Ecodialysis: is it possible to design an eco-friendly system?

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The authors of the abstracts below will receive a diploma.

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THE PRO-PKD SCORE, A NEW ALGORITHM TO PREDICT RENAL OUTCOME IN AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE (ADPKD)
Emilie Cornec-Le Gall, Brest, France

SO016
TOLVAPTAN-TREATMENT OF ADPKD CONFERS PERSISTENT EGFR IMPROVEMENT: RESULTS FROM THE TEMPO 4:4 EXTENSION TRIAL Vicente Torres, Rochester, USA

SO018
EFFICACY AND SAFETY OF MYCOPHENOLATE-MOFETIL VS. LEVAMISOLE IN CHILDREN WITH IDIOPATHIC NEPHROTIC SYNDROME: RESULTS OF A RANDOMIZED CLINICAL TRIAL Biswanath Basu, Kolkata, India

SP410
COMBINING RENAL CELLS AND MICRO- AND NANOTECHNOLOGIES: A NEW ROUTE TO THE DEVELOPMENT OF BIOARTIFICIAL PLATFORMS FOR IN VITRO TESTING DRUG NEPHROTOXICITY Anna Giovanna Sciancalepore, Arnesano (LE), Italy

MO003
A NON-TRANSCRIPTIONAL ROLE OF HYPOXIA-INDUCIBLE FACTOR (HIF)-1 IN DEFENSE AGAINST DNA DOUBLE STRAND INJURY Tetsuhiro Tanaka, Tokyo, Japan

MO026
SURVIVAL OF CALCIPHYLAXIS IN END STAGE RENAL DISEASE PATIENTS FROM THE UNITED STATES RENAL DATA SYSTEM Lu Huber, Augusta, USA

MO028
MESENCHYMAL STEM CELLS INDUCED IN VITRO GENERATION OF REGULATORY T-CELLS: A CELL-BASED THERAPY TO PROMOTE TRANSPLANTATION TOLERANCE Shruti Dave, Ahmedabad, India

TO031
DECLINE IN ESTIMATED GLOMERULAR FILTRATION RATE AND SUBSEQUENT RISK OF MORTALITY: A META-ANALYSIS OF 35 COHORTS IN THE CKD PROGNOSIS CONSORTIUM Josef Coresh, Baltimore, USA
AFTER LIVING KIDNEY DONATION Marco van Londen, Groningen, The Netherlands

TO026 TLR4 LINKS PODOCYTES WITH THE INNATE IMMUNE SYSTEM TO MEDIATE GLOMERULAR INJURY IN PATIENTS WITH TYPE 2 DIABETES AND MICROALBUMINURIA (MA) Emanuele Parodi, Genoa, Italy

Best Abstracts presented by Young Authors

The authors of the abstracts below will receive a grant of EUR 500, free congress registration and a certificate.

SO001 CRASHED - A NOVEL RISK STRATIFICATION TOOL FOR PREDICTING AKI Vijaya Ramasamy, Wrexham, UK

SO007 BRANCHED-CHAIN AMINO ACID SUPPLEMENTATION ACCELERATES CYST GROWTH IN A MOUSE MODEL OF AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE Junya Yamamoto, Sapporo, Japan

SO017 CLINICAL CHARACTERISTICS AND OUTCOMES OF INFANTS ON CHRONIC DIALYSIS Enrico Vidal, Padova, Italy

SO025 THE RELATIONSHIP BETWEEN ACCUMULATING TISSUE PHOSPHATE AND CALCIUM IS DEPENDENT ON VITAMIN K STATUS IN EXPERIMENTAL CHRONIC KIDNEY DISEASE Jason Zelt, Kingston, Canada

SO026 IMPROVEMENT OF CKD-MBD SERUM PARAMETERS IS ASSOCIATED WITH BETTER SURVIVAL. THE 3-YEAR FOLLOW-UP COSMOS STUDY Marla Dionisi, Oviedo, Spain

SO027 CELLULAR AND MOLECULAR MECHANISMS INVOLVED IN VASCULAR CALCIFICATION: THE ROLE OF LAMIN A Pablo Roman-Garcia, Oviedo, Spain

SO031 MECHANISMS AND RELEVANCE OF ENAC REGULATION BY EGF: ROLE IN THE DEVELOPMENT OF SALT-SENSITIVE HYPERTENSION AND PKD Alexander Staruschenko, Milwaukee, USA

SO039 ANALYSIS OF ABDOMINAL CT SCANS IN 35 PATIENTS WITH ENCAPSULATING PERITONEAL SCLEROSIS: VALIDATION OF TWO DIAGNOSTIC SCORES AND PREDICTION OF THE MACRO-SOCOPICAL PHENOTYPE Joerg Latus, Stuttgart, Germany

SO040 ALANYL-GLUTAMINE IN PERITONEAL DIALYSIS FLUID LEADS TO INCREASED EX-VIVO STIMULATED CYTOKINE RELEASE OF PERITONEAL CELLS Rebecca Herzog, Vienna, Austria

SO041 PREGNANCY OUTCOMES IN RENAL TRANSPLANT RECIPIENTS: A SINGLE-CENTRE STUDY Sokratis Stoumpos, Glasgow, UK

SP011 ROLE OF EXTRACELLULAR MATRIX DEFECTS IN THE PROGRESSION OF THE POLYCYSTIC KIDNEY DISEASE Caroline Clerckx, Paris, France

SP013 RENAL VOLUME IN CHILDREN WITH AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE Svetlana Papizh, Moscow, Russian Federation

SP066 WNT10A OVEREXPRESSION IN KIDNEY FIBROBLASTS INDUCES KIDNEY FIBROSIS IN ACUTE INTERSTITIAL NEPHRITIS Akihiro Kuma, Kitakyushu, Japan

SP068 EFFECTS OF CILASTATIN ON GENTAMICIN-INDUCED RENAL DAMAGE. IN VITRO AND IN VIVO EVIDENCE Alberto Lázaro, Madrid, Spain

SP102 SYNEDECAN-1 IN DECOMPENSATED HEART FAILURE: ASSOCIATION WITH RENAL FUNCTION AND MORTALITY Tacyano Leite, Fortaleza, Brazil

SP136 FREQUENCY AND DOSING OF URIC ACID LOWERING THERAPY IN PATIENTS WITH CKD 3 - BASELINE DATA OF THE GERMAN CHRONIC KIDNEY DISEASE COHORT Markus Heisterkamp, Hannover, Germany
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SERUM SODIUM RATE OF CHANGE AND VARIABILITY: ASSOCIATIONS WITH SURVIVAL IN INCIDENT HEMODIALYSIS PATIENTS Joselyn Reyes-Bahamonde, NY, USA

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EPIDEMIOLOGY OF POTENTIALLY DANGEROUS THERAPEUTIC PRESCRIBING IN HOSPITAL PATIENTS WITH RENAL INSUFFICIENCY Patricia Blank, Basel, Switzerland

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REGULATION OF LIVER AND KIDNEY ERYTHROPOIETIN GENE EXPRESSION IN A RAT MODEL OF ANEMIA ASSOCIATED WITH CHRONIC RENAL FAILURE João Fernandes, Coimbra, Portugal

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URINARY AND SEROLOGICAL MARKERS OF COLLAGEN DEGRADATION ARE ASSOCIATED WITH DISEASE SEVERITY AND INFLAMMATION IN IGA NEPHROPATHY PATIENTS Federica Genovese, Herlev, Denmark

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ABNORMAL URINARY EXCRETION OF NKCC2 AND AQP2 IN RESPONSE TO HYPERTONIC SALINE IN CHRONIC KIDNEY DISEASE. A CASE CONTROL STUDY Janni Jensen, Holstebro, Denmark

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THE ROLE OF PKC-β AND MICRORNAS IN DIABETIC NEPHROPATHY Malte Kölling, Hannover, Germany

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CORRELATION OF PODOCYTE ULTRASTRUCTURAL CHANGES AND LEVEL OF PROTEINURIA IN PATIENTS WITH DIFFERENT FORMS OF PRIMARY GLOMERULOPATHIES Ian Proletov, Saint-Petersburg, Russian Federation

SP413
ECODIALYSIS: IS IT POSSIBLE TO DESIGN AN ECO-FRIENDLY SYSTEM? Martina Ferraresi, Turin, Italy

SP450
NATIONAL RATES OF ADMISSION, MORTALITY AND POST-PERITONITIS TECHNIQUE SURVIVAL ACCORDING TO DAY OF THE WEEK IN ENGLISH PERITONEAL DIALYSIS PATIENTS James Fotheringham, Sheffield, UK

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NONALCOHOLIC FATTY LIVER DISEASE (NAFLD) PROVEN BY TRANSIENT ELASTOGRAPHY IN HEMODIALYSIS PATIENTS; IS IT A NEW RISK FACTOR FOR ADVERSE CARDIOVASCULAR EVENTS? Ivana Mikolasevic, Rijeka, Croatia

SP483
OVERHYDRATION IS ASSOCIATED WITH ENDOTHELIAL DYSFUNCTION IN HEMODIALYSIS (HD) PATIENTS: ROLE OF PENTAXIN 3 (PTX3) AND ROS PRODUCTION BY NEUTROPHILS Giovanni Pertosa, Bari, Italy

SP525
REDUCED INFECTION RATES IN A DIALYSIS NETWORK WITH A NOVEL SURVEILLANCE PROGRAMME Maryam Khosravi, London, UK
**Results:** The data of 94 (48 from group A and 46 from group B) patients (53M and 41F) were fully analysed. The median age was 70 (27-92) years and dialysis vintage was 47.2 (7.5-454.6) months. No difference was found in the demographic characteristics and treatment parameters. 164 MID sessions and 161 POST sessions were analysed. A statistically significant difference in RR (%) was found for three MMW molecules: β-2 Microglobulin (B2M), Complement Factor D (CFD) and Retinol Binding protein (RBP). Values were 80.1±0.4 in POST vs 81.6±0.4 in MID (p=0.01) for B2M, 72.8±0.8 in POST vs 76.4±0.6 in MID (p=0.003) for CFD and 24.1±0.9 in POST vs 30.0±0.8 in MID (p=0.003) for RBP. The other investigated molecules, ADMA, Homocystein, Leptin and Myoglobin, shown a better MID RR but it is not statistically significant. The renfused volume was significantly higher in MID than in POST (average total volume of 43.63 L in MID vs 20.96 L in POST), but also the amount of renfused volume in MID exchanged in its post-dilution stage (estimated around the 2/3 as shown in Maduell publication) is significantly higher (28.8 L in MID vs 20.96 L in POST); this could explain the depuration capability of MID respect POST for the MMW molecules, indeed, was found a linear correlation (R2 0.83) between the delta differences in RR (RR MID - RR POST) and MW of molecules (Figure 1). No significant differences between MID - and POST-dilution were observed for small MW molecules depuration (assessed by second-generation daugirdas Kt/Vd), neither for Albumin loss.

**Conclusions:** MID is superior to remove MMW molecules as compared to POST. This very likely can be related to an higher total amount and efficiency of substituted volume obtained in the MID group as compared to the POST group.

**Abstracts**

**ECODIALYSIS: IS IT POSSIBLE TO DESIGN AN ECO-FRIENDLY SYSTEM?**

Martina Ferraresi¹, Amina Pereno², Marta Nazha¹, Silvia Barbero² and Giorgina El Pozzi³

¹University of Torino, Turin, Italy, ²Politecnico of Turin, Turin, Italy

**Introduction and Aims:** Attention to the environmental impact is still limited in medicine. Chronic Hemodialysis produces about 600,000 tons of plastic wastes per year. The economic crisis and the awareness of the ecosystem induced to focus attention on medicine. Chronic Hemodialysis produces about 600,000 tons of plastic wastes per year. Introduction and Aims: Martina Ferraresi

**Methods:** An analysis of the disposables employed on dialysis and of their “final destiny” (the grave) was performed in 3 subsequent bicarbonate dialysis sessions with 3 different dialysis machines. All disposables and packagings were photographed, classified, weighted and analyzed as for type of materials, possibility to recycle, contamination with blood or biological fluids.

**Results:** Each dialysis session produces between 4 and 6 kg of wastes; it may be divided into about 2 kg of residual fluids (to be discharged); 2 kg of “contaminated” wastes (i.e. in contact with blood or fluids) and 2 kg of “non-contaminated” wastes. The differentiation is crucial, as the weight of contaminated waste products is the main determinant of disposal cost (approximately 2 Euro/kg in Italy). Furthermore, each dialysis session produces between 0.9 and 1.4 kg of packaging (cardboard and plastic); this is usually discharged separately, but where this procedure is not followed, it adds considerably to the volume and weight of the final wastes. Therefore, a differentiated waste collection may produce over 6 kg of waste products per session; the cost (up to 12-14 Euros) corresponds to 20-40% of the cost of the disposables. While all the cardboard and paper wastes are readily recyclable, the plastic wastes (non contaminated) can theoretically enter a dedicated recycle process. In this regard, the wastes may be classified into “families” of different plastic materials, with different compatibility for joint recycling. However, in most of the cases the types of plastic components are not identifiable and separable. Further problems are related with: packaging oversize: the content of most of the packaging of dialysis materials occupies between 50 and 75% of the space, increasing costs (production, wastes, transportation). Emptying: there are no automated systems for emptying residual fluids after the dialysis session. Difficult separation of materials: many packages are laminated made of different components. Difficult separation of contaminated material: there is no clear definition of “contaminated”. Conclusions: Attention to the life cycle of the dialysis disposables may conjugate the attention to our planet, reducing the “mountain” of wastes produced every year; simple tasks, as careful emptying and differentiating between “contaminated” and “non contaminated” wastes may lead to a 20% saving of the costs of a dialysis session. Cooperation with the Industry is needed for designing recycling strategies in keeping with the modern ‘cradle to cradle’ approach.