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POSTERS

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Kallol Bhattacharjee et al., J Clin Nephrol Ther 2018, Volume 2

SPECTRUM OF ACUTE KIDNEY INJURY IN CRITICALLY ILL PATIENTS IN MEDICAL ICU: A SINGLE CENTER HOSPITAL-BASED STUDY FROM NORTH-EASTERN INDIA

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Introduction: Acute kidney injury (AKI) is a common complication in hospitalised patients, the incidence of which has been increasing steadily in the recent years. Diabetes mellitus has been recognized as an important risk factor for AKI. However, there are only a few studies that have particularly addressed the topic "AKI in diabetes mellitus." Therefore, our aim is to study the causes and outcome of acute kidney injury (AKI) in type 2 diabetes mellitus (DM).

Methods: This single-centric prospective study was conducted at the Medicine department, Silchar Medical College for a period of 1 year i.e. from January 2017 to December 2017. All adult type 2 diabetic patients presenting with AKI were included in the study. Acute kidney injury was classified according to Kidney Disease Improving Global Outcomes criteria. The treatment options were conservative and dialysis. All patients were followed for a period of 4 weeks for outcome of AKI i.e. recovery, dialysis dependency and death.

Results: A total of 105 type 2 diabetic patients with AKI were enrolled during the study period. The most common cause of AKI was found to be sepsis (52.4%) and the most common focus of infection was urinary tract infection (65.5%). The percentage of patients requiring dialysis was 30.5%, while 69.5% of the patients were managed conservatively. Eventually 78.1% of the patients recovered, 11.4% became dialysis dependent, and 10.5% died. Among those who expired, all underwent dialysis and sepsis was the leading cause of death in the patients.

Conclusion: Most common causes of AKI in our study was found to be sepsis mainly due to urinary tract infection. AKI recovered in 78.1%. Outcome was favourable in those who did not require dialysis.

Key Words: AKI, diabetes mellitus, infection, dialysis.

BIOGRAPHY

Kallol Bhattacharjee passed his MBBS examination from Gauhati University, Guwahati, Assam, India in 1986 at the age of 22 years and did his post-graduation in internal medicine in 1990. He has been working in the department of medicine in Silchar Medical College and Hospital, Silchar, Assam, India in various capacities since 1992 and presently working as associate professor of the department, incharge of the medical ICU and deputy superintendent of the hospital. He has published approximately 30 original research papers in various national and international journals and in January 2017, he was conferred fellowship by the Indian College of Physicians, the academic wing of the Association of Physicians of India. He has dedicated his service towards the cause of ailing humanity especially in the field of Nephrology with special interest in AKI.

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Lu Xiuli et al., J Clin Nephrol Ther 2018, Volume 2

NETWORK IDENTIFYING PATHOGENIC BIOLOGICAL EVENTS IN KIDNEY STONE

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A large number of promising genes/proteins have been found to be related to the kidney stone formation. Identifying highly pathogenic biological events in these candidates will advance our understanding of kidney stone formation. We performed protein-protein interaction (PPI) networks analysis by integrating datasets from four genome-wide association studies (GWAS), a microarray study and a urine proteomics study. Highly connected genes/proteins were calculated to construct corresponding direct network, respectively. Permutation tests were performed to evaluate the networks reliability. Backbone networks were extracted to acquire essential genes/proteins for functional enrichment analysis. Overlaps were performed to identify accumulations of abnormal genes, biological processes (BPs) and pathways. We found that the abnormal accumulation were overlapped at three genes, in two pathways and in five BPs. Abnormal changes accumulated in these genes, pathways and BPs may increase risk of stone formation. Our findings provide valuable information for screening potential biomarkers and further clarifying kidney stone formation mechanism.

BIOGRAPHY

Lu Xiuli has completed her PhD at the age of 31 years from Nagoya University, Japan. She is the professor of Liaoning University, China.

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ACCEPTED ABSTRACTS

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SUBCLINICAL EHRLICHIOSIS: MAY CAUSE KIDNEY ALTERATIONS?

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We hypothesized that renal glomerulopathy is a common finding in dogs with subclinical ehrlichiosis and pro-inflammatory cytokines may be associated to renal injury. The aim of this study was to evaluate renal cortex biopsies in 15 dogs with subclinical ehrlichiosis diagnosed by PCR and enzyme-linked immunosorbent assay (ELISA) and in 17 healthy dogs as a control group. Dogs with presence of clinical signs, comorbidities and/or azotemia were excluded. Biopsy material was examined by light microscopy (LM). Sections were stained with hematoxylin and eosin, periodic acid Schiff, Jones methenamine silver, Masson's trichrome, and Congo Red. Cytokine quantification of tumor necrosis factor alpha (TNF- α), interferon gamma (INF- γ) and interleukin 6 were assessed through ELISA using commercial kits specific to dogs (Milliplex), according to the manufacturer's instructions. LM abnormalities were identified in 14 dogs (93.3%) from the ehrlichiosis group, but most findings were subtle. Mesangial cell proliferation (40.0%), synechiae (40.0%), globally sclerotic glomeruli (33.3%), ischemic glomeruli (33.3%), focal segmental glomerulosclerosis (FSGS) (33.3%), focal thickening of the glomerular basement membranes (26.7%), hydropic degeneration (26.7%) and interstitial fibrosis and tubular atrophy (IFTA) (20.0%) were frequent. Cytokines was increased in subclinical phase on levels of TNF- α , INF- γ , and IL-6 in comparison to control. These results suggest that TNF- α , INF- γ and -IL-6 may be involved in the pathogenesis of tubule-glomeruli injury and subclinical ehrlichiosis may lead in chronic kidney disease (acknowledgement to FAPESP for financial support - #2014/21506-2).

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LUMINEX ASSAYS – THE NEW REVOLUTION IN RENAL TRANSPLANTATION IN INDIA

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Background: The prevalence of End Stage Renal Disease (ESRD) in India is approximately 151 -232/ million which translates into 220,000 individuals. With approximately 7500 transplants every year only 3.4 % of patients are provided optimal treatment. Deceased donor transplant accounts for < 0.5% of all transplants only. No precise data is available regarding the donor profile, but in a standalone commercial laboratory in India of 705 samples over three-year period, nearly 40% of the donors were unrelated, 15% non- first-degree relatives and 18% spousal.

Methods: 748 pre-transplant and 169 post- transplant samples from prospective recipients were evaluated for HLA- class I and II donor specific IgG antibodies. Additional tests included pooled bead assay and PRA specification on 52% and 5 % samples of pre-transplant samples respectively. The laboratory added value to these tests by semi-quantitative grading. Donor profile was scrutinized.

Results: Luminex Crossmatch in combination with pooled bead assay was found to be an economical and very useful strategy for evaluation of sensitization and antibody monitoring in nations with economic constraints. Less than half the donors evaluated were first degree relatives and deceased donations accounted for less than 0.5 %.

Conclusion: Luminex based pooled bead assay and crossmatch are valuable and cost-effective for recipient work up and there is an urgent requirement to promote deceased donor transplant in Indian Subcontinent.



Note: