IPNA/ISN Pediatric Nephrology Course
June 13-15, 2019
Beirut, Lebanon

Abstract: Acute Kidney Injury in Children with Cancer

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With increasing success of childhood cancer treatments and patients' survival we are observing a higher rate of chronic residual morbidity due to cancer and its treatments. Acute kidney injury (AKI) in cancer survivors is multifactorial due to the nature of the disease itself and the acute renal injury due to the biological, chemical, surgical, and bone marrow transplantation (BMT) instituted in many of these patients. Ultimately up to 80% of children with significant cancer-related AKI end up with chronic kidney disease (CKD) of variable severity.

This lecture explores the epidemiology, pathophysiology and management of AKI in children undergoing cancer therapy which will be considered at least 3 levels:

1- Traditional Chemo/Radiation/Surgical approach and their complications.
2- BMT, ablation and post-transplant complications such as GVHD among others.
3- Complications arising from other compounding factors such as contrast nephropathy, infection, hypertension and other cardiovascular sequelae.

We will explore the latest clinical management strategies to avoid AKI when possible, and in advanced AKI-3 or more, avoid chronic changes leading to renal insufficiency and resulting ESRD, with its resulting morbidity and in case of renal transplantation a renewed set of risk factor for the cancer patient.

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Abstract: Lupus Nephritis Update

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Systemic Lupus Erythematosus (SLE) is a multiorgan disease with variable severity ranging from a mere rash to severe morbidity and death. Kidneys are often affected in approximately 50% of SLE cases and may be the only manifestation of the disease, termed Lupus Nephritis (LN). The disease pathophysiology is based on an autoimmune process with autoantibodies against B cells, resulting in a complement-mediated inflammatory response leading to small and medium size vasculitis. Of increasing importance in the pathogenesis and severity of LN are anti phospholipid antibodies (APL) resulting in APL disease syndrome (APS) and consequent thrombogenic nephritis leading to AKI and ultimately chronic renal failure and ESRD. Thrombogenic LN in the context of atypical hemolytic uremic syndrome (aHUS) or APS management is also a challenge in renal transplantation of LN patients. There is a wide body of literature describing this process and the renal pathology findings, including a histologic classification of LN by an international body of expert pathologists, known as the WHO classification. Pathophysiology also reveals several genetic mutations and genomic loci that may be associated with the triggering and severity of the disease. In parallel to these findings, several serological and urinary markers are identified.
This talk will review the fundamentals of SLE/LN in children and above pathophysiologic determinants.

Finally, we will review established and current LN clinical scale quantitation of disease activity such as SLEDAI, together with management protocols based on the European and US clinical trials and summarize the current best practice approach of children with LN, including long term follow up and prognosis.