E CONF SERIES

International Conference on Economics, Finance, Banking and Management
Hosted online from Paris, France
Website: econfseries.com 24th March, 2025

PATHOMORPHOLOGICAL FEATURES OF THE KIDNEYS IN PREGNANT WOMEN WHO DIED FROM PREECLAMPSIA

Saidakhmadova Nargiza Gayratjon kizi
Tashkent Medical Academy
Master's Student of Pathological Anatomy Department

Annotation:
Preeclampsia is a severe pregnancy-related disorder that significantly impacts multiple organ systems, with the kidneys being among the most affected. This study aims to analyze the pathomorphological changes in the kidneys of pregnant women who succumbed to preeclampsia, highlighting the structural and functional impairments associated with the condition.

Keywords: Preeclampsia, renal pathology, glomerular changes, vascular dysfunction, tubulointerstitial alterations.

Renal Parenchymal Alterations: Preeclampsia leads to several significant morphological changes in the renal parenchyma, including glomerulosclerosis, endothelial swelling, capillary basement membrane thickening, and mesangial hyperplasia. These modifications impair renal filtration efficiency and contribute to progressive renal dysfunction.

Glomerular Pathology: Key glomerular alterations observed in preeclampsia include mesangial expansion, endotheliosis, microthrombosis, and glomerulopathy. Thickening of the glomerular basement membrane results in a reduced filtration rate, exacerbating the severity of renal involvement.

Tubulointerstitial Changes: The renal tubules exhibit dystrophic epithelial cell damage, tubular obstruction, and in severe cases, focal necrosis. These changes disrupt urine formation and lead to interstitial inflammation, further impairing renal function.

Vascular Abnormalities: Preeclampsia induces vascular pathologies such as endothelial dysfunction, vasculopathy, and microangiopathy. Hyaline arteriolosclerosis and vascular calcifications contribute to reduced renal perfusion, further worsening nephron damage.

Histopathological Observations: Microscopic examination of renal tissue in preeclamptic patients reveals endothelial swelling, mesangial cell proliferation, fibrinoid necrosis, and peritubular capillary congestion. These findings indicate widespread vascular and parenchymal damage characteristic of preeclampsia-induced renal pathology.

Conclusion:

The kidneys of pregnant women affected by preeclampsia undergo extensive structural alterations, significantly impairing their function. The observed glomerular, tubular, and vascular abnormalities underscore the necessity for early diagnostic and therapeutic interventions to mitigate renal complications in preeclampsia.

References:

1. Roberts JM, Hubel CA. The Two-Stage Model of Preeclampsia: Variations on the Theme. – Hypertension, 2020.
2. von Dadelszen P, Magee LA. Predicting Complications in Preeclampsia. – Best Practice & Research Clinical Obstetrics & Gynaecology, 2022.
3. WHO. Global Perspectives on Hypertensive Disorders in Pregnancy. – Geneva, 2023.