

Autopsy Kidneys: Importance in Today's Scenario.

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I. Introduction

Kidney disease forms an important cause of morbidity and mortality in a large proportion of the population and also in many hospitalised patients. Chronic kidney disease is now a global health crisis with estimated prevalence of 8-16% world wide.[1] Acute and chronic kidney diseases result in complications like cardiovascular accidents, end stage renal disease, infections, renal osteodystrophy, anemia and cognitive decline. Therefore kidney diseases should be prevalent in autopsy kidneys but it has been noticed that the frequency and spectrum of medical renal pathology in autopsy specimens is not documented frequently. Not often do pathologists invoke kidney disease as the cause of death at autopsy.[3] This is because the primary importance during autopsy is given to find out the immediate cause of death thus inspecting the heart, lungs and brain primarily involved frequently. Thereby ignoring other organs involved.[1]

Key words: Kidney, Autopsy, Clinico- pathological correlation.

Are pathologists adequately trained to recognize medical renal disease as the cause of death at autopsy? In terminally ill patients renal biopsy is usually avoided, in these cases gross and histological evaluation of autopsy kidneys may be the only opportunity to identify renal disease[7]. Also it was noticed that some significant lesions were not identified like non-neoplastic renal diseases missed in tumour nephrectomy specimens.[4,5]. As a practicing pathologist one must be aware of the frequency and the spectrum of renal pathology that may be present in autopsy kidneys.[7]

Several reasons exist why a pathologist misses a medical renal lesion by overlooking a disease process at autopsy.[1] More importance is given to other organs like heart, lungs and brain. Kidney disease is an important cause of morbidity and mortality, this fact has not been impacted in our minds. Also because of vertical specialisation in reporting a particular organ system(S) of expertise, kidney lesions are neglected. Many pathologists are not adequately trained to recognize medical disease in autopsy kidney specimens.[1,2]

Autopsy pathology including medical renal pathology forms a rich educational resource of residency training. Medical renal pathology is a small and highly subspecialized subject that requires integration of clinical and laboratory data with light microscopy and immunofluorescence and electron microscopy. Infact, autopsy kidneys provide a more accurate picture of the spectrum and frequency of kidney disease in the general population [3,6,7].

Autopsy kidneys can easily be incorporated into didactic lectures and slide seminars and gross pathology sessions particularly in residency and medical student training programmes.[1]

Thus study of kidney lesions at autopsy is very essential. There are some challenges to assessment of kidney lesions at autopsy. There are no standard guidelines for a proper evaluation of autopsy kidneys and also we cannot afford money for ancillary tests like immunofluorescence and electron microscopy which may not be present at all the centres. [1] Our understanding of how kidney disease contributes to morbidity and mortality will be obtained from a thorough study of kidney lesions at autopsy.[3]

Clinico-pathological correlation requires medical record review including clinical and laboratory data along with gross morphology and histopathological studies. According to Kammi J Henriksen systematic evaluation of glomeruli, tubules, interstitium and blood vessels on H&E stained sections is

very much sufficient to come to the final diagnosis or differential diagnosis in autopsy kidneys. This helps in avoiding time and expenditure on ancillary tests.[1]

In the present time medical autopsies are far reduced in number which is not in the interest of the academic pathologists and clinicians and at larger note for the betterment of the society.[1,8,9]. Medical autopsies are not being performed frequently as were being done earlier because of lack of reimbursements, clinical disinterest, advances in pre-mortem diagnostic technics and because of the risk of litigation.[1] The hospital autopsies have dwindled to a great extent. Hospital autopsy provides invaluable epidemiological data and significantly contributes to quality control and improvement of patient care. The autopsy specimens help in clinicopathological correlation exercises.[8,9,10]

The medical autopsy specimens provide a valuable educational tool for both residents and medical students. Medical renal disease is common in adult autopsy kidney specimen, but is often overlooked. Autopsy has long been considered and recognized for providing important contribution in medical education and quality improvement of medical care. [8,9,10].

Autopsy kidney specimens are a valuable source of material to supplement training in anatomic pathology. Also our understanding of the natural history and pathogenesis of kidney disease can be enhanced with accurate recognition and reporting of kidney disease at autopsy.[8,9,10]

In many instances reevaluation of autopsy kidneys demonstrates that medical renal diseases are common in autopsy cases, but significant diagnoses are often missed.[3]. Some medical renal lesions are diagnosed at autopsy and not pre-mortem as they do not cause any functional derangement.[11]

Thus by correlating the clinical data, laboratory data, gross and histopathological features of autopsy kidney specimens one can come to the correct final diagnosis. Thus medical autopsies are of great help in proper diagnosis, medical education, prevention of disease and proper management of the patient.[8,9,10]

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