

- ❖ **Name & Designation** : Dr. Ashok Kumar Yadav, Research Associate
- ❖ **Address** : Deptt. Of Nephrology, PGIMER, Chandigarh-160012
- ❖ **Name of the International Conference/ Seminar/Symposium/ Workshop** : American Society of Nephrology, Kidney Week 2014.
- ❖ **Title of the abstract accepted** : 1. Association of bioavailable vitamin D, bone mineral density and markers of mineral metabolism in adults with nephrotic syndrome. 2. Vitamin D supplementation improves central arterial stiffness and inflammatory biomarkers in patient with chronic kidney disease. 3. Vitamin D deficiency and biomarkers of endothelial function in kidney transplant recipients.
- ❖ **Money sanctioned** : ₹ 1,00,000/-
- ❖ **Money reimbursed** : ₹ 1,00,000/-

Participation Report

More than 13,000 kidney professionals from across the globe joined at Kidney Week 2014 in Philadelphia, Pennsylvania. The world's premier nephrology meeting, Kidney Week provides participants exciting and challenging opportunities to exchange knowledge, learn the latest scientific and medical advances, and listen to engaging and provocative discussions with leading experts in the field. Building New Paths to Kidney Health was the theme of Kidney Week 2014 and is incorporated throughout the meeting

There was >50 session which includes international representatives including the invited lectures, oral and poster presentation. There were >20 sections of oral presentations with 10 papers in each session. Approximately 4500 poster were presented at the conference.

Academic highlights of the conference, including major recommendations and the following :

(i) New developments presented at the conference:

The emphasis of this conference was to provide a building partnerships across regions and disciplines to ensure increasing knowledge and strategies to ensure public health care, particularly the kidney patients, that are generally developed locally and opportunity to learn from each other. To reach this aim, an international panel of key experts and participants from all around the world were actively interacted to resolve pending issues and to highlight areas needing further analysis and investigation. To fully exploit the use of newer tools and method/strategies for combating severe kidney disease and its outcome in terms of cardiovascular morbidity, the need is to bring the researchers and clinicians on one platform to discuss the important issues. There was several study which presented their data on strategies for treating outcome of kidney disease, renal replacement therapy, chronic infections, disease management and prevention, role of non-invasive and genetic biomarkers, challenge of viral infection in dialysis and transplant patients, new immunosuppressant drugs in the replacement therapy and some

new drugs for the treatment of kidney disease, molecular methods and markers cardiovascular risks and other outcomes in chronic kidney disease patients.

There were several research papers on the pathogenesis and management of Kidney diseases including glomerular and tubulointerstitial diseases, Acute Kidney Injury, Chronic kidney disease, dialysis modalities and renal transplantation.

The conference commenced on 11th November with a two-day update course on various field of Nephrology including glomerulonephritis, acid-base, renal transplantation and Intensive care Nephrology. The updates included the progress in Nephrology in the respective field over the last one-year. This was mainly targeted for the postgraduate attendees from all over the world.

(ii) New development resulting from the conference (200 words):

The conference commenced on 11th November with a two-day update course on various field of Nephrology including glomerulonephritis, acid-base, renal transplantation and Intensive care Nephrology. The updates included the progress in Nephrology in the respective field over the last one-year. This was mainly targeted for the postgraduate attendees from all over the world. There were several research papers on the pathogenesis and management of Kidney diseases including glomerular and tubulointerstitial diseases, Acute Kidney Injury, Chronic kidney disease, dialysis modalities and renal transplantation.

On 13th November after the Presidential address, Dr Melton in his plenary presentation spoke on "Stem Cells to Understand and Treat Diabetes". In the 60 min long presentation Dr Melton from Harvard University spoke on how stem cells could be successfully molded into Insulin producing cells islet cells. This was followed by various presentations in the field of clinical Nephrology including Lupus Nephritis, hemodialysis, CKD management and counseling on organ allocation policy. On 14th November Homer W. Smith Award Presentation and Address on "Single-Gene Defects Elucidate

Mechanisms of CKD" by Friedhelm Hildebrandt and this was followed by state-of-the-art lecture on "what can we learn from our genetic past" by Eske Willerslev. This was followed by various brain storming discussion through out the day. In the evening the oral abstract presentation on glomerular diseases, AKI, CKD-MBD and Transplantation was held. On 15th November various presentation including President's Medal, Robert G. Narins Award Presentation, John P. Peters Award Presentation, Belding H. Scribner Award Presentation, Passing of the Gavel, State-of-the-Art Lecture. The highlight of all the above mentioned was the "Realizing the Promise of Nanomedicine" by Prof Chad A. Mirkin. This was followed by various presentations on ANCA vasculitis, Thrombotic microangiopathy, and anemia management in CKD and fluid management in hemodialysis. On the last day commenced with a plenary presentation on "Mineral (Mal) Adaptation to Kidney Disease" by Myles S. Wolf and "Autophagy and Metabolic Diseases" by Beth C. Levine. This was followed by lectures on "Targeting the microvascular environment in KAI during Injury and repair", "salt and Hypertension", "RAAS action inside and outside the kidney", "Gut and Kidney connection", "B-cell and Kidney diseases" and "vascular calcification".

Furthermore the different novel strategies discussed which could be of some values for treating these different diseases. It was a unique conference in which many young scientists were involved and they had been given an opportunity to present their work in front of several international eminent scientists. Overall, this conference presented to the world unresolved issues in the clinical and basic Nephrology.

(iii) Name of the publication in case your work is recommended for publications:

1. Bioavailable vitamin D levels are reduced and correlate with bone mineral density and markers of mineral metabolism in adults with nephrotic syndrome.
2. Vitamin D deficiency and Biomarkers of Endothelial function in kidney transplant recipients

Participant's contribution to the conference (100 words):

I presented my following paper:

1. Association of Bioavailable Vitamin D, Bone Mineral Density and Markers of Mineral Metabolism in Adults with Nephrotic Syndrome.
2. Vitamin D Supplementation Improves Central Arterial Stiffness and Inflammatory Biomarkers in Patient with Chronic Kidney Disease.
3. Vitamin D deficiency and Biomarkers of Endothelial function in kidney transplant recipients

1st paper shows that bioavailable 25(OH)D is a better measure of vitamin D status with respect of BMD and mineral metabolism in patients of nephrotic syndrome as there was strong association of bioavailable 25(OH)D with BMD as compared to 25(OH)D.

2nd paper is ongoing study of vitamin D supplementation in CKD patients and preliminary study indicate that supplementation of 2 doses of 300000IU of oral Vitamin D achieve sufficient level of vitamin D which leads to improvement in markers of inflammation, FGF-23 and arterial stiffness.

3rd paper studied the vitamin d level and endothelial markers in stable renal transplant recipients. In this study, patients with Vitamin D <37.5 nmol/L (66%) had similar age, serum creatinine, serum phosphate, iPTH, blood pressure but lower calcium (9.3 ± 0.7 vs 9.6 ± 0.5 mg/dL, $p < 0.05$), lower FGF23 (59 ± 73 vs 107 ± 97 pg/mL, $p < 0.05$) and higher E Selectin (16 ± 8 vs 13 ± 5 ng/mL, $p < 0.05$). With increasing quartiles of Vitamin D concentration the levels of E Selectin decreased (figure 1) ($p < 0.005$) and this was associated with rising levels of FGF23 ($p < 0.05$). Thus this study demonstrates that Vitamin D deficiency is common in KTx recipients in North India, associated with low calcium, low FGF23 and high E Selectin. These findings set up the basis for further studies to assess whether vitamin D deficiency associated endothelial dysfunction play a role in cardiovascular complications in KTx recipients.