

NEPHROLOGY

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Proceedings of the 2nd International
Congress of Chinese Nephrologists (ICCN)

8–10 December 2017

Taipei, Taiwan



The banner features a central graphic of two kidneys with a stylized '腎' character, set against a globe. To the right is a colorful illustration of a traditional Chinese boat with figures and lanterns. Text in Chinese and English provides details about the congress.

第二屆全球華人腎臟病學術大會
2nd International Congress of Chinese Nephrologists, ICCN

ICCN 2017
Taiwan

2017台灣腎臟醫學會年會
2017 Annual Meeting of Taiwan Society of Nephrology

Date: 2017年12月8-10日
December 8-10, 2017

Venue: 台北萬豪酒店
Taipei Marriott Hotel, Taipei, Taiwan



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Guest Editors:

Professor Hung-Chun Chen
Professor Jer-Ming Chang

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PROCEEDINGS OF THE 2ND INTERNATIONAL
CONGRESS OF CHINESE NEPHROLOGISTS (ICCN)
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ORIGINAL ARTICLE

- 5 Association between albumin and C-reactive protein and ankle-brachial index in haemodialysis
H-J Tsai, J-C Huang, Y-C Tsai, L-I Chen, S-C Chen, J-M Chang and H-C Chen
This article highlights the associations between peripheral arterial occlusive disease and the combination of malnutrition and inflammation, and their interactions in haemodialysis patients.

REVIEW ARTICLES

- 11 Complement in glomerular diseases
Y Tan and M-H Zhao
This review focuses on the contribution of complement system to some glomerular diseases. The pathogenesis of complement-associated kidney diseases and potential novel therapeutic targets are discussed in detail.
- 16 Diet, gut microbiome and indoxyl sulphate in chronic kidney disease patients
C-Y Yang and D-C Tarng
The accumulation of indoxyl sulphate, a gut-derived uremic toxin which is notorious for its pro-inflammatory feature, in CKD patients is exaggerated by the dietary restriction on vegetables, fruits, and yogurt, which leads to the predominance of indole-producing intestinal microbial flora. Thus in order to establish gut symbiosis in CKD patients, it's important to achieve sufficient intake of dietary fiber by proper vegetable pretreatment and accurate fruit selection, instead of directly avoiding these potassium-rich yet fiber-rich and base-producing foods.
- 21 Epigenetic targeting for acute kidney injury
S Zhuang
This article reviews the role and mechanism of histone acetylation and methylation in AKI and provides novel insights into epigenetic regulation of this disease.
- 26 Genetic study of immunoglobulin A nephropathy: From research to clinical application
M Li and X Yu
This review summarizes recent achievements of genetic studies in IgAN, including Genome Wide Association studies (GWAS), which have identified several susceptibility loci, and advanced our understanding of genetic basis and pathogenesis in IgAN. This article also discussed the future research directions of IgAN such as epigenome-wide association study and whole genome sequencing.
- 32 Glomerular mesangial cell and podocyte injuries in diabetic nephropathy
C-W Tung, Y-C Hsu, Y-H Shih, P-J Chang and C-L Lin
Dysregulation of signaling involved in renal development or regeneration often leads to diabetic nephropathy. Recent advances of these molecular mechanisms are discussed.
- 38 New insights into the role and mechanism of Wnt/ β -catenin signalling in kidney fibrosis
Y Zuo and Y Liu
This review summarizes recent advances in our understanding of the regulation, activation and mechanisms of Wnt/ β -catenin signalling in the pathogenesis of kidney fibrosis, and discusses the therapeutic potential of targeting this pathway for the treatment of chronic kidney disease.
- 44 Salt, water and nephron: Mechanisms of action and link to hypertension and chronic kidney disease
Q Qian
 - Na⁺ and water regulations are tightly connected, involving neurohumeral multi-organ regulations of AVP, glucocorticoids, RAAS activation, muscle catabolism, urea generation and salt-retention.
 - High-salt and low-water intake, common in the general population, is potentially pathogenic and linked to the genesis of hypertension and CKD.
 - The tissue (mainly skin and muscle) storage pool of Na⁺ likely participates in Na⁺ and water homeostasis; heavier tissue Na⁺ storage may be pathological and has been associated with resistant hypertension and left ventricular hypertrophy.
 - When appropriate, a modest increase (~0.5 -1.5 L/day) in water intake and reduction in dietary salt to a recommended range can blunt AVP increase and will likely be beneficial.

- 50 Role of C-reactive protein in the pathogenesis of acute kidney injury
Y Tang, S-K Mak, AP Xu and H-Y Lan
Accumulating evidence demonstrates that CRP is not only an inflammation biomarker, but also a mediator of AKI. Recent studies revealed that CRP may mediate AKI by promoting renal inflammation, autophagy, mitochondrial dysfunction, and importantly by impairing tubular epithelial cell regeneration. Thus, CRP can be used as a biomarker for AKI. It is also possible that targeting CRP may represent as a novel therapy for AKI.
- 53 Role of Krüppel-like factor-2 in kidney disease
F Zhong, K Lee and JC He
Transcription factor KLF2 plays a vital role in endothelial homeostasis. In the setting of kidney disease KLF2 expression is reduced, which is associated with aggravated endothelial injury and worsened disease progression. Therapeutic approaches to increase KLF2 function may provide renoprotection and impede the progression of kidney disease.
- 57 Advanced therapeutics in focal and segmental glomerulosclerosis
Y Liu, Y Shi, R Ren, J Xie, W Wang and N Chen
In this systematic review of advanced FSGS therapeutics, the author summarized current evidences on the treatment FSGS and shared their experience. More prospective studies may pave the way to improve patient care in FSGS.
- 62 Update on treatment of immunoglobulin A nephropathy
Y-M Zhang and H Zhang
By systemically searching the clinical trials in immunoglobulin A nephropathy, we update the available treatments and explore the promising targeting pathogenic pathway therapeutic options.
- 68 Biomarkers for acute cardiorenal syndrome
P-C Fan, C-H Chang and Y-C Chen
Cardiorenal syndrome type I (CRS I) is defined as acute kidney injury caused by acute cardiac dysfunction such as acute decompensated heart failure and acute coronary syndrome. This article reviews emerging biomarkers, including brain natriuretic peptide, soluble ST2, angiotensin II, soluble thrombomodulin, neutrophil gelatinase-associated lipocalin, kidney injury molecule-1, cystatin C, interleukin-18 and calprotectin. These biomarkers may help early detecting, differential diagnosis, assessing disease severity and prognosis in patients with CRS I.
- 72 CKD prevention: Perspectives in Hong Kong
SCW Tang
This report describes the burden of chronic kidney disease in Hong Kong and how governmental and non-governmental organisations work together toward improving CKD care and prevention.
- 76 How to treat patients with chronic kidney disease: With special focus on IgA nephropathy
Y Tomino
IgA nephropathy is a major cause of CKD in the world. Using of new biomarkers, we should select the treatment for the patients with IgA nephropathy.
- 80 Lupus nephritis: An update on treatments and pathogenesis
DYH Yap, S Yung and TM Chan
Immunosuppressive therapies for lupus nephritis have evolved considerably over the past few decades, and have significantly improved clinical outcomes. This review highlights the recent updates on the treatments and pathogenesis of lupus nephritis.
- 84 Maternal obesity and offspring risk of chronic kidney disease
MG Wong, NL The and S Glastras
 1. Obesity in pregnancy is increasingly a common problem worldwide.
 2. Maternal obesity has long-lasting functional and histological effects on offspring kidney health.
 3. Autophagy, epigenetic and their influence on inflammatory markers and oxidative stresses, are potential mechanisms involved.
 4. Environmental factors known as "second hits" potentiate the deleterious effects on renal damage in offspring from obese mother.
 5. Offspring obesity has an overwhelming negative impact on offspring kidney health effects, overpowering the effect of maternal obesity.
 6. There is a suggestion of a sex-specific difference in SIRT-1 mediated autophagy on renal outcomes in offspring from obese mother.
- 88 Mineral bone disorders in chronic kidney disease
Y-C Hou, C-L Lu and K-C Lu
This article is a systematic review of the mechanism of CKD-MBD and the complication about CKD-MBD, including uremic vascular calcification and osteoporosis. Nutritional vitamin D, should play a role in managing CKD-MBD.
- 95 Perspectives in renal replacement therapy: Haemodialysis
A Liew
The article reviews the recent advances in haemodialysis technology and their relevance to current clinical practice.
- 100 Perspectives on acute kidney injury strategy in China
Y Zhao and L Yang
This review considers the national health challenge posed by acute kidney disease, the importance of implementing regional improvement strategies and multidisciplinary cooperative AKI team in China.
- 104 Perspectives on acute kidney injury strategy: Hong Kong
C-C Szeto
We review the upcoming Hong Kong College of Physicians guideline on acute kidney injury. The global epidemiology of AKI is also discussed.
- 107 Raising awareness, screening and prevention of chronic kidney disease: It takes more than a village
L-L Hsiao
Chronic kidney disease (CKD) is a major public health problem worldwide. And the incidence is increased in many ethnic minority populations. However, the awareness is alarmingly low. Studies have shown that screenings for CKD improve incidence of end-stage renal disease (ESRD) and ESRD-free survival.

- 112 Taiwan renal care system: A learning health-care system
M-Y Wu and M-S Wu
Prevention of chronic kidney disease is an important public health issue in Taiwan. Through the four facets of this system, including data, knowledge, practice and customer, the experience of Taiwan Renal Data System is a success model of learning health-care system.
- 116 Chronic kidney disease epidemic: How do we deal with it?
JK-C Ng and PK-T Li
Facing the global healthcare challenges posed by chronic kidney disease (CKD), this review outlines multiple practical strategies to tackle the CKD epidemic.
- 121 Role of renin-angiotensin system in acute kidney injury-chronic kidney disease transition
Y-H Chou, T-S Chu and S-L Lin
Renin-angiotensin system (RAS) is activated after AKI and leads to AKI-CKD continuum. RAS blockade can reduce the ensuing CKD and mortality. Using RAS blockade could be considered for the monitoring and therapeutic strategies after AKI.