTOMORPHOLOGICAL CHANGES OF LIVER IN AUTOPSY CASES

Pathology

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ABSTRACT

Background: Liver is the most vulnerable and major organ in our body facing wide variety of insults like metabolic, toxic, microbial and circulatory disturbances. In India there are many deaths without a proper diagnosis. Many diseases are often undiagnosed that may not directly be a reason behind the death or may be an associated finding of the principal cause of the death. Liver is the principal organ of body where various metabolic processes occur. So it reflects wide variety of metabolic, toxic, microbial, circulatory and neoplastic insults that may not be directly related to the death.

Aim of the study: To identify the spectrum of incidental histomorphological features in liver in autopsy cases in relation to different demographic characteristics.

Materials and Methods: The study was conducted in the department of Pathology and Forensic Medicine, R. G. Kar Medical College and Hospital, Kolkata with the Police Morgue attached to R. G. Kar Medical College over a period of 1 year (1st June, 2014- 31st May, 2015). 103 liver specimens were collected and after processing tissues were stained with H&E stain.

Results: Out of 103 specimens, 26 (25.24%) showed steatosis, followed by hepatitis 11 (10.68%) cases, steatohepatitis 9 (8.74%) cases, cirrhosis 7 (6.8%) cases, chronic venous congestion 8 (7.77%) cases, extra hepatic biliary atresia 1 (0.97%) case, granuloma 1 (0.97%) case and metastasis 1 (0.97%) case. 39 (37.86%) cases were normal. Maximum numbers of cases were seen in the age group 41-50 years. Liver diseases predominated in males.

Conclusion: This study reflects a spectrum of liver abnormalities silently present during lifetime in the population of this geographical location. This study has also highlighted the correlation of individual liver diseases with age, sex and gross morphological features and this may help in diagnosis and treatment of liver diseases in future.

KEYWORDS

Liver autopsy, Steatosis, Liver disease

INTRODUCTION

The importance of silent liver disease in the overall perspective of pathology and clinical medicine cannot be overemphasized. The enormous functional reserve of the liver masks the clinical impact of mild liver damage. With the rare exception of fulminant hepatic failure, liver disease is an insidious process in which clinical detection and symptoms of hepatic decompensation may occur weeks, months or many years after the onset of injury. That's why most of the chronic liver diseases even in advanced stages may not cause overt clinical signs and symptoms. Actual weight, gross morphological and microscopic findings of liver can be studied most accurately by medicolegal autopsy method which cannot be so accurate in other methods like imaging.

Autopsies are primarily carried out for determination of manner of death, evaluation of ante-mortem and post-mortem diagnosis, epidemiological purposes, survey outbreaks, audits, medical teaching purposes, forensic purposes and to enlighten or reassure families or inform them of hereditary diseases.¹ Different literatures revealed that 50% of autopsies produce findings unsuspected before death. In addition, the cases which give rise to discrepancies cannot be identified prior to autopsy. Over 20% of clinically unexpected autopsy findings, including 5% of major findings, can be correctly diagnosed only by histological examination.^{2,3} So, it can be said that the conventional autopsy still has an important role in modern medicine.

Alcohol abuse generally leads to the distinct pathological changes in liver, in which the most frequent hepatic lesions are fatty change, hepatitis and alcoholic cirrhosis. Person may have any one or all three at the same time.^{4,5} These diseases are presently the most common chronic liver disease problem in Western and developing countries like India.⁶ Apart from the major three liver diseases mentioned above, chronic venous congestion, abscess, malignancy, yellow atrophy, infarcts and cyst can be seen in the morphological findings.⁷

MATERIALS AND METHODS

A total of 103 Liver specimens received as a part of examination of multiple viscera, over a period of one year from 1st June 2014 to 31st May 2015 in the department of pathology, R.G.Kar Medical College, Kolkata were examined both grossly and microscopically. Sections from representative areas were taken and submitted for processing.

After processing tissues were sectioned and stained with H&E stain and special stains like reticulin, PAS and Pearl stains.

Different pathological findings of all cases were analyzed and expressed as frequencies and percentage.

RESULTS

Among the 103 cases 39 were found to have no pathology in their liver, while most common pathology was steatosis found in 26 cases (25.24%). It was followed by hepatitis (10.68%), steatohepatitis (8.74%), cirrhosis (6.80%) and CVC (7.77%). One cases each of EHBA, granuloma and metastasis were also found.

Among the 103 cases 72 were male while the rest 31 were female. Liver abnormalities were predominantly found in male subjects. Among the male subjects 46 (63.88%) were found to have pathology while 18 (58.06%) female found to have any abnormality.

The most number of cases were in between 41-60 years of age. Mean age of cirrhosis cases was 54.58 years, while mean age of hepatitis 49.64, steatohepatitis 47.89, cirrhosis 61.00 and CVC 49.75 years.

Histopathological diagnosis	Number of cases	Percentage (%)
Normal	39	37.86%
Steatosis	26	25.24%
Hepatitis	11	10.68%
Steatohepatitis	9	8.74%
Cirrhosis	7	6.80%
CVC	8	7.77%
EHBA	1	0.97%
Granuloma	1	0.97%
Metastasis	1	0.97%
Total	103	100%

Table 6.8: Table showing histopathological impressions of liver

Histopathological diagnosis	Male	Female	Total
Normal	27	12	39
Steatosis	19	7	26
Hepatitis	7	4	11
Steatohepatitis	6	3	9
Cirrhosis	6	1	7
CVC	6	2	8
EHBA	0	1	1
Granuloma	0	1	1
Metastasis	1	0	1
Total	72	31	103

Table 6.13: Table showing histopathological diagnoses according to gender

Age group	Number of cases	Percentage (%)
≤30 Yrs	10	9.71%
31-40 Yrs	21	20.39%
41-50 Yrs	27	26.21%
51-60 Yrs	24	23.30%
61-70 Yrs	18	17.48%
>70 Yrs	3	2.91%
Total	103	100%

DISCUSSION

In the present study total 64 cases were found to have pathology, among which 46 cases were male and 18 were female. So, in this study liver diseases predominates in males which is similar findings of B Kour et al (74.2%), Bal MS et al (83%) and Sotoudehmanesh R et al (86.7%).8,9,10

The present study showed that on microscopy steatosis (25.24%) was most common liver pathology. R. Bhagat et al found similar finding (32.5%).11

The second most common cause of liver disease was hepatitis (10.68%). S. Nibhoria et al found similar finding (12.98%).12

In the present study maximum number of cases were seen in the age group of 41-50 years (26.21%) which was similar finding in the study conducted by R. Bhagat et al.11

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