



SJMLS - 5 (2) - 008

Histopathological Spectrum of Hepatic Lesions on Autopsy at the Lagos State University Teaching Hospital, Ikeja, Nigeria.

Anibor, E. *, Soeze, A.M., Ugbaja E.S.

Department of Human Anatomy and Cell Biology, Faculty of Basic Medical Sciences, Delta State University, Abraka, Nigeria.

Author for Correspondence: +234- 818-040-4966/+234- 813-1617679/eseovo2000@yahoo.com

Abstract

Liver lesions confirmed on autopsy include hepatitis, fatty change, cirrhosis and portal traditis. The target of this inquiry is to establish the spectrum of histopathological findings of the liver at autopsy as seen at the Lagos State University Teaching Hospital (LASUTH), Ikeja, Lagos State in Nigeria. This is a cross sectional review of 100 medico-legal autopsies performed between the first day of March and the end of August, 2018. Data were procured from the case folders and histological logbook and the histopathological findings were recorded in a data sheet. Data obtained were analyzed with the Statistical Package for the Social Sciences (SPSS) version 23. Chi- square was adopted to probe for interdependency between gender and the rampancy of liver lesions. Any p-value less than (<) 0.05 was deemed significant. Fatty liver occurred most frequently (73%) and ballooning of hepatocyte was least frequent (1%). The interrelation between gender and the commonness of liver lesions was not significant (p>0.05). Steatosis (fatty liver) is the most common liver lesion.

Keywords: *Histopathological, autopsy, fatty, liver.*

Introduction

The histopathological forms of conditions identified in liver tissues are hepatitis, fatty change, cirrhosis, portal traditis, cloudy swelling, acute phosphorous poisoning and congenital malformation (Kumar *et al.*, 2014). The aetiologies of these histopathological sorts of ailments in the liver tissue vary in accordance

with geographical locales, socio-economic range, style of living, nutriment, local or regional infections and other endemic diseases (Patel *et al.*, 2016; Sotoudelimanesh *et al.*, 2006).

The liver is exposed to metabolous, noxious, microbes, cardiovascular and metabolic injuries. The predominant hepatic infirmities are viral hepatitis, alcohol-related liver disease, steatosis, and malignant hepatoma. Liver impairment also happens in humans consequential to conditions namely cardiac decomposition, disseminated malignancy and extrahepatic infections (Kumar *et al.*, 2009). Alcoholic abuse results to three pathologically pronounced liver disorders: fatty liver, hepatitis and alcoholic cirrhosis. One or all of the three can prevail concurrently and in the same sufferer (Bal *et al.*, 2004).

Data on hepatic histopathology at autopsy in Ikeja, Nigeria are lacking, thus there is justification for this study. The target of this inquiry is to establish the spectrum of histopathological findings of the liver at autopsy as seen at the Lagos State University Teaching Hospital (LASUTH), Ikeja.

Materials and Methods

This study was carried out in the Department of Pathology and Forensic Medicine, LASUTH, Ikeja. This cross-sectional review involved 100 medico-legal autopsies performed between the first day of March and the end of August, 2018. After the autopsies were performed, liver specimens were amassed and formalin fixed. Gross examination was carried out and cut hepatic sections were set forth for tissue

processing and thereafter stained with haematoxylin and eosin stain.

Data were procured from the case folders and histological logbook and the histopathological findings were recorded in a data sheet. Data obtained were analyzed with the Statistical

Package for the Social Sciences (SPSS) version 23. Chi- square was utilized to probe for interdependence between gender and the occurrence of liver lesions. For statistical analysis, a p- value less than (<) 0.05 was deemed significant.

Results

Table 1: Gender distribution of the study subjects

Gender	Frequency	Percentage
Male	51	51%
Female	49	49%
Total	100	100%

From the data collected, fifty-one (51) were male liver specimens and forty-nine (49) were female liver specimens (Table 1).

Table 2: Histopathological diagnosis of hepatic lesions

Histopathological findings	Number of cases	Percentage
Hepatitis	13	13%
Portal triaditis	6	6%
Ballooning of hepatocyte	1	1%
Cirrhosis	7	7%
Fatty liver (steatosis)	73	73%
Total	100	100%

Post-mortem report divulged thirteen (13) cases of hepatitis, seventy-three (73) cases of fatty liver, six (6) occurrences of portal triaditis, one (1) case of ballooning of hepatocyte and seven (7) cases of cirrhosis (Table 2).

Table 3: Gender disposition of hepatic lesions

Histopathology	Male	Female	Total	P-value
Hepatitis	5	8	13	0.929
Portal triaditis	6	0	6	0.305
Ballooning of hepatocyte	0	1	1	0.863
Cirrhosis	7	0	7	0.256
Fatty change (steatosis)	33	40	73	0.768
Total	51	49	100	

Table 3 shows that fatty liver disease is the most predominant liver lesion with its frequency higher in females. Ballooning of hepatocyte accounted for the least dominant liver disease and the condition was absent in males. The interrelation between gender and the frequency of liver lesions was not significant ($p > 0.05$).

Discussion

The widespread liver lesions seen in this study are steatosis (fatty change of the liver), hepatitis and cirrhosis. In a study done in Russia, the pervading liver lesions seen were steatosis and inflammatory disorders (Voinora, 2000). Researchers have noted that hepatic steatosis is the commonest finding with male predominance (Konjengbam *et al.*, 2017; Elayassi, 2000) and this is consistent with this present study where hepatic steatosis was found to be pervasive with more cases seen among females than males. Liver lesions that prevailed among males in this survey (cirrhosis and portal triaditis) is in agreement with previous reports (Merat *et al.*, 2012; Selvi *et al.*, 2010; Bal *et al.*, 2004).

Regarding liver specimens seen at autopsies performed in South East London, cirrhosis, adenoma, metastatic carcinoma and hamartoma were frequent findings (Berry, 1987). Analysis of post-mortem reports among the Singaporeans divulged that unanticipated liver lesions are predominant. The lesions are cholecystitis, hepatic fibrosis and primary hepatic cancer (Lee, 1979).

Steatosis, hepatitis and cirrhosis were the most frequent hepatic lesions observed in this study. Cirrhosis and chronic viral hepatitis are common hepatic lesions in Nigeria, other parts of Africa and most parts of Asia while other liver lesions include haemochromatosis and alcohol-related hepatic lesion (Madhu, 2013; Nduba *et al.*, 2010; Adeniji and Anjorin, 2002).

The study indicated that there are differences in the histological pattern of hepatic lesions at autopsy as seen at the Lagos State University Teaching Hospital (LASUTH), Ikeja, Lagos State in Nigeria. The reasons for this may include nutriment, mores, socioeconomic issue, ethnosc and age.

Conclusion

Steatosis is the most common liver lesion. The association that exists between gender and the preponderance of liver lesions is not a significant one.

Conflict of Interest Declaration

No conflict of interest.

References

- Adeniji, K.A. and Anjorin, A.S. (2002). Histopathological assessment of the pattern of liver cirrhosis in a tropical population. *African Journal of Medicine and Medical Sciences*; 31:367-369.
- Bal, M.S., Singh, S.P., Bodal, V.K., Oberoi, S.S. and Surinder, K. (2004). Pathological findings in Liver autopsy. *Journal of Indian Academy of Forensic Medicine*; 26(2):971-973.
- Berry, C.L. (1987). Liver lesions in an autopsy population. *Journal of Human and Experimental Toxicology* 6:209-214.
- Elayassi, H. (2000). Fatty Liver, a postmortem study. *Medical Journal of Iran Hospital*; 5(1):28-29.
- Konjengbam, R., Khuraijam, A.D., Ningthoujam, J. and Debnath, K. (2017). Histopathological Profile of Liver Lesions in autopsy examination. A hospital-based study. *Journal of Evidence Based Medicine and Healthcare*; 52:3182-3184.
- Kumar, V., Abbas, A., Aster, J.C. and Fausto, N. (2009). Robbins and Cotran Pathologic Basis of Disease. Liver and Biliary Tract. 8th edn. Elsevier, New Delhi:833-890.
- Kumar, V., Abbas, A. and Aster, J. (2014). Robbins and Cotran Pathologic Basis of Disease. Liver and Biliary tract 9th edn. Elsevier, New Delhi:281-283.
- Lee, Y.S. (1979). The pattern of liver diseases in Singapore. An autopsy study. *Journal of Tropical and Geographical Medicine*; 31:69-74.
- Madhu, B. (2013). Pathological findings of liver in autopsy cases. A study at Imphal. *Journal of Indian Academy of Forensic Medicine*; 35(3):206-210.
- Merat, S., Sotoudehmanesh, R., Nouraie, M., Peikan-Heirati, M., Sepanlou, S.G., Malekzadeh, R., *et al.*, (2012). Sampling error in histopathology findings of non-alcoholic fatty liver diseases: A postmortem liver histology study. *Archives of Iranian Medicine Journal*; 7:418-420.
- Ndububa, D.A., Ojo, O.S., Adetiloye, V.A., Aladegbaiye, A.O., Adebayo R.A., Adekanle O. (2010). The contribution of alcohol to chronic liver disease in patients from South-west Nigeria. *Nigerian Journal of Clinical*

- Practice*; 13:360-364.
- Patel, P.R., Patel, R.D. and Tailor, H.J. (2016). Incidental findings in autopsy examination of Liver: A study at tertiary care hospital. *International Journal of Community Medicine and Public Health*; 3(3):697-699.
- Selvi, R.T., Selvam, V. and Subranmanium, P.M. (2010). Common silent liver diseases in and around of Salem population: An autopsy study. *Journal of Clinical and Diagnostic Research*; 6(2):207-210.
- Sotoudehmanesh, R., Sotoudeh, M., Ali-Asgar A., Abedi, B., Tavangar S.M., Khakinejad, A. *et al.*, (2006). Silent Liver diseases in autopsies from forensics Medicine of Tehran. *Archives of Iranian Medicine Journal*; 9(4):324-328.
- Voinova, L.V. (2000). Aetiological and nosological structure of liver diseases (on autopsy data of clinics of I.M. Sechenov Moscow Medical Academy in 1988-1997). *Archives of Pathology and Laboratory Medicine Journal*; 62:45-47.

Citation: Anibor, E., Soeze, A.M., Ugbaja E.S. Histopathological Spectrum of Hepatic Lesions on Autopsy at the Lagos State University Teaching Hospital, Ikeja, Nigeria. *Sokoto Journal of Medical Laboratory Science*; 5(2): 64 -67

Copyright. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.