



HISTOPATHOLOGIC FINDINGS IN AUTOPSIES OF HEART, LIVER AND KIDNEYS WITH SPECIAL REFERENCE TO INTERESTING AND INCIDENTAL FINDINGS

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ABSTRACT

Introduction – Histopathological finding in autopsy cases are often unexpected as the patient may not be aware of disease condition throughout life.

Aim and Objectives – The aim of the study was to determine various histopathological findings unrelated to the cause of death

Material and methods – the retrospective study of 2 years was conducted in department of Pathology, RIMS, Ranchi and spectrum of histopathological findings unrelated to the cause of death were noted.

Result – 141 autopsy cases were conducted during a period of two years from January 2017 to December 2018, out of which 99 cases had abnormal findings. Liver, being an important organ had maximum incidental findings followed by atherosclerosis.

Conclusion – Incidental findings in autopsy cases are not uncommon. Autopsy examination helps in identifying underlying disease conditions unrelated to the cause of death.

KEYWORDS : Autopsy, liver cirrhosis, atherosclerosis

INTRODUCTION

The term "autopsy" is derived from the Ancient Greek word *autopsia*, means "to see for oneself", *autos* ("oneself") and *opsis* ("eye")^{1,2}. Histopathological findings unrelated to the cause of death are often observed in routine histopathological examination of medicolegal autopsies. These findings give us an insight to the lesions which go unnoticed when a person is alive. The medicolegal autopsy gives us an opportunity for studying medically diagnosed and treated conditions and also the natural course of disease process. Autopsy also contributes to the diagnosis of undiagnosed or misdiagnosed diseased conditions irrespective of underlying cause of death. Many incidental findings have been observed on histopathological examinations which have proven to be great opportunities for pathologists as well as the forensic expert in better understanding of diseases. Histopathological examination of autopsy specimen also helps in providing statistical data of various undiagnosed diseases at community level.

MATERIAL AND METHODS

A retrospective descriptive study of medicolegal autopsies for two years from 2015-2017 was conducted in the Department of Pathology, RIMS, Ranchi. A total number of 141 cases were sent for histopathological examination heart, liver and kidneys were studied. In 99 cases abnormal findings were seen. The organs were sent in 10% formalin. Representative bits from the concerned organs were processed in a routine manner. All sections were stained with Haematoxylin and Eosin (H & E) stain. Gross and histopathologic findings were noted and the salient features were studied.

RESULTS

The present study consisted of a series of 141 autopsy cases from RIMS Hospital, Ranchi, India conducted over a period of two years. In 99 cases abnormal findings were seen which comprised of heart, liver and both kidneys.

S. No	Histopathological Findings	Number of Cases
1	Atherosclerosis	17
2	Acute tubular necrosis	12
3	Chronic diffuse glomerulonephritis	10
4	Myocardial infarction	10
5	Cirrhosis	9
6	Interstitial nephritis	8
7	Fatty liver	7
8	Cloudy change kidney	5

9	CPVC	4
10	Metastasis to liver	4
11	Myocarditis	2
12	Kidney cyst	2
13	TB liver	2
14	TB kidney	2
15	Hepatitis	2
16	HCC	1
17	Hemangioma Liver	1
18	Sickle Cell	1
	Total	99

Out of the total 141 cases, 85 (60.0%) were males and 56 (40.0%) were females. The majority (48.5%) of cases were between 21-40 years, constituting of the total cases as stated in. The commonest cause of death was acute tubular necrosis.

The incidental renal masses in the study comprised of adult polycystic disease of kidney, renal tuberculosis and renal cell carcinoma. A case of Autosomal Dominant Polycystic Kidney Disease (ADPKD) was identified in the post mortem examination of a 45-year-old male after death from road traffic accident who was asymptomatic during his life. Clear cell RCC was incidentally detected in a 40-year-old male. Two cases of renal tuberculosis were seen with caseating granulomas and Langhans giant cells. Liver being a predominant organ sent for histopathologic study, a total number of 28 liver lesions were discovered, 09 cases were that of cirrhosis followed by fatty liver and a spectrum of fortuitous findings comprising of chronic passive venous congestion, hepatitis. The changes in hepatic architecture secondary to large bile duct obstruction were noted in a 30-year-old male after death from methanol poison consumption, who had a past clinical history of recurrent jaundice and microscopy revealed bile duct proliferation with perivenular bilirubin stasis accompanied by portal tract oedema and inflammation, suggestive of changes due to large bile duct obstruction. Among the neoplastic lesions of liver, cases of metastatic adenocarcinoma to liver was noted was diagnosed in a specimen of liver displaying multiple grey white nodules, largest measuring 2x1.8cm, suggestive of metastatic deposits. On case hepatocellular carcinoma was seen. Incidental finding of hemangioma was seen on liver surface measuring 2 x 2 cm, reddish which was confirmed by histology. Four cases (1.48%) of tubercular lesions unrelated to the cause of death were discovered, with all of them having extra-pulmonary. Renal tuberculosis were seen in two and hepatic tuberculosis were seen in two cases one of which was coexistent fatty change.

A postmortem diagnosis of Sick cell anaemia was made in a 23-year-old who died in a RTA. The patient had intra-cerebral bleed, collapsed lungs and haemorrhagic contusion of liver, where the cause of death was attributed to cardio-respiratory arrest. On histopathology, sections from blood vessels of heart filled with sickled erythrocytes, liver displayed congested sinusoids filled with sickled erythrocytes. Among the incidental and interesting findings noted in our study, neoplastic lesions accounted for 5(2.47%) of cases, comprising of the above mentioned cases of RCC, tumour metastasis- adenocarcinoma of stomach, gall bladder metastasis to liver and a case of hemangioma of liver was seen.

DISCUSSION

Quite rightly liver is called as custodian of milieu interior" and is vulnerable to a variety of metabolic, toxic, microbial and circulatory insults³. Hence, liver is sent in almost all cases of autopsies to ascertain the cause of death. Most of the chronic liver diseases even in advanced stages may cause no prominent clinical signs and symptoms and are diagnosed only during autopsy. The spectrum of lesions that are reported in a series of autopsy findings of liver have reported fatty change, Chronic Venous Congestion (CVC), cirrhosis of liver, malignancy, hepatitis and chronic abscess, fatty change being the predominant finding. Another, autopsy study of fifty cases of liver specimens reported fatty change, chronic venous congestion (CVC), cirrhosis of liver, neoplasm and hepatitis with CVC being the predominant finding. The findings in our study are comparable to these studies with fatty liver being the commonest lesion in both studies. Secondaries to liver were more than the primary. The importance of histopathology in autopsy studies cannot be under emphasised in understanding the disease processes involving liver.

Sickle cell anaemia was an incidental finding in a 23-year-old male who died in road traffic accident. The patient had intra-cerebral hemorrhage, where the cause of death was attributed to cardio-respiratory arrest. On histopathological examination, multiple sections from lung showed macrophages and blood vessels filled with sickle cells with areas of consolidation, sinusoids in liver filled with sickled erythrocytes and brain had large areas of oedema showing congested cerebral blood vessels packed with sickled RBC. Among the other incidental findings noted, neoplastic lesions accounted for 5(2.47%) of cases, comprising of the above mentioned cases of RCC, tumour to tumour metastasis-adenocarcinoma of stomach with metastasis to oncocytoma of kidney, carcinoid of liver and a case of follicular adenoma of thyroid

CONCLUSION

From our study we conclude that atherosclerosis was the commonest histopathologic finding followed by fatty liver. Histopathology in autopsy plays a vital role in the study of some of the rare neoplastic lesions contributing to the knowledge of pathology. This study highlights the various incidental unexpected rare cases in medico-legal autopsies, which are imperative in academic and research purposes. Histopathology would not have been necessary for some of these conditions during a life time but an incidental finding in autopsy has unveiled the histo-pathological changes that help in the understanding of disease processes which are otherwise rare for a pathologist to encounter in the day to day specimens. Such retrospective and prospective studies also provide an insight into the true prevalence of diseases or lesions.

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