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### Annual Congress on

# NEPHROLOGY & END-STAGE RENAL DISEASE ESRD

November 16, 2022 | Webinar



### Hosting Organization: Pulsus

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## Scientific Program



## Nephrology 2022 \_\_\_\_

## Opening Ceremony/ 09:00-09:10

November 16, 2022   Wednesday					
Plenary Session					
Sessions on: Nephrotic Syndrome   Kidney diseases   Urology   Kidney and Bladder Stones					
09:10-09:50	Treatment of Anti Neutrophil Cytoplasmatic Antibody (ANCA) - related Vasculitis				
	Kresimir Galesic, Department Of Nephrology, KB Dubrava, Croatia				
09:50-10:30	How less drop out affects sex life study implementation totally less sun light				
	pharmacy institutions in formerly reputed Pune University				
	Rahul Hajare, Indian Council of Medical Research, India				
10:30-11:10	Role of management in the quality of the health care provided				
	Ashraf Salah Ibrahim El Ghaname, Cairo University, Egypt				
	Refreshment Break 11:10- 11:30				
11:30-12:10	IgG4 renal disease a diagnostic dilemma and management approach				
	Akbar Mehmood, Bradford Teaching Hospitals, NHS Foundation Trust, UK				
	Lunch Break 12:10-13:00				
Sessions on: Andrology   Kidney Transplantation   Dialysis   Glomerulonephritis					
Plenary Session					
	Canagliflozin ameliorates renal oxidative stress in ischemia reperfusion				
13:00-13:40	syndrome in rats non-diabetics				
	Sara Ventura, Maria de Fatima F Vattimo, University of Sao Paulo, Brazil				
13:40-14:20	Screening for fabry disease among 619 hemodialysis patients in Saudi Arabia				
	Salwa A Alhemyadi, Taiz University, Saudi Arabia				
14:20-13:00	Hyperspectral imaging for assessment of initial graft function in human kidney transplantation				
	Tristan Wagner, University Hospital Münster, Germany				
Thanks Giving and Closing Ceremony					



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## Scientific Tracks & Abstracts



## Sessions

Nephrotic Syndrome | Kidney diseases | Urology | Kidney and Bladder Stones

#### **Session Introduction**

- Title: Treatment of Anti Neutrophil Cytoplasmatic Antibody (ANCA) related Vasculitis Kresimir Galesic | Department Of Nephrology | KB Dubrava | Croatia
- Title: How less drop out affects sex life study implementation totally less sun light pharmacy institutions in formerly reputed Pune University

Rahul Hajare | Indian Council of Medical Research | India

- Title: Role of management in the quality of the health care provided Ashraf Salah Ibrahim El Ghaname | Cairo University | Egypt
- Title: IgG4 renal disease a diagnostic dilemma and management approach Akbar Mehmood | Bradford Teaching Hospitals | NHS Foundation Trust, UK

Andrology | Kidney Transplantation | Dialysis | Glomerulonephritis

#### Session Introduction

Title: Canagliflozin ameliorates renal oxidative stress in ischemia reperfusion syndrome in rats non-diabetics

Sara Ventura | Maria de Fatima F Vattimo | University of Sao Paulo | Brazil

- Title: Screening for fabry disease among 619 hemodialysis patients in Saudi Arabia Salwa A Alhemyadi | Taiz University | Saudi Arabia
- Title: Hyperspectral imaging for assessment of initial graft function in human kidney transplantation Tristan Wagner | University Hospital Münster | Germany



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#### Treatment of Anti-Neutrophil Cytoplasmatic Antibody (ANCA)-related vasculitis

#### Kresimir Galesic

Department of Nephrology, KB Dubrava, Croatia

ANCA-associated vasculitis is a well-known clinico-pathological group of systemic diseases comprising microscopic poliangiitis, granulomatosis with poliangiitis and eosinophilic granulomatosis with poliangiitis. ANCA-associated vasculitis is very often the cause of acute renal failure. This lecture shows contemporary treatment of these diseases with extensive literature review.

Stepwise treatment of ANCA-associated vasculitis is divided in induction therapy and remission maintenance therapy. Standard Induction Therapy is a combination of glucocorticoids and cyclophosphamide and plasma exchange. Studies that are more recent have shown that rituximab is as effective as cyclophosphamide for induction therapy in patients with newly diagnosed severe ANCA vasculitis and superior for patients with relapsing ANCA vasculitis. In Maintenace Therapy, combination of low-dose glucocorticoids and azathioprine or methotrexate is used. There is also accumulating evidence indicating potential role of rituximab for maintenance therapy in ANCA vasculitis. Leading immunology and nephrology associations developed treatment guidelines. Since ANCA-associated vasculitis is relatively rare diseases, there are a lot randomized controlled studies to provide high level of evidence and treatment recommendations. Avacopan, an orally selective C5a receptor inhibitor was effective in replacing high-dose glucocorticoids in treating vasculitis.

Most patients achieve remission, but relapses often occur. The main treatment considerations, apart from frequently relapsing disease, are disease refractory to treatment and potentially harmful effects of immunosuppressants, especially cyclophosphamide. Future studies are needed to determine the effects of less toxic immunosuppressants, mainly rituximab.

#### **Recent Publications:**

1. Galesic K, Ljubanovic D, Horvatic I. Treatment of renal manifestations of ANCAassociated Vasculitis. J Nephropathology. 2013; 2(1): 6-19. DOI: 10.5812/nephropathol.8971

 Galesić K, Sabljar-Matovinović M, Prkacin I, Kovacević-Vojtusek I. Dijabeticka nefropatija i primarne bolesti glomerula [Diabetic nephropathy and primary glomarular diseases]. Lijec Vjesn. 2009 May-Jun;131(5-6):141-5. Croatian. PMID: 19642534

3. KRESIMIR GALESIC, BORKA BOZIC, IVANA RACIC, MIRA SCUKANEC-SPOLJAR Thrombotic microangiopathy associated with α-interferon therapy for chronic myeloid leukaemia (Case Report)//doi.org/10.1111/j.1440-1797.2006.00524.x.

#### Biography

Kresimir Galesic is Working in University Centre Zagreb he Completed Doctor of medicine in the department of Neurology, Croatia.

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## How less drop out affects sex life study implementation totally less sun light pharmacy institutions in formerly reputed Pune University

#### Rahul Hajare

Indian Council of Medical Research, India

For a young woman, fewer drops out diagnosis can disrupt her body image, the intimacy with the partner and the ability to engage in sex. A fewer drops out diagnosis affects a person's sexual functioning, according to research. The study, led by the University of Pune, found that more than half of young fewer drops out patients reported problems with sexual function, with the probability of reporting sexual dysfunction increasing over time. The study discovered that two years after their initial fewer drops out diagnosis, nearly 53 percent of young adults 18 to 39 years old still reported some degree of affected sexual function. We wanted to increase our understanding of what it has like to adjust to fewer drops out as a young adult but also the complexity of it over time," said lead author affiliated at the Pune University. Fewer drops out can put a patient's life on hold, especially among young adults who are just starting their careers or families.

#### Biography

Rahul Hajare was fortunate enough to be recognized for hard work with scholarships from India council of medical research ministry of health research New Delhi scholarship including a centenary post doc national AIDS research institute Pune that is presented by respected Dr. R.S.Paranjape, Immunologist and World Renowned Scientist., Retired Director & Scientist 'G' National AIDS Research Institute Pune. His initial journey was a quest to heal with a different kind of highly education and did a sponsorship at the ana laboratory in Mumbai. After completing his training, he was privileged to practice in KLE College of pharmacy Bangalore as a board-certified Secretary KLE society Belagavi, he was work to formerly reputed Pune University and services to be recognized by special Investigation team (SIT) for work in education.

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#### Role of management in the quality of the health care provided

#### Ashraf Salah Ibrahim El Ghaname

Cairo University, Egypt

In this abstract we are going to clarify how a good manger couldn't work alone without communicating with the other departments and at the same time communicating and tacking control of members of his own team.

As he needs full cooperation of other departments and also full response of his own team, together with packup plans.

#### Actually, this abstract comes from real situation experience.

A situation as shifting to another medical wastes disposal company makes you responsible for making sure no spread of infection takes place until the shift is complete

Also being in a haemodialysis unite in a remote area mainly over-ruled by tribes of this place makes it difficult to implement the rules, unless you are supported both from the directorate and the understanding staff that are citizens in this area.

A part of other department full cooperation comes the importance of manager in checking availability of supplies, personnel of the working staff and the proper implementation of rules

All the above comes under the responsibility of the manager

Then comes the role of the team work

Effective team work is of good benefit as there is always one that can cover an absent colleague willingly

Also, it makes extra duties (which is a commonly in dialysis units) to pass smoothly.

#### To maintain an effective team work you need to

· Continuous training of the team for regular work to make sure done like the book and also updating their knowledge

• Creating a situation similar to that happen in emergency as working with part of the on-duty staff to check who will obey and who will reject.

#### Biography

He is a doctor in Arafat General Hospital Maqdishio Somalia as a mission through Arab medical union Relief and Emergency Committee.

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#### Akbar Mehmood

Bradford Teaching Hospitals NHS Foundation Trust, UK

A young male was referred by GP to renal services due to unexplained rise in serum creatinine associated complaints of easy fatigability and weight loss of almost 6 kgs in 4 weeks. No other details worth to mention except frequent travelling due to his job. Detail clinical exam was unremarkable. Bed side urine dip was bland but protein creatinine ratio turned out equal to almost 1g proteinuria. Admission creatinine 292 from base line of 122 two yrs ago with eGFR drop from 62 to 21 ml/min over 2 yrs. Complements, autoimmune, vasculitis profile and myeloma screen turned out negative including bone marrow biopsy unremarkable. Raised IgG levels noticed particularly IgG4 subtype. Strong impression was IgG related disease. Kidney biopsy was performed with only nonspecific tubulointerstitial picture, not suggestive of Ig4RD.

As a rescue attempt medium dose prednisone regimen administered for 2-3 months course which resulted into improvement in serum Cr to 130s base line. It was a blind treatment based to salvage nephrons with patient's consent. Gentleman was readmitted few months later as GP detected rise in creatinine to 290s, drop in eGFR to 27ml/min from 40 over 6-8 months period. Almost two months ago he travelled to Kenya, developed symptomatic COVID infection there. In Kenya he was told eGFR has dropped. Re admitted for further evaluation. Only concerning lab finding was high Ig 4 levels. Kidney biopsy was performed again which turned out to be features consistent with Ig4 related disease, limited to kidneys. Immunohistochemistry showed significant positivity for IgG4 within the plasma cell infiltrate; approximately 150 positive cells per HPF. Dense fibrosis was present within core biopsy. However a storiform fibrosis was not established a common occurrence in needle biopsies taken for exclusion of IgG4-related disease. Steroid course resulted in creatinine improvement. Mycophenolate added to the regimen and prepared for rituximab two doses four week apart in order to cure the condition. Learning point to highlight is unexplained creatinine rise is a sensitive and specific marker heralding kidney injury necessitating cause hunt to tailor disease specific treatment. Diagnosing Ig4 related disease can be challenging. Disease course can be unusual, subtle and insidious which should not preclude redoing biopsy of the involved organ. Biochemical indicators are suggestive but tissue diagnosis is mandatory to definitely label the diagnosis as heavy immunosuppression is required to halt the process. Ig4 renal disease is a multisystem condition, missing diagnosis equals permanent failure of the organ involved. In this case ongoing kidney injury would result in renal failure requiring renal replacement therapy causing significant mental trauma along with health care economic burden.

#### **Recent publications:**

1. Stone JH, Zen Y, Deshpande V. IgG4-related disease. N Engl J Med 2012; 366:539.

2 Kamisawa T, Zen Y, Pillai S, Stone JH. IgG4-related disease. Lancet 2015; 385:1460.

3 Zhang W, Stone JH. Management of IgG4-related disease. Lancet Rheumatol 2019; 1:e55.

4 Murashima M, Tomaszewski J, Glickman JD. Chronic tubulointerstitial nephritis presenting as multiple renal nodules and pancreatic insufficiency. Am J Kidney Dis 2007; 49:e7.

5 Watson SJ, Jenkins DA, Bellamy CO. Nephropathy in IgG4-related systemic disease. Am J Surg Pathol 2006; 30:1472.

6 Saeki T, Nishi S, Imai N, et al. Clinicopathological characteristics of patients with IgG4-related tubulointerstitial nephritis. Kidney Int 2010; 78:1016.

#### Biography

He is working as a doctor and at Bradford Teaching Hospitals NHS Foundation Trust, UK and he has attend many international conference and also he had published many papers in the international journals.

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## Canagliflozin ameliorates renal oxidative stress in ischemia reperfusion syndrome in rats non-diabetics

#### Sara Ventura and Maria de Fatima F Vattimo

University of Sao Paulo, Brazil

Recent meta-analyses have shown that sodium-glucose cotransporter 2 (SGLT-2) inhibitors alleviate acute kidney injury (AKI) in diabetic patients. This antidiabetic drug has proven effective in other comorbidities such as heart failure, however, there are no studies that report on its prevention in AKI. Ischemia Reperfusion syndrome (I/R) is one of the leading causes of AKI. The incidence of AKI is increasing, and AKI causes at least 2 million deaths worldwide/year. I/R syndrome is characterized by tissue damage mediated by reactive oxygen species (ROS) generation. Oxidative stress is considered one of the main pathogenic and aggravating factors in kidney disease, in which it contributes to AKI, to the transition from AKI to Chronic Kidney Disease (CKD), and to the progression from CKD to End Stage Renal Disease (ESRD). Thus, the purpose of this study was to investigate the renoprotective of effect of canagliflozin in I/R syndrome in non-diabetic rats. Methods: Wistar rats were randomly divided in: SHAM: surgery simulated control; I/R: ischemic group (30 minutes bilateral renal clamping); CANA: canagliflozin, 30 mg/kg once a day, 5 days; CANA+I/R: as described. Renal hemodynamics as, renal blood flow (RBF) and renal vascular resistance (RVR); renal function (inulin clearance, serum creatinine); oxidative metabolites (urinary peroxides, TBARS, urinary nitrate and thiols in renal tissue) and the activation of the nuclear factor erythroid 2-related factor 2 were analyzed. Results: Compare with Sham group, the I/R group showed significantly decrease renal function and levels of thiol antioxidants, as well as increased oxidative metabolites. Nevertheless, pretreatment with Canagliflozin reversed these changes. In addition, canagliflozin treatment resulted in a marked increase in antioxidant protein expression compared with I/R group. Conclusions: Canagliflozin did not induced hypoglycemia and has significant potential as a therapeutic intervention to ameliorate renal injury after renal I/R and attenuation of oxidative stress.

#### **Recent Publications:**

1. Yang S, He W, Zhao L, Mi Y (2022) Association between use of sodium-glucose cotransporter 2 inhibitors, glucagonlike peptide 1 agonists, and dipeptidyl peptidase 4 inhibitors with kidney outcomes in patients with type 2 diabetes: A systematic review and network meta-analysis. PLOS ONE 17(4): e0267025.

2. Bocchi, Edimar Alcides et al. (2021) Emerging Topics in Heart Failure: Sodium-Glucose Cotransporter Inhibitors 2 (iSGLT2) in HF. Brazilian Archives of Cardiology 2021, v. 116, n.2

3. Naomi Boyer, Jack Eldridge, John R. Prowle, Lui G. Forni (2022) Postoperative AKI. CJASN June 2022, CJN.16541221

4. Sang Jun Han, H. Thomas Lee (2019) Mechanisms and therapeutic targets of ischemic acute kidney injury Kidney Res Clin Pract. 2019;38(4):427-440.

5. Guerrero-Hue M, Rayego-Mateos S, Vázquez-Carballo C, et al. (2020) Protective Role of Nrf2 in Renal Disease. Antioxidants (Basel). 2020;10(1):39.

#### Biography

She has ability in exercise search about kidney disease particularly in acute kidney disease. She has the support of her supervisor and the research group of the animal model experimental laboratory at the university of Sao Paulo's school of nursing. It seeks to represent nursing in basic research, providing results in evidence-based care.

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#### Screening for fabry disease among 619 hemodialysis patients in Saudi Arabia

#### Salwa A Alhemyadi, Mamoun Elawad, Konstantinos Fourtounas Zakaria Abdrabbou Bellalah Alaraki Siddeg Younis, Zahir Nawaz Salem Algurashi and Sarar Mohamed

Taiz University, Saudi Arabia

Objectives: The aim of this study was to determine the prevalence of FD among Saudi patients on hemodialysis

Methods: This prospective study was conducted in three major hospitals in Saudi Arabia All adult patients (> 18 years old) attending the dialysis unit who have end-stage renal disease (ESRD) and on hemodialysis were included Known patients with FD and those who refused to participate in the study were excluded All eligible patients were screened for FD using Dry Blood Spot (DBS) for  $\alpha$ -Gal A A positive DBS (enzyme activity < 40%) was followed by another confirmatory enzyme assay if the second DBS sample was also positive (enzyme activity < 40%), a Sanger sequencing of the GLA gene was performed

Results: A total of 619 patients with ESRD and on hemodialysis were screened for FD using DBT for a-Gal A enzyme level Enzymatic activity was below 40% in 11 samples On retesting, three females had < 20% enzymatic activity suggesting FD Sanger sequencing of these three females showed the variant c[1055C>G] (p[Ala352Gly]) confirming the diagnosis of FD Family screening of one of these three patients revealed one asymptomatic female carrying the same mutation

Conclusion: The prevalence of FD in this cohort was 48 per 1000 patients Screening of Fabry patients with ESRD seems to be a cost-effective strategy Furthermore, screening of relatives of patients identified by screening enhances this screening strategy.

#### References

1 Published Article about screening for Fabry disease among 619 hemodialysis patients in Saudi Arabia Saudi Med J 2020 Aug; 41(8): 813-818doi: 1015537/smj2020825184

2 The clinical outcome of HIV infection at a tertiary Care Center in Riyadh, Saudi Arabia, July 2020

3 Characteristics and outcome of viral pneumonia caused by influenza and Middle East respiratory syndrome-coronavirus infections: A 4-year experience from a tertiary care center 2019

4 Case report of Cytomegalovirus Hepatitis in HIV infection 2016

5 A case report accepted for publication recently in SKDT for 2022 issues: about pauci-immune lupus nephritis in antiphospholipid: A diagnostic challenge 2020.

#### **Biography**

He was experienced physician trained in the discipline of internal medicine with well-rounded experience in acute and in-patient care i have had the opportunity to provide medical care for various communities in the past during my training of Saudi board of internal medicine and as a fellow of Nephrology, I have an opportunity to teach paramedical staff, undergraduate medical students and interns Deputy of the research committee in Nephrology department at PSMMC since 2019 I am keen in research and looking forward to a challenging and professionally competent environment in which I can learn and practice evidence based medicine.

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## Hyperspectral imaging for assessment of initial graft function in human kidney transplantation

Tristan Wagner<sup>1</sup>, Sophie Romann<sup>1</sup>, Shadi Katou<sup>1</sup>, Stefan Reuter<sup>1</sup>, Thomas Vogel<sup>1</sup>, Felix Becker<sup>1</sup>, Haluk Morgul<sup>1</sup>, Philipp Houben<sup>1</sup>, Philip Wahl<sup>2</sup>, Andreas Pascher<sup>1</sup>and Sonia Radunz<sup>1</sup>

<sup>1</sup>University Hospital Münster, Germany <sup>2</sup>Diaspective Vision GmbH, Germany

The aim of our study was to evaluate Hyperspectral Imaging (HSI) as a rapid, non-ionizing technique for the assessment of organ quality and the prediction of delayed graft function (DGF)in kidney transplantation after static cold storage (SCS, n = 20), as well as hypothermic machine perfusion (HMP, n = 18). HSI assessment of the kidney parenchyma was performed during organ preservation and at 10 and 30 min after reperfusion using the TIVITA® Tissue System (Diaspective Vision GmbH, Am Salzhaff, Germany), calculating oxygen saturation (StO2), near-infrared perfusion index (NIR), tissue haemoglobin index (THI), and tissue water index (TWI). Recipient and donor characteristics were comparable between organ preservation groups. Cold ischemic time was significantly longer in the HMP group (14.1 h [3.6–23.1] vs. 8.7h [2.2–17.0], p= 0.002). The overall presence of DGF was comparable between groups (HMP group n = 10 (55.6%), SCS group n = 10 (50.0%)). Prediction of DGF was possible in SCS and HMP kidneys; StO2at 10 (50.00 [17.75–76.25] vs. 63.17[27.00–77.75] %, p= 0.0467) and 30 min (57.63 [18.25–78.25] vs. 65.38 [21.25–83.33]%, p= 0.0323) after reperfusion, as well as NIR at 10 (41.75 [1.0–58.00] vs. 48.63 [12.25–69.50], p= 0.0137) and 30 min (49.63 [8.50–66.75] vs. 55.80 [14.75–73.25], p= 0.0261) after reperfusion were significantly lower in DGF kidneys, independent of the organ preservation method. In conclusion, HSI is a reliable method for intraoperative assessment of renal microperfusion, applicable after organ preservation through SCS and HMP, and predicts the development of DGF.

#### **Recent publications:**

1. Wagner T, Radunz S, Becker F, Chalopin C, Kohler H, Gockel I, Jansen-Winkeln B. Hyperspectral imaging detects perfusion and oxygenation differences between stapled and hand-sewn intestinal anastomoses. Inn Surg Sci 2022; accepted for Publication May 25, 2022.

2. Wagner T, Katou S, Wahl O, Vogt F, Kneifel F, Morgul H, Vogel T, Houben P, Becker F, Struecker B, Pascher A, Radunz S. Hyperspectral imaging for quantitative assessment of hepatic steatosis in human liver allografts. Clin Transpl 2022; May 27: e14736.

3. Romann S, Wagner T, Katou S, Reuter S, Vogel T, Becker F, Morgul H, Houben P, Wahl P, Pascher A, Radunz S. Hyperspectral Imaging for Assessment of Initial Graft Function in Human Kidney Transplantation. Diagnostics 2022;12(5):1194.

4. Sucher R, Wagner T, Köhler H, Sucher E, Guice H, Recknagel S, Lederer A, Hau HM, Rademacher S, Schneeberger S, Brandacher G, Gockel I, Seehofer D. Hyperspectral Imaging (HSI) of Human Kidney Allografts. Ann Surg. 2020 Nov 13.

5. Hau HM, Jahn N, Brunotte M, Wagner T, Rademacher S, Branzan D, Sucher E, Seehofer D, Sucher R. Pre-operative anklebrachial index for cardiovascular risk assessment in simultaneous pancreas-kidney transplant recipients: a simple and elegant strategy! BMC Surg. 2021 Mar 22;21(1):156.

#### Biography

Tristan Cedric Wagner is working as an Assistant physician at the University Hospital Münster Department of General, Visceral and Transplantation Surgery, Germany.

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