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### Renal parenchyma have most common Incidental histopathological finding of medicolegal post mortem autopsy Study

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#### Abstract

**Objective & Aims:** 1.Identify undiagnosed histopathology changes in autopsy medicolegal cases. 2. useful in cases of undiagnosed cases or suspected cases to confirm the diagnosis in postmortem finding. 3. There is involvement of in various organs due to cystic, dysplastic and neoplastic conditions along with end events. 4. The aim of this study was to determine the spectrum of histopathological findings including any type lesions related or unrelated to the cause of death. It was also aimed to highlight various incidental and interesting lesions in autopsies

The present study was done to find spectrum of various lesions by histopathological examination autopsy tissues.

**Material and Methods:** A retrospective descriptive study of medicolegal autopsies for Four years from 2013-2017 was conducted in the Department of Pathology, MGM Medical College with M.Y.H attached tertiary care center. A total number of 120 cases shows incidental histopathological significant finding. The organs relevant to the case concerned were sent in 10% formalin. In most of the cases they comprised of heart, liver, spleen, kidneys, brain and lungs. Representative bits from the concerned organs were processed in a routine manner. All sections were stained with Haematoxylin and Eosin (H & E) stain and special stains were used, as and when required. Gross and histopathologic findings were noted and the salient features were studied.

**Results:** Among the 120 cases, 54 cases shows renal Tubler congestion, 49 cases shows Cystic lesion. 05 cases shows renal stones 02 cases shows tuberculosis, 05 cases shows Pylonephritis, 3% shows PUJ obstractions and 02 cases shows renal dysplasia. Among all cases 66 were males and 54 were females.

**Conclusion:** Histopathology examination of autopsy tissue is useful for evaluation of underlying undiagnosed renal pathology. The common finds were congestion but nonspecific and Renal tissue cystic pathology is most common incidental histopathological finding in postmortem autopsy Department of Pathology, MGM Medical College with M.Y.H attached tertiary care center.

Keywords: Autopsy, Histopathology.

#### Methodology

The present retrospective histomorphological study of Incidental findings in autopsy is retrospective (from January 2013 to December 2017) study. The material for the study comprised of specimens received in the Department of Pathology, MGM Medical College, Indore during this four years.

The specimens consisted of medico legal autopsy tissues, partially resected and complete excised tissues. Clinical history and findings were already recorded in each case by complete clinical examination and post mortem sheet record.

The specimens were fixed in 10% neutral buffered formalin for 24 to 48 hours. Large specimens were cut serially at a distance of 1 centimeter before fixing.

After fixation, representative areas were selected for paraffin embedding, including the proper and the margin with surrounding tissue.

Four to five paraffin blocks of each specimen were prepared and sections of 3-5 microns thickness were cut and stained with hematoxylin and eosin. Microscopic examination of the stained sections was performed..

#### Hematoxylin and Eosin staining procedure

- 1. Sections are dewaxed in two jars of Xylene, for two minute in each.
- 2. Xylene removed by keeping slides in two jars of absolute alcohol, each for 2 minute.
- Treatment with descending grades of alcohol.
   a. In 90% alcohol for 2 minute..
  - b. In 70% alcohol for 2 minute.
- 4. Rinse in tap water.
- 5. Sections stained in Harris Hematoxylin for 7-10 minute.
- 6. Wash in running water till the sections turn blue.
- 7. Sections differentiated in 1% acid alcohol solution for 5 -10 seconds.
- 8. Wash with tap water for 5 minute.
- 9. Dip in saturated solution of lithium carbonate till the section is completely blue.
- 10. Wash with tap water for 5 minute.

- 11. Treatment with increasing grades of alcohol
  - a. In 50% alcohol for 2 minute.
  - b. In 70% alcohol for 2 minute.
  - c. In 90% alcohol for 2 minute.
- 12. Counter stain with 1% Eosin Y for 1 minute.
- 13. Rinse in 95% alcohol 2 times each for 2 minute.
- 14. Dehydrate with absolute alcohol 3 times each for 2 minute.
- 15. Clearing done by 3 changes in Xylene each for 2 minute.

16. Mount in DPX.

Result: nuclei-blue, cytoplasm-pink

#### **Observation and Result**

Gender-wise distribution of cases

Renal Organ involvement. sample size 150

Type of pathology	No. Of cases	Male	Female
Tubular Congestion	54	27	30
Cystic lesion	49	31	18
Pylonephritis	05	01	04
Tuberculosis	02	01	01
Renal stone	05	04	01
PUJ obstruction	03	01	02
Dysplasia	02	01	01

Renal tissue pathology is most common incidental histopathological finding in postmortem autopsy.

#### Organ involvement

Organ involvement	NO. of cases	Male	Female
	out of 150		
Renal parenchyma	120	66	54
Lung parenchyma	110	80	30
Ovary parenchyma	22	00	22
Liver parenchyma	69	60	09
Spleen parenchyma	02	01	01
Bowel loop	09	07	02

Renal tissue pathology is most common incidental histopathological finding in postmortem autopsy and bowel is shows least common incidental histopathology finding.

#### Gender-wise distribution of cases

Age Group† (Years)	Female (N*)	Male (N*)	Total Patients (N*)
1-10	03	02	0
11-20	02	04	0

21-30	02	11	1
31-40	08	10	1
41-50	13	14	2
51-60	12	17	2
61-70	12	04	1
71-80	02	02	0
81-90	0	02	0
Total	54	66	120

The results of the study showed that renal cystic lesion cases, this is comparable to the study by Sulegaon et al<sup>[1]</sup> which showed cystic lesion in 38 cases in Medicolegal autopsies- Interesting and incidental findings. And Shah NR <sup>2,</sup> Incidental and interesting histopathological findings in medicolegal autopsies also shows same as above result

### Conclusion

Histopathology examination of autopsy tissue is useful for evaluation of underlying undiagnosed renal pathology. The common finds were congestion but nonspecific and Renal tissue cystic pathology is most common incidental histopathological finding in postmortem autopsy Department of Pathology, MGM Medical College with M.Y.H attached tertiary care center.

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