Città di Milazzo

Università degli Studi di Messina

Ordine Provinciale dei Medici Chirurghi e degli Odontoriatri di Messina

The Mediterranean Kidney Society

Second Congress

ABSTRACT BOOK

Milazzo (ME), Italy, April 12-14, 2013

president

BIAGIO RICCIARDI, MD

SAMPERI EDITORE

Samperi Editore
Via XXIV Maggio, 54 - Messina

ISBN 978-88-86038-90-4

Figures out of text are taken from:
"Marcelli Malpighii, opera posthuma (1698)
Biagio Ricciardi, private collection

Dear Colleagues

I'm very pleased to welcome you to Sicily and to the beautiful town of Milazzo, with its impressive castle of Frederick II, rich in history and from which we can enjoy a wonderful view. Today we celebrate the Second Congress of the Mediterranean Society of Nephrology, which is showing signs of scientific growth marked by the large number of participants, all qualified nephrologists operating in the Mediterranean. The number of abstracts submitted are the sign of the interest that the scientific event has aroused. The topics that will be discussed during the event cover a wide area of nephrology and reflect the current nephrological problems that require not only a scientific, professional and social commitment, but also significant economic costs, hard to maintain due to the period of serious economic crisis that most of the Mediterranean countries are facing nowadays.

I express heart felt thanks to EuTox Working Group of ERA-EDTA for organizing the session on Uremic Toxicity.

The way we have to follow which can help us reduce the costs of kidney disease, without interfering with the quality of care, remains that of epidemiological studies and prevention, being areas of interest on which we must focus our attention. By doing so we may contribute to relieving the suffering of our patients thus improving the health status of those who live along the shores of the Mediterranean, by making the best use of our own resources. It is with this hope that I wish you all the best and a pleasant stay here in Sicily.

Guido Bellinghieri

Dear Members and Guests of the Mediterranean Kidney Society

I am very pleased to welcome you in Milazzo for the Second Congress of the Mediterranean Kidney Society, in this wonderful seat full of history, legends and symbols as the mysterious scarab in lava stone present on the eastern tower of the castle.
Indeed for me and my colleagues at the Milazzo "Fogliani" Hospital, has been a privilege to organize the event with the support of the Council and the Scientific Committee, and the important number of abstracts submitted and the presence of nephrologists throughout the Mediterranean area have well repaid for all the efforts.
The matter made available in this book grants fruitful discussions and a plenty of take home messages, and the memory of a Malpighi's ancient book here inserted, can also connects the past with the future.
I do hope that returning back to your working place you might feel satisfied with the results of the Congress and rich of new ideas and friends. I take the opportunity to thank all of you for the contributions to this event on the shores of the Mediterranean Sea, a place where many literary, philosophical and scientific ideas have been matured in our splendid past.

Biagio Ricciardi, MD
President of the 2nd Congress of the MKS

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BIAGIO RICCIARDI, MD
Division of Nephrology.
Milazzo General Hospital Contrada Grazia, 98057 Milazzo
E-mail: biagioricciardi@asp.messina.it - biagioricciardi@virgilio.it

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PROGRAM

DAY ONE
FRIDAY - APRIL 12, 2013

3.00 PM -7.30 PM Registrations

6:00 PM Opening Ceremony

Chairs: GUIDO BELLINGHIERI, NATALE G. DE SANTO & BIAGIO RICCIARDI

BRUNO MANCUSO, *Senator of the Italian Republic*
CARMELO PINO, *Mayor of Milazzo*
FRANCESCO TOMASELLO, *"Rector Magnificus" University of Messina*
GIUSEPPE LACCOTO, *Deputy Sicilian Parliament*
MANLIO MAGISTRI, *Manager of ASP Messina*
GIACOMO CAUDO, *President of Messina Medical Association*

6.20 PM Honorary Memberships

Chairs: GUIDO BELLINGHIERI & NATALE G. DE SANTO

ATHANASIOS DIAMANDOPOULOS
RASHAD BARSOUM
RADOSLAV KVEDER
AZIZ EL MATRI
JUAN MARIANO RODRIGUEZ-PORTILLO
NATALE G. DE SANTO
VINCENZO SAVICA *Webmaster*
MASSIMO CIRILLO *Assistant secretary*
BIAGIO RICCIARDI, *President of the Congress*

6.30-7.10 PM SESSION 1 – STATE OF THE ART LECTURE (35 min + 5 min)

Chair: AYSE BALAT

RASHAD BARSOUM
Emeritus Professor Department of Medicine and Cairo Kidney Center, Cairo, Egypt
Renal Amyloidosis

7:10 PM Concert

8:00 PM Cocktail in the Benedectine Monastery in The Castle

10:00 PM Adjourn

CME SESSIONS

DAY TWO
SATURDAY- APRIL 13, 2013

DISCUSSANTS OF THE DAY:
ANGEL ARGILES, SANTINA CASTELLINO, GIUSEPPE ENIA,
BOULOS HABASHI, MOHAMMED M. NASRALLAH & ALBERTO ORTIZ

9:00- 9.40 AM - SESSION 2- STATE OF THE ART LECTURE (35 min + 5 min)

Chair: HALIMA RESIC

AZIZ EL MATRI
Tunis Dialysis Centre, Tunis, Tunisia
Dialysis and Kidney Transplantation in North Africa

9.40-11:20 AM - SESSION 3 - UREMIC TOXICITY (15 min + 5 min)

VASCULAR REMODELLING: A RESEARCH AXIS OF EUTOX

In collaboration with EuTox, Working Group of ERA-EDTA

Chairs: VERA JANKOWSKI & ALESSANDRA PERNA

9:40 ALBERTO ORTIZ, Spain
Department of Nephrology, IIS - Fundación Jiménez Díaz, Madrid, Spain
Biomarkers of Vascular Injury in CKD Patients

10:00 JUAN MARIANO RODRIGUEZ-PORTILLO
University Hospital Reina Sofia, Unidad de Investigacion, Cordoba, Spain
Impact of FGF23 and Klotho on Vascular Calcification

10.20 JOACHIM JANKOWSKI
Charité, Med. Klinik IV (CBF) - Nephrologie, Berlin, Germany
Mechanisms of vascular calcification: Impact of Dinucleoside Polyphosphates

10.40 VERA JANKOWSKI
Charité, Med. Klinik IV (CBF) - Nephrologie , Berlin, Germany
Endogenous Synthesis of Dinucleoside Polyphosphates as Enhancer of Vascular Calcification Processes in CKD Patients

11.00 ANGEL ARGILES
CNRS, RD-Néphrologie
Groupe REIN & Hypertension EA3127
Institut Universitaire de Recherche Clinique IURC-UM1, Montpellier, France
New Therapeutic Approaches for Prevention and Treatment of Vascular Calcification

11:20 AM Break

11:50 AM - 1.10 PM- SESSION 4 - PHOSPHORUS TOXICITY (15 min + 5 min)

Chairs: EMANUEL FARRUGIA & VINCENZO SAVICA

11:50 MASSIMO CIRILLO
Chair of Nephrology, University of Salerno, Italy
Renal Phosphate Handling

0:10 VINCENZO SAVICA
Chair of Nephrology University of Messina and Division of Nephrology, Papardo Hospital, Messina, Italy
Therapy of Hyperphosphatemia in Uremia

0.30 LUCIA DI MICCO, BIAGIO DI IORIO, DONALD MOLONY, EMANUELE CUCCINIELLO, VINCENZO BELLIZZI, DOMENICO RUSSO, ANTONIO BELLASI, ANTONIETTA DE BLASIO
Nephrology, Landolfi Hospital, Solofra (AV), Division of Renal disease and Hypertension, Department of Medicine, University of Texas Houston Medical School, Houston, Division of Pediatric Nephrology, University of Texas Houston Medical School, Nephrology Ruggi d'Aragona Hopital, Salerno, Department of Nephrology University Federico II, Naples, Nephrology Unit, Sant'Anna Hospital, Como, Italy and USA
Sevelamer Versus Calcium Carbonate in Incident Hemodialysis Patients: Results of Independent Study

0.50 MOHAMED M. NASRALLAH, NOHA A. OSMAN, AMAL R. EL-SHEHABY, TAREK S. FAYAD, MONA M. SALEM and USAMA A.A. SHARAF ELDIN
Department of Nephrology, Department of Clinical Biochemistry, department of Endocrinology, Kasr Al-Ainy School of Medicine, Cairo University, Cairo, Egypt
The Association Between Fibroblast Growth Factor-23 and Vascular Calcification in CKD is Mitigated by Markers of Inflammation

1:10 PM Light Mediterranean Lunch

2.30-4.20 PM SESSION 5 - CKD THERAPY AROUND THE MEDITERRANEAN SEA (15 min + 5 min)

Chairs: MASSIMO CIRILLO & JUAN MARIANO RODRIGUEZ-PORTILLO

2.30 HALIMA RESIC
Hemodialysis Clinic, Clinical Center University of Sarajevo, Bosnia & Herzegovina
Exercise on dialysis – Single Center Experience

2 .50 J. BUTTIGIEG, L. MERCIECA, A. SALIBA, S. AQUILINA, E. FARRUGIA
Mater Dei Hospital, Malta
Referral Practices of Chronic Kidney Disease Patients within Mater Day Hospital in Malta

3.10 TAHAR RAYANE
Department of Nephrology, Dialysis and Kidney transplantation, CHU Bab El Oued, Algiers, Algeria
Chronic Kidney Disease in Algeria: What is new in 2013

3.30 JADRANKA BUTUROVIC-PONIKVAR on behalf of the Department of Nephrology, University Medical Center of Ljubljana, Slovenia and Slovenian Renal Replacement Therapy Registry Group
Renal Replacement Therapy in Slovenia

3.50 GUIDO BELLINGHIERI
Chair of Nephrology, University of Messina, Messina, Italy
Dialysis and Transplantation in Sicily

4.10-4.50 PM - SESSION 6 - LECTURES (15 min + 5 min)

Chair: ATHANASIOS DIAMANDOPOULOS

4.10 PIETRO CASTELLINO
Internal Medicine, University of Catania, Italy
Hepato-renal syndrome. Options for treatment

4.30 LUCA SALVATORE DE SANTO, GIANPAOLO ROMANO, CRISTIANO AMARELLI, MARIANNA BUONOCORE, CIRO BANCONE, FEDERICA AGRUSTA, NICOLA GALDIERI, and CIRO MAIELLO
Chair of Cardiac Surgery, University of Foggia, Foggia, Department of Cardiovascular Surgery and Transplants, V. Monaldi Hospital, Naples, Department of Cardiothoracic Sciences, Second University of Naples, Naples, Italy
Acute Kindney Injury After Heart Transplantation

4.50-6.10 PM - SESSION 7 - RENAL TRANSPLANTATION (15 min + 5 min)

Chairs: GIUSEPPE ENIA & SI-AHMED EL MEHDI

4.50 SI-AHMED EL MEHDI
Department of Abdominal Surgery, CHU Blida, Algeria
Surgical operations in Kidney transplant

5.10 TAREK M. FAYAD, EMAD A. WILLIAM, NASR T. ATALLA, BOULOS A. HABASHY, SAMEH SHOKRY AMIN, RASHAD S. BARSOUM, SOHA S. KHALIL
Department of Medicine and Cairo Kidney Center, Cairo, Egypt
Eight-Year Outcomes of "the CKC Sequential Protocol"

5.30 USAMA MOHAMADY and KARIM MAGDY SOLIMAN
Division of Nephrology, Cairo University, Cairo, Egypt
Epidemiology of PRA in Pre-transplant Renal Recipients and Its Relation to Different Factors

5.50 E. ZAKARIAH, M. AZIZ, M. ISHAAK, T. FAYAD, N. ELSAYED, B. HABASHI
Departments of Internal Medicine and Clinical Pathology, Cairo University and The Cairo Kidney Center, Cairo, Egypt
Association of IL-6-174G/CD Promoter Polymorphism with New Onset Diabetes After Renal Transplantation

6.10-7.00 PM - SESSION 8 - FREE COMMUNICATION (7 min + 3 min)

Chairs: BIAGIO RICCIARDI & CARMELO FEDE

6.10 E. FARRUGIA, J. AGIUS FARRUGIA
Nephrology, Mater dei Hospital Malta
Prevalence of Serum Parathyroid Hormone Abnormalities in Maltese Chronic Dialysis Patients

6.20 C. SESSA, V. VENTURA, R. MARCHESE, B. POCOROBBA, S. RAPISARDA, P. FATUZZO
Chair of Nephrology, University of Catania, Italy
Hypoglycemia Issues in Unordinary Nephrological Scene: Non-islet Tumor-Induced Hypoglycemia

6.30 M. BENGHANEM, N. CHIBANE, B. BAHAMIDA, M. SAIDANI, M. BENABADJI,
Department of Nephrology-Hemodialysis-CHU-BeniMessous, Algiers, Algeria
Renal Impairment in Multiple Myeloma Young at The Topic: About Two Cases

6.40 R. EL BEY, Z. AINOUZ, H. BENDRIS, L. BENHOCINE, M. SAIDANI, M. BENABADJI
Nephrology Service, University Hospital BeniMessous, Algiers, Algeria
Acute Renal Failure in a Guillain-Barré Syndrome Treated with Intravenous Immunoglobulin

6.50 FATMA BEN MOUSSA
Nephrology University of Tunis, Tunisia
Renal Involvement in Sickle Cell Disease

7.00 PM Adjourn

8:30 PM Dinner

NON CME SESSIONS

DAY THREE
SUNDAY APRIL 14, 2013

DISCUSSANTS OF THE DAY:
GIORGIO BATTAGLIA, J. BUTTIGIEG, FLAVIA CAPUTO, GIUSEPPE DAIDONE, LUCIA DI MICCO, SALVATORE GIANNI, GIUSEPPE VISCONTI, & MUSTAFA WAFIK

9.00-9.40 AM - SESSION 9 - STATE OF THE ART LECTURE (35 min + 5 min)

Chair: JADRANKA BUTUROVIC PONIKVAR

9:00 LORETO GESUALDO
Division of Nephrology University of Bari, Bari, Italy
Biosimilars for Anemia Therapy in CKD

9.40 AM- 11.00 AM - SESSION 10 - Workshop on Vascular Access (15 min + 5 min)

Chairs: DOMENICO DI LANDRO & TAREK FAYAD

9.40 BIAGIO RICCIARDI
Division of Nephrology, Milazzo General Hospital, Milazzo, Italy
The Echoscopic Technique in Positioning of Central Venous Catheters for Hemodialysis - 24 Years of Experience

10.00 G. FORNERIS, W: MORALE, K. ROSAS, M. LODI, A. GRANATA, C. LOMONTE, G. LEONARDI, M. SPINA, L. TAZZA, D. SASSONE, R. BOERO, L. LUCCI
Dialysis Centers of Turin, Catania, Carbonia, Pescara, Akragas, Acquaviva delle Fonti, Cagliari, Rome, Asti, Modena
A survey of 21 cases of stuck catheter: sooner or later you might fall in

10.20 D. FERRARA, S. SCAMARDA, F. VALENZA, F. D'AMATO, L. BERNARDINO, L. AMICO, M.C. LORITO, L. VISCONTI, G. VISCONTI
Nephrology and Dialysis Unit, Radiology Unit, Hospital Villa Sofia-Cervello, Palermo, Italy
Complex vascular access for dialysis: cooperation between nephrologist and interventional radiologist

10.40 I. CARELLA*, C.A. RICCIARDI, G. CARELLA, F. MONTELEONE, A. PONTORIERO, B. RICCIARDI
Division of Nephrology, "Fogliani" Hospital, Milazzo, Italy
Division of Radiology "Barone Romeo" Hospital Patti Italy
Angioplasty for the Central Veins in the Recovery of the Function of the Arteriovenous Fistula

11.00 Break

11.30 AM - 12.00 PM – SESSION 11 - FREE COMUNICAT IONS (7 min + 3 min)

Chair: JOACHIM JANKOVSKI & DOMENICO SANTORO

11.30 F. MILONE, S. URSO, D. LICCIARDELLO, M. GAROZZO, G. BATTAGLIA
Nephrology Santa Marta and Santa Venera Hospital, Acireale and ASP Catania, Italy
Protocol for infections in Tunnelized Central Venous Catheters

11.40 K. ROMOZI and R. PONIKVAR
University Medical Center, Ljubljana, Slovenia
The influence of Vascular Access on C-Reactive Protein in Chronic Hemodialysis Patients

11.50 R.V. SCARFIA, F. PAGLIALONGA, A. EDEFONTI, M. INSALACO, A. CLEMENTI, A. GRANATA
Nephrology and Peritoneal Dialysis Unit, "San Giovanni di Dio" Hospital, Agrigento, Italy; Pediatric Nephrology and Dialysis Unit, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy
Intradialytic Cycling in Children and Young Adults on Chronic Hemodialysis

12.00 PM - 1.20 PM - SESSION 12 - LECTURES (15 min + 5 min)

Chairs: MAURIZIO LI VECCHI & TAHAR RAYANE

12.00 AYSE BALAT
Division of Pediatric Nephrology, Department of Pediatrics, University of Gaziantep, Turkey
Anemia Therapy in Predialysis Pediatric Patients

12.20 J. BUTTIGIEG, A. CASSAR, AGIUS J. FARRUGIA, E. FARRUGIA
Mater Dei Hospital, Malta
Improvement in Kidney Function After Cardiac Resynchronization Therapy

12.40 ANNA CLEMENTI, ANTONIO GRANATA, DINNA N. CRUZ, FRANCESCO GARZOTTO, ROSALIA VIVIANA SCARFIA, MONICA INSALACO, CLAUDIO RONCO
Department of Nephrology and Dialysis, San Giovanni di Dio Hospital, Agrigento, Italy
Department of Nephrology, Dialysis and Transplantation, San Bortolo Hospital, Vicenza, Italy
Cardiovascular Risk in Hemodialysis Patients: Fluid Overload and Heart Rate Variability

1.00 DOMENICO SANTORO, ADELE POSTORINO
Nephrology and Dialysis Unit Department of Internal Medicine, Messina University - Italy
Renal Disease in Adult Patients with Cystic Fibrosis

1.30 PM Light Mediterranean Lunch

2.20 PM- 3.30 PM - SESSION 13 - FREE COMMUNICATIONS (7 min + 3 min)

Chairs: RADOSLAV KVEDER & FRANCESCO RAPISARDA

2.20 LUCA DI LULLO, ANTONIO GRANATA, RODOLFO RIVERA, VINCENZO BARBERA, ALBERTO SANTOBONI, MORENO MALAGUTI, FULVIO FLOCCARI
Departments of Nephrology and Dialysis: L. Parodi – Delfino Hospital, Colleferro, San Giovanni di Dio Hospital, Agrigent, S. Gerardo Hospital, Monza and San Paolo Hospital, Civitavecchia, Italy
Echocardiography, Pulmonary Hypertension and Right Ventricular Function in NKF Stage III Chronic Kidney Disease

2.30 VALERIA CERNARO, ANTONIO LACQUANITI, VALENTINA DONATO, MARIA ROSARIA FAZIO, SILVIA LUCISANO, ROSARIA LUPICA, DOMENICO TRIMBOLI, MICHELE BUEMI
Chair of Nephrology, Department of Internal Medicine, University of Messina, Messina, Italy.
NGAL (Neutrophil Gelatinase-Associated Lipocalin) Is a Marker of the Chronic Inflammation Induced by Metabolic Acidosis in CKD Patients

2.40 TAREK FAYAD, HEBA MORAD, NOHA CHAHEEN, MUSTAFA WAFIK
Department of Internal Medicine, Cairo University, The Cairo Kidney Centre, Department of Clinical Pathology, Cairo University, As Salam International Hospital, Cairo, Egypt
The Predictive Value of Plasma and Urinary NGAL in AKI After Coronary Artery Bypass Grafting in Adult Egyptian Patients

2.50 STEFANIA MARZOCCO, FABRIZIO DAL PIAZA, LUCIA DI MICCO, SERENA TORRACA, MARIA LUISA SIRICO, DOMENICO TARTAGLIA, GIUSEPPINA AUTORE, ANTONIETTA DE BLASIO, BIAGIO DI IORIO
Division of Nephrology, Nephrology "A. Landolfi Hospital", Solofra (AV), Italy and Department of Pharmacy University of Salerno, Italy
Very-Low Protein Diet and Indoxyl Sulphate: A Post-hoc Analysis

3.00 DOMENICO SANTORO, CARMELA GIUSEPPINA CONDEMI, SALVATORE SAITTA, GIANLUCA TRIFIRO', SEBASTIANO GANGEMI, VINCENZO SAVICA, CARLO ALBERTO RICCIARDI, MICHELE BUEMI, GUIDO BELLINGHIERI
Unit of Nephrology, Unit of Immunology, Unit of Pharmacology, University of Messina, Messina, Italy
Erythropoiesis-Stimulating Agents: Dose And Mortality Risk Among Incident Hemodialysis Patients

3.10 A. SARANITI, G. SFERLAZZAS*, G. CIMINO*, A. PONTORIERO, F. MONTELEONE, A. SAPORITA, B. RICCIARDI
Division of Nephrology, and Dialysis "Fogliani" Hospital, Milazzo, Italy
*Division of General Surgery "Fogliani" Hospital Milazzo Italy
Laparoscopic Maintenance of Peritoneal Catheter: Our experience

3.20 G. SEMINARA, L. INFANTONE, C. MARCANTONI, M. MATALONE
W. MORALE, G. GIANNETTO*, D. DI LANDRO
Nephrology and Dialysis Unit Cannizzaro Hospital - Italy
*U.O.C. Nefrology ane Dialysis P.O. Gravina Caltagirone
Posterior Reversible Encephalopathy Syndrome (PRES) in a patient with Systemic Erytematodes Lupus (SLE)

3.30 – 4.10 PM - SESSION 14 - SHORT LECTURES (15 min + 5 min)

Chairs: FATMA BEN-MOUSSA & GIUSEPPE COSTANTINO

3.30 MICHELE BUEMI
Chair of Nephrology and Division of Nephrology, University of Messina, Italy
Kidney Regeneration

3.50 SANTORO, E. MANCINI, P. BOLASCO, S. SEVERI, L. CORAZZA
Nephrology, Dialysis and Hypertension, University Policlinic S. Orsola-Malpighi, Bologna, Territorial Dialysis service, Quartu S. Elena, Biomedical Engineering dpt., University of Bologna, Cesena, Bellco srl, Mirandola, Italy
Oxygen Saturation Italian Study Group: Results of the First Trial on the Role of Oxygen Saturation as a Predictive Marker of Intradialytic Cardiovascular Instability

* * *

4.20- 6.30 PM - SESSION 15 – POSTERS, DRINK AND SICILIAN PASTRIES
(3 min for presentation + 3 min for discussion)

Chairs: RASHAD BARSOUM & SILVIO MARINGHINI
Posters 1-19, Lateral Nave A

M.M. D'ALESSANDRO, V. ZANGARA, C. CORRADO, R. CUSUMANO, and S. MARINGHINI
Division of Nephrology, Children's Hospital "G. Di Cristina", Palermo, Italy
Urolithiasis in Sicilian Children

RADOSLAV KVEDER
University Medical Center, Ljubljana, Slovenia
Promising novel prognostic markers in IgA nephropathy

A. ALLAOUA, H. BENDRIS, M. LAIB, N. CHIBANE, B. BAHAMIDA, M. SAIDANI, M. BENABADJI
Nephrology Service -University Hospital of Beni Messous, Algiers, Algeria
Hypokalemia revealing Sjögren syndrome

H. BENDRIS, Z. AINOUZ, A. ALLAOUA, A. BENZIANE, M. SAIDANI, M. BENABADJI
Nephrology Service- University Hospital of Beni Messous, Algiers, Algeria
Renal Failure Induced Acyclovir

Z. AINOUZ, DE. ADOUI, G. KHELLAF, M. SAIDANI, M. BENABADJI
Nephrology Service- University Hospital of Beni Messous, Algiers, Algeria
Atypical Hemolytic Uremic Syndrome

F. DJEDI, M. BENGHANEM, D. RAS EL KAF, G. KHELLAF, M. BENABADJI
Department of Nephrology-Hemodialysis-CHU-Beni Messous Algiers,Algeria
Two Hereditary Kidney Diseases in the Same Algerian Family – About a Rare Case

N. GOUMRI, A. AMIEUR, M. BENGHANEM, M. SLIMANI, B. BAHAMIDA, M. SAIDANI, M. BENABADJI
Department of Nephrology, CHU Beni Messous, Algiers, Algeria
Hypercalcemia Indicative of Primary Hyperparathyroidism After Surgery for Renal Carcinoma

Z. MAACHI, M. BENGHANEM, Z. AINOUZ, H. ALIPACHA,
DE. ADOUI, A. KHELIFA, G. KHELLAF, M. SAIDANI, M. BENABADJI
Nephrology - Dialysis, CHU Beni Messous, Algiers, Algeria.
One renal neoplasm, 9 years after membranous glomerulonephritis

J. BUTTIGIEG, AGIUS J. FARRUGIA, L. BUHAGIAR, M.P. VELLA, E. FARRUGIA
Mater Dei Hospital, Malta
Hemodialysis Adequacy at the Renal Unit

J. BUTTIGIEG, AGIUS J. FARRUGIA, L. BUHAGIAR, M.P. VELLA, E. FARRUGIA
Mater Dei Hospital, Malta
Ionic Dialysance and Urea Kinetic Modelling in the Modern Renal Unit

H. RAFAA-DEBBAH, Z. AINOUZ, C. TOUMI, DE. ADOUI, G. KHELLAF, M. SAIDANI, M. BENABADJI
Nephrology - Dialysis, CHU Beni Messous, Algiers, Algeria.
AA renal amyloidosis associated with bilateral osteoarthritis revealing Familial Mediterranean Fever

K. CHAA, A. HASSANI, T. RAYANE, A. REMACHE
Department of Nephrology, Dialysis and Kidney transplantation, CHU Bab El Oued, Algier, Algeria
Tuberous Sclerosis of Bourneville and Renal Localisation

A. AGAOUA, N. MAZARI, T. RAYANE, A. REMACHE
Department of Nephrology, CHU Bab El Oued, Algiers, Algeria
Sclerodermia and Syndrome of Gougerot-Sjögren Association

A. DJAIDJA, N. MAZARI, T. RAYANE, A. REMACHE
Department of Nephrology, CHU Bab El Oued, Algiers, Algeria
Mediterranean Spotted Fever and Acute Kidney Failure

Z. AINOUZ, C. TOUMI, M. SLIMANI, M. SAIDANI, M. BENABADJI
Nephrology Service-University Hospital of Beni Messous -Algiers-Algeria
Sarcoidosis and renal involvement

J. PIATTONI, C. ZAIRA, A. CARUSO, V. CARUSO and G. ENIA
Thalassaemia Centre and Nephrology and Dialysis Unit ARNAS Garibaldi, Catania, Italy
Renal dysfunction in patients with thalassemia

LUCA DI LULLO, ANTONIO GRANATA, RODOLFO RIVERA, VINCENZO BARBERA, ALBERTO SANTOBONI, MORENO MALAGUTI, FULVIO FLOCCARI
Departments of Nephrology and Dialysis: L.Parodi-Delfino Hospital, Colleferro, San Giovanni di Dio Hospital, Agrigent, S.Gerardo Hospital, Monza and San Paolo Hospital, Civitavecchia, Italy
Echocardiography in Critical Care Hemodialysis: What Nephrologists Can Obtain Performing It

D. FERRARA, L. BERNARDINO, M.C. LORITO, L. AMICO, L. VISCONTI, S. SCAMARDA, F. INCALCATERRA, G. VISCONTI
Nephrology and Dialysis Unit, Hospital Villa Sofia-Cervello, Palermo, Italy
Spondylodiscitis: a serious infectious complication in dialysis patients

ROBERTO CHIMENZ, MARIA AUSILIA CATENA, CLAUDIA FEDE, GAETANA GUERRIERA, GIOVANNI CONTI, CARMELO FEDE
Unit of Pediatric Nephrology and Rheumatology, University of Messina, Messina, Italy
Description of a rare case of multicystic renal dysplasia and left polycystic kidney in a child

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4.20- 6.30 PM - SESSION 15 - POSTERS, DRINKS AND SICILIAN PASTRES
(3 min for presentation + 3 min for discussion)

Chairs: ANNAMARIA BERNARDI & AZIZ EL MATRI
Posters 20-38, Lateral Nave B

ANNAMARIA BERNARDI, MICHELE PIVA, ENRICO PIVA
Nephrology, Rovigo, Italy
A Case of Hyponatremia with Complex Etiology: SIADH or Pituitary Dysfunction?

A. FAILLA, V. SCOLLO, A. PANI, S. LA ROSA, L. SAPORITO, S. RAPISARDA, P. FATUZZO
Nephrology University of Catania, Catania, Italy
Management of Exit-Site in Peritoneal Dialysis and Infections Complications

M.G. ANTOCI, S. SCUTO, R. ALIOTTA, A. D'ANCA, S. RAPISARDA, P. FATUZZO
Nephrology, University of Catania, Catania, Italy
Aspergillosis in a Patient on Hemodialysis

A. REINA, G. PATANÈ, D. GALEANO, L. SAPORITO, S. RAPISARDA, P. FATUZZO
Nephrology, University of Catania, Catania, Italy
Ocular Infections in a Kidney Transplanted Patient

R. PONIKVAR
University Medical Center Ljubljana, Department of Nephrology, University Medical Centre, Ljubljana, Slovenia
Relative Longevity of PTFE Thigh Grafts as Vascular Access in Chronic Hemodialysis Patients

LUCIA DI MICCO, MARIA LUISA SIRICO, LUIGI RUSSO, ANDREA POTA,
FRANCESCO MIRENGHI, DOMENICO RUSSO, ANTONIETTA DE BLASIO, BIAGIO DI IORIO
Renal Unit, Landolfi Hospital, Solofra (AV), Italy
Very-Low Protein Diet and FGF23: A Randomized Study

ANTONIETTA DE BLASIO, ANDREA POTA, MARIA LUISA SIRICO, LUCIA DI MICCO,
ROBERTO RUBINO, PASQUALE GUASTAFERRO, BIAGIO DI IORIO
Renal Unit, A. Landolfi Hospital, Solofra (AV), Italy
Blood pressure variability and Clinical Outcomes in Chronic Kidney Disease

STEFANIA MARZOCCO, PASQUALE GUASTAFERRO, SIMONA ADESSO,
GIUSEPPINA AUTORE, ANDRÈ KLASSEN, AUGUST HEIDLAND,
ANTONIETTA DE BLASIO, BIAGIO DI IORIO
Renal Unit, A. Landolfi Hospital, Solofra (AV), and Department of Pharmacy, University of Salerno, Salerno, Italy
Role of Nitric Oxide and Endothelin During High-Frequency External Muscle Stimulation in Acute Kidney Failure: A Post-Hoc Analysis

N. BELLIK, N. MAZARI, T. RAYANE, A. REMACHE
Department of Nephrology, CHU Bab El Oued, Algiers, Algeria
Anti-Synthetase Syndrome Revealed by Glomerular Syndrome

B. OLIVA, B. BUSCEMI, C. ALTIERI, R. MONGIOVI, F. CAPUTO
UOC Nefrologia II con Dialisi e Trapianto.
Centro trapianti di rene "Leonardo Sciascia" ARNAS Civico - Palermo
The role of pretransplantation dialysis modality on kidney transplantation outcome: a single centre experience

B. POCOROBBA, I. LAURETTA, P. SANTANGELO, G. PORTALE, S. RAPISARDA, P. FATUZZO
Nephrology, University of Catania, Italy
An Unusual Asociation: Fahr's Syndrome and Chronic kidney Disease

LUCA ZANOLI, GIULIA ROMANO, STEFANIA RASTELLI, FRANCESCO RAPISARDA,
GAETANO INSERRA, PASQUALE FATUZZO, MARCELLO ROMANO, PIETRO CASTELLINO
Internal Medicine and Postgraduate School in Nephrology of the University of Catania, and Geriatric ARNAS Garibaldi, Catania, Italy
Combined Use of Ultrasound and GFR Predictive Equations for the Estimation of Renal Function in Elderly Patients

LUCA ZANOLI, STEFANIA RASTELLI, CARMELITA MARCANTONI,
CORRADO TAMBURINO, PIETRO CASTELLINO
Internal Medicine and Nephrology, University of Catania, Division of Nephrology, Cannizzaro Hospital, Catania, and Division of Cardiology, University of Catania, Italy.
Left Ventricular Hypertrophy amd Atherosclerotic Renovascular Disease Are Risk Factors for Contrast Induced Nephropathy in Patients With Ischemic Heart Disease

MESSINA SALVATORE, BUCCA MAURIZIO, CASTELLINO SANTINA
UOC Nefrologia e Dialisi - Ospedale S.Vincenzo Taormina
Kidney biopsy: a clinical step in management of Glomerular Lesions. Taormina experience

DOMENICO SANTORO, MARIA TERESA INGEGNERI, GIUSEPPE VITA, ANDREA PISACANE, CARLO ALBERTO RICCIARDI, GUIDO BELLINGHIERI, VINCENZO SAVICA
Unit of Nephrology and Unit of Clinical Pathology, University of Messina, Messina, Italy
Socio-Economic Factors, Food Habits And Phosphorus Levels In Patients On Hemodialysis

I. CARELLA, F. MONTELEONE, C.A. RICCIARDI, G. CARELLA, B. RICCIARDI
Division of Nephrology and Dialysis, "Fogliani" Hospital, Milazzo, Italy
Division of Radiology "Barone Romeo" Hospital Patti Italy
Recanalization of Arteriovenous Fistula for Hemodialysis Through Endovacsular Procedures: Our Experience

A. PONTORIERO, A. SARANITI, F. GITTO, P. FAVAZZI, L. EMANUELE*,
A. DABBICCO#, B. RICCIARDI
Division of Nephrology and Dialysis "Fogliani" Hospital, Milazzo Italy
*Hospital Direction and #Division of Clinical Pathology of "Fogliani" Hospital Milazzo,
Hypertension and proteinuria in 18 Years Old Students in the Territory of Milazzo

ROSAMARIA DE SANTO
Italian Institute for Philosophical Studies, Naples, Italy
Sleep Disorders in CKD: Present Status

C. CORRADO, F. LO CASCIO, P. CARMINA, F. LEONE, S. MARINGHINI
Pediatric Nephrology, G. Di Cristina Hospital. Palermo, Italy
Blood pressure measurements in Sicilian school-children

W. MORALE, L. INFANTONE, C. MARCANTONI, M. MATALONE,
D. PULIATTI, G. SEMINARA D. DI LANDRO
Nefrologia e Dialisi Azienda Cannizzaro Catania - Italy
Project work: project formation of health-care personnel for self-care of tunnellized central venous catheter in the sicilian territory

6.30 PM – CLOSURE OF THE SECOND CONGRESS OF MKS

6.30 PM-7.15 PM - BUSINESS MEETING OF THE MEDITERRANEAN KIDNEY SOCIETY (members only)

ANEMIA THERAPY IN PRE-DIALYSIS PEDIATRIC PATIENTS

AYSE BALAT, MD
Professor in Department of Pediatric Nephrology in Gaziantep University, School of Medicine, Gaziantep, TURKEY

Anemia is one of the major problems in chronic kidney disease (CKD). Erythropoietin and iron deficiencies, chronic inflammation, bone marrow suppression, increased red cell turnover, malnutrition are the common causes of anemia in CKD. Although the prevalence of anemia within CKD stages in the pediatric population has not been well established, several studies demonstrated that percentage of anemia increased with the severity of CKD, and more than half of children on long-term dialysis were anemic. In addition to decreased exercise tolerance, physical performance, and school attendance, anemic children are more likely to be hospitalized when compared with non-anemic children, and have increased risk of death.

Since volume status, body temperature, and blood sugar may effect the hematocrit, serum hemoglobin level should be used for the evaluation of anemia, and checked periodically in all children with CKD, regardless of the disease etiology or stage.

Although the presence of several unresolved problems related to the treatment of anemia in pediatric CKD patients, such as target goals of treatment, and factors contributing to the presence and/or persistence of anemia in early stages of CKD, erythropoietic stimulating agents (ESA) such as rHuEPO, darbepoetin-alfa, and iron supplementation, are the main elements in management. It has been shown that treatment of anemia with rHuEPO has produced a significant reduction in left ventricular mass index, which is related to a 1,000-fold increased risk of cardiovascular morbidity and mortality in young adults with ESRD, within a year of the therapy. Blood transfusions should be used only for patients with symptomatic anemia, significant hemolysis, or inadequate response to ESA therapy.

Correction of anemia in pediatric CKD patients improves the appetite, exercise tolerance, oxygen consumption, intelligence testing scores, and quality of life.

We will mainly discuss the treatment of anemia in pre-dialysis pediatric patients.

RENAL AMYLOIDOSIS

RASHAD BARSOUM
Emeritus Professor Prof of Medicine, Cairo University, Cairo Egypt

Amyloid tissue deposits have intrigued pathologists since the 17th Century, being described as stony, lardaceus, cellulosis, etc. The term "Amyloid" was used for the first time by Virchow in 1854, on the basis of affinity to iodine. Over the succeeding 150 years, knowledge on these mysterious deposits has evolved to encompass many types of systemic and local disorders. Nevertheless, all amyloids turned out to share a common basic structure including: a) a protein subunit, which distinguishes the different types; b) a penetraxin"P" component, which provides the ground scaffold common to all amyloids, and confers affinity to congo-red; c) a glycosoaminoglycan which helps to shape the protein subunits into the characteristic beta-pleated fibers seen by electron-microscopy.

The kidney is involved in a dozen of systemic amyloidoses, including 3 forms of primary, 2 secondary, 6 familial and Age related amyloidosis (ARA). Primary amyloidosis is associated with para-proteinemias, leading to deposition of light or heavy chains, with or without intact abnormal IgG. Secondary amyloidosis is characterized by the deposition of Amyloid-A1 or -A2 proteins, which are chemo-attractants generated by the hepatocytes in response to proinflammatory cytokines, mainly Il-1 and TNFα, hence the association with chronic or recurrent acute inflammatory conditions. A significant break though has recently been made when the role of Pyrin was discovered in this context. This is a cytoskeleton- associated, microbe-sensitive protein present in the monocytes and granulocytes, which regulats the release IL-1 and TNFα. Interestingly, Pyrin is a product of the FMFV gene, hence being the link between auto-inflammatory syndrome and amyloidosis.

The third most common form of renal amyloidosis is familial transthyretin amyloidosis. The protein subunits are fragments of transtyretin, a normal component of plasmaproteins involved in the transport of thyroxin, hence the name. There are over100 polymorphism of this protein, which are associated with its breakdown into amyloidogenic as well as anti-amyloidogenic fragments. Depending on the balance in-between these fragments, the may deposit in the kidneys, heart, peripheral nerves and/or vitreous.

Transtyretin is the protein subunit also deposited in ARA, which is less aggressive, usually associated with sub-nephrotic proteinuria.

Other familial amyloidosis include Fibrinogen-chain, Apolipopotein A-II(and less often A-I), lysosome and Leucocyte chemotactic factor 2 (Lect-2), based on the prevailing protein subunits.

All form of renal amyloidosis share the clinical synopsis of proteinuria, hypertension and progressive CKD. Extra-renal manifestations may differentiate specific types, though the final diagnosis often requires imaging and sophisticated chemical, histopathological and genetic laboratory evaluation.

Fortunately, the progress in therapeutics has paralleled the advances in knowledge about amyloidosis. While a few decades ago, the only effective treatment was colchicines in FMF-associated amyloidosis, we now have: a) potent regimes for the management of primary amyloidosis, including drugs and stem-cell transplantation; b) cytokine modulators and Eprodisate for secondary amyloidosis; c) Tafamides and other bendoxazoles for transthyretin amyloidosis; d) a train of drugs that target specific steps in the process of amyloid formation notably CPHPC which interferes with the binding of protein subunits with P component.

SICILIAN REGISTRY OF DIALYSIS AND TRANSPLANTATION

GUIDO BELLINGHIERI

Chair of Nephrology, University of Messina

Sicilian Registry of Dialysis and Transplantation includes all patients on haemo and peritoneal dialysis from a population of about 5 million of inhabitants. There are 125 dialysis center in Sicily, 88 are private units and 37 are public units, with 2 pediatric units both in hospital, one in Palermo and one in Messina. The number dialysis patient for units range between 1 and 135, with a mean of 38 patients for unit. In 2010 prevalence resulted 920 pmp distributed 74% in private units and 26% in public units. Distribution of patients in different provinces range from 811 pmp in Syracuse province to 1030 pmp in Palermo province. Hemodialysis was adopted for the majority of patients 95% vs 5% of peritoneal dialysis. The most common type of dialysis in private units was very biocompatible membrane bicarbonate (76%) followed by HDF on line (15%), whilst in public units very biocompatible membrane bicarbonate represented 58% and HDF on line with Acetate free Biofiltration (AFB) was adopted in 29% of patients. The mean age of prevalent patient is 68 years, the percentage of over 75 is 37%, The oldest age is 99 year in hemodialysis and 92 year in peritoneal dialysis. Sex distribution is the same as the previous year M/F 59%/41%. The mean age on dialysis is 5 years. Incidence in 2010 was 213 patients pmp with 71% that starts with bicarbonate dialysis in public vs 86% in private units.

SICKLE CELL GLOMERULOPATHY

FATMA BEN MOUSSA

Nephrology Department La Rabta University Hospital, Tunis, Tunisia

The renal manifestations of sickle cell disease (SCD) range from various functional abnormalities to gross anatomic alterations of the kidneys. The inner medulla's relatively hypoxic, hypertonic, and acidotic environment is known to predispose to sickling of red blood cells (RBCs), which significantly decreases renal medullary blood flow through vaso-occlusion.

Glomerulopathy,mainly secondary to hyperfiltration is rare but may lead to advanced renal failure.

Sickle cell disease in the second hemoglobinopathy in our country after Thalassemia.

We report our experience about 35 patients with SCD and glomerulopathy: 19F and 16M with a mean age of 22.6 years (range 11-52)

Renal manifestations were: oedema in 24 patients, hypertension in 10 patients, gross hematuria in 3 and microscopic hematuria in 23 cases.

All the patients had a proteinuria and 21 had a Nephrotic syndrome, renal failure was present in 18 cases.

A kidney biopsy was performed in 29 patients: the main lesion was FSGS in 14 patients ((51.7%); MPGN like glomerulopathy was observed in 9 cases (31.03%) MPGN in 5 (17.2%) and Scarred kidneys in 1 case (3.45%).

The prognosis of such patients is poor. Management of sickle nephropathy is not separate from that of overall patient management. The use of ACE inhibitors has been associated with improvement of the hyperfiltration glomerulopathy but steroids and IS drugs seem to be ineffective on SC glomerulopathy.

SARCOIDOSIS AND RENAL INVOLVEMENT

Z. AINOUZ, C. TOUMI, M. SLIMANI, M. SAIDANI, M. BENABADJI

Nephrology Service-University Hospital of Beni Messous -Algiers-Algeria

Introduction:
Renal involvement in sarcoidosis is rare but may progress to renal failure observed in less than 2% of patients. It is most often the result of disorders of calcium metabolism or granulomatous interstitial damage.

Patients and methods:
We report the case of a young man 35 years old and originally residing at 100 km east of Algiers, followed in hematology since 2008 for isolated splenomegaly, lost sight of until November 2011 or renal to 44 ml / min clearance was found with microscopic hematuria and normochromic normocytic anemia. At admission the patient reported asthenia, weight loss, epigastric pain and polyuria-polydipsia syndrome. The review finds a TA 120/90 mmHg, a state of proper hydration and splenomegaly. The urinalysis include: to strip a pH 7, + protein, trace blood, sediment: a leukocyte and proteinuria 645MG / 24. The blood test to find hypercalcemia 127.3mg / l, serum albumin was 35g / l and gamma globulin in a hyper protein electrophoresis, a VS 26/57.la CXR bilateral interstitial syndrome finds a chest CT confirmed with evidence of lymphadenopathy péricarinaire. Abdominal Doppler ultrasound found small echogenic kidneys, splenomegaly 203mm without evidence of portal hypertension. In a second step we find an increase in ACE, an aspect suggestive of sarcoidosis in bronchoscopy and three epithelioid follicles in spinal biopsy.

Discussion:
Our patient has a chronic interstitial nephritis within the scope of systemic sarcoidosis with involvement florida thoracic and haematological whose diagnosis was delayed because of the poverty of the original table and not patient compliance to controls.

Conclusion:
Renal involvement in sarcoidosis may be indicative of disease or may occur in an array of multi-systemic damage. It is most often expressed as a granulomatous tubulointerstitial nephritis or nephropathy as calcium. Treatment with corticosteroid introduced early shall prevent progression to chronic renal failure, hence the interest of a rapid diagnosis.

AA RENAL AMYLOIDOSIS ASSOCIATED WITH BILATERAL OSTEOARTHRITIS REVEALING FAMILIAL MEDITERRANEAN FEVER

RAFAA-DEBBAH, Z. AINOUZ, C. TOUMI, DE. ADOUI, G. KHELLAF, M. SAIDANI, M. BENABADJI

Nephrology - Dialysis, CHU Beni Messous-Algiers, Algeria

Introduction

Familial Mediterranean fever (FMF) is a hereditary inflammatory disease, autosomal recessive, affects mainly people of Mediterranean origin with a male predominance.

Patients and Methods

We report the case of a 49-year-old and living in the north of Algeria, from a consanguineous marriage 1st degree. Personal history of bowel obstruction with acute appendectomy in 2004, with no history special family.

In October 2007 the patient has edemas lower limbs and complains of pain in the especially on the right hip that started about 4 years ago with recently a slight limp on the right side when walking.

The radio-biological exploration found: Nephrotic syndrome with pure deep glucosuria with normal glycemic inflammatory balance sheet complete with serology (rheumatoid arthritis, ankylosing spondylitis) is none of except for one particular VS accelerated 2chiffres a radiograph and CT scan confirms the hips reached joint with bilateral osteoarthritis advanced beginner right and left.

The renal biopsy back in favor of AA amyloidosis. A year after the patient describes the onset of other symptoms ie acute abdominal pain requiring its removal to surgical emergencies 3 episodes in the same year,

radiological exploration target (TDM abdominale, upper and lower endoscopy) has nothing found individuals. The genetic study is then done to confirm the diagnosis (FMF) the patient has been under COLCHICINE at a dose of 1 mg / j.Sur down 4 years of evolution: there is a total remission of the syndrome with nephrotic renal function correct by cons on the joint the patient is a candidate for replacement prosthetic hip.

Discussion and Conclusion

In the literature as extrarenal signs of serositis are repésentées The FMF peritonitis by 95% and synovitis (monoarthritis lower limb) in 75% of cases.

Etiological research of AA amyloidosis is very difficult, apart from a balance inflammatory. For this patient, we first mentioned the appearance of chronic rheumatic origin of the AA amyloidosis without serological evidence, but the contribution of genetics has been a gain since diagnosis (FMF) has been confirmed. Is part of the hip complications

chronic FMF remains in this case the only major extrarenal signs associated with nephrotic syndrome pure when the ACB.
Algeria is part of the Mediterranean countries, the diagnosis of FMF should be considered before any AA amyloidosis secondary unlabeled associated or not with extrarenal usual signs. Genetic studies in kidney disease hereditary must be developed in our laboratories because inbreeding is still continuing in some regions of our country.

ACUTE RENAL FAILURE IN A GUILLAIN-BARRÉ SYNDROME TREATED WITH INTRAVENOUS IMMUNOGLOBULIN

R.EL BEY, Z.AINOUZ, H.BENDRIS, L.BENHOCINE, M.SAIDANI, M.BENABADJI

Nephrology Service -University Hospital Beni Messous- Algiers -Algeria

Introduction:
The human polyvalent immunoglobulins are used in a wide range of autoimmune and / or inflammatory. The first case of acute renal failure secondary to intravenous immunoglobulin treatment was described in 1987. We related the case of acute renal failure occurred in a Guillain-Barré syndrome treated with intravenous immunoglobulin.
Methods and patients:
He is a 54 years old man with hypertension, type II diabetes, hospitalized in ICU for Guillain-Barré syndrome in ascent phase in October 2011. At admission the patient is conscious scored 15/15 on the Glasgow Coma Scale with good hemodynamic constants and preserved diuresis. It has a paralysis of both lower limbs, muscle weakness in the upper limbs and a very low cough reflex. a balance is found: glucose: 1.65 g / l urea, 0.98 g / l - Clr creatinine 59.76 ml / min, Na: 138 meq / l K: 5,4-Hb: 10.6 g / dl - FNS: GB: 9200/mm3-plq: 273000/mm3- Gazoméztrie: Ph: 7.37, PCO2: 52.4-PaO2: 140.9 HCO3-30. The patient received immunoglobulin (SANDOGLOBULINER) IV at a dose of 36 g / day for five days and placed in thromboembolic prophylaxis, a few days later the patient developed respiratory distress requiring intubation and its tendency to hypotension. Balance control include: 36 hours of IVIG treatment Creat clearance: 17ml / min - urea: 2.12g / l, 48 Clr creat: 15ml/min - urea 2.58g / l and 72h creat Clr: 9.95ml / min-urea 2.63 g / l - Na / K: 122/4.O3 meq / l in view of the rapid deterioration of renal function the use of hemodialysis was necessary (02 sessions) and stop immunoglobulins mandatory with rehydration and correction of electrolyte disturbances. 48h after renal function has improved (Clr Creat: 39.84ml/min- urea: 1.45g / l - Na / K: 142/3 meq / l)

Discussion:
It is an IRA background most likely secondary to chronic immunoglobulins used containing sucrose as a stabilizer on land at risk: diabetes and renal impairment. (

Conclusion:
Acute renal failure is a complication of immunoglobulin therapy, particularly in patients at risk, with CKD and / or diabetes. It is usually reversible, but the use of hemodialysis is sometimes necessary. Nevertheless, it can be avoided by adjusting: the dose, type of preparation, the infusion rate and ensuring adequate hydration.

ATYPICAL HEMOLYTIC UREMIC SYNDROME

Z.AINOUZ, DE.ADOUI, G.KHELLAF, M.SAIDANI, M.BENABADJI

Department of Nephrology-Hemodialysis-CHU-Beni Messous ALGIERS, ALGERIA

Introduction:

The hemolytic uremic syndrome (HUS) is a thrombotic microangiopathy due to intrarenal, causing hypertension and acute renal failure (ARF). Its pathogenesis includes injury / activation of the endothelium, mainly in the kidney induced by bacterial enterotoxins, toxic drugs, or autoantibodies. Hyperactivation of the alternative complement pathway in connection with a heterozygous deficiency in regulatory proteins (factor H, factor I or MCP) can also be associated with HUS. More rarely, microthrombi are related to a congenital or acquired deficiency in protease von Willebrand factor.

We report a case of atypical HUS in a young patient aged 28 individuals with no history who presented with asthenia and edema of the lower limbs (IMO) installation causing progressive consulted three months later or syndrome with nephrotic renal impairment clearance 20ml/min, microscopic hematuria and hypertension and anemia were found. On admission the patient is in good condition, has mucocutaneous pallor, polyuria, blood pressure 120/80 mmHg in LP Loxen 100mg / d Triatec 5mg and no IMO. At first the biological assessment include: a rapid rise in serum creatinine up to 20 ml / min clearance, normochromic normocytic anemia with platelet count and normal leukocytes, serum albumin 24 g / l, protein + + + + and blood to the test strip, proteinuria and leukocyturia 12g/24h in the urinary sediment without hematuria. When the morphological assessment found echogenic kidneys keeping corticomedullary differentiation D: 100mm, RG: 108mm, stage I hypertensive retinopathy and LVH in echocardiography. In a second step we find a coombs test negative for schistocytes in blood smear, normal LDH, C3 normal, FAN, cardiolipin and anti cryoglobuline negative viral serology negative. In view of this table a PBR has been completed and returned for a thrombotic micro (MAT).

Discussion:

Our patient had a nephrotic syndrome with rapid deterioration of renal function. A GNRP was raised in his first, and high-dose corticosteroids (three bolus then relay Solumedrol see a 1mg/kg oral / J) has been started without awaiting the outcome of histology who later returns in favor of MAT within the scope of a table even in a HUS clinical expression.

Conclusion:

learn to think to atypical hemolytic uremic syndrome.

HYPERCALCEMIA INDICATIVE OF PRIMARY HYPERPARATHYROIDISM AFTER SURGERY RENAL CARCINOMA

N. GOUMRI, A. AMIEUR, M. BENGHANEM, M. SLIMANI, B. BAHAMIDA, M. SAIDANI, M. BENABADJI

Department of Nephrology, CHU Benimessous – Algiers-Algeria

Introduction: hypercalcemia may be associated with several diseases.
The neoplastic etiology is secondary to the forefront after treatment of carcinoma etiology, but other sources may coincide, it will look.

Patients and methods

We report a patient 62ans, with a history of: hypertension and renal carcinoma néphrectomisée it there's 3 years. Consult Supplement for healthy bones, a balance has been found: creatinine to 28mg / l (clearance was 19 ml / min MDRD), hypercalcemia 157mg / l.

On admission: patient in poor general condition, asthenic. Calcium per os was arrested and medical treatment was initiated: oral and parenteral rehydration. The exploration of this causal launched hypercalcemia, namely EPP, FS and tumor markers (looking for tumor recurrence) returned without anomalies, by against the PTH assay is frankly high income (PTH 241pg / l), an ultrasound scan and a neck made and showed a parathyroid adenoma at the inferior pole right thyroid. The diagnosis of primary hyperparathyroidism was made and the patient was operated in emergency left thyroid lobe-ismectomie with parathyroid adenomectomy lower right, upper left parathyroidectomy and parathyroidectomy lower left. The histological study of the surgical specimen was found multi nodular goiter heterogeneous, a parathyroid adenoma right lower parathyroid parenchyma and left upper and lower are healthy. The postoperative evolution was favorable with recovery of renal function (serum creatinine 14 mg / l) and fall in serum calcium (70mg / l) and the rate of PTh (3.4pg / l).

Conclusion: Hypercalcemia after carcinoma is not always synonymous with metastasis, think primary hyperparathyroidism.

HYPOKALEMIA REVEALING SJÖGREN SYNDROME

H.BENDRIS, M.LAIB, N.CHIBANE, B.BAHAMIDA, M.SAIDANI, M.BENABADJI

Nephrology Service -University Hospital of Beni Messous-Algiers -Algeria

Introduction:
Renal involvement is a manifestation of extra-glandular rare during the Gougerot-Sjogren (SGJ).
We report a patient with severe hypokalemia secondary to distal renal tubular acidosis (ATD) indicative of SGJ.

Patients and methods:
It is a patient aged 33, with a quadri-paresis paroxysmal members atrophy, vascular purpura, poly-arthralgia, asthenia and chronic.
Laboratory tests showed profound hypokalemia to 1.43 mEq / l with kaliuresis high 104mmol/24heures confirming the renal origin of the leak potassium. Hyperchloremic metabolic acidosis realizing the table distal renal tubular acidosis, serum chloride was 114mmol / l PH 7.3 to arterial and urinary pH 7, 1 g proteinuria / 24. Renal function is preserved.
The retrospective examination of the patient found functional signs related to a syndrome dry eye and mouth. The Schirmer test is positive and the salivary gland biopsy objective lymphocytic infiltrate corresponding to a level 4 score Chisholm and Masson. Antinuclear antibodies (ANA) were positive at 1/1000 of specificity anti-SSA and anti-SSB. Research of anti-native DNA is negative.
The diagnosis of SGJ syndrome with renal distal tubular successful and the patient was put on steroids 0.5 mg / kg, anti malarial synthesis and potassium supplementation.

Discussion:
Hypokalemic paralysis is a rare clinical syndrome, usually of an abnormal transfer of membrane K +, potassium depletion is of renal origin in our case.
Kidney damage associated with Sjogren's syndrome Sjogren often type tubulointerstitial leading to a decrease in the power of concentration of urine and distal renal tubular acidosis default secretion of H + ions into the lumen. Far lower urinary pCO2, reflecting secretion of H +, shows the deficit.

Conclusion
Hypokalemia with para paresis should encourage us to seek a distal renal tubular acidosis and a possible Sjogren's Syndrome Sjogren latent. The early detection allows to tune therapy.

ONE RENAL NEOPLASM, 9 YEARS AFTER MEMBRANOUS GLOMERULONEPHRITIS (GEM)

Z.MAACHI, M.BENGHANEM, Z.AINOUZ, H.ALIPACHA, DE.ADOUI, A.KHELIFA, G.KHELLAF, M.SAIDANI, M.BENABADJI

Nephrology - Dialysis, CHU Beni Messous Algiers, Algiers, Algeria.

Introduction:
The membranous glomerulonephritis (GEM) is the leading cause of primary nephrotic syndrome in adults.
The GEM is idiopathic in 75% of cases, in 5-10% of cases it is associated with cancer, solid cancers or hematological are frequent. The parallel development of both conditions suggesting a paraneoplastic syndrome.
Patients and Methods:
He is a 67 years old patient with previous history of deep nephrotic syndrome 9 years ago when he was 58ans: hypertension associated with minimal coughing and fatigue, put under Protocol in complete remission since PONTICELLI under low-dose ARB. At the time a biological investigations (serology lupus, viral serology, dosage PSA) and morphological (TV thorax, abdomen and pelvis ultrasound, FOGD, colonoscopy) was launched in search for a secondary cause but no cause was found.
In February 2012 the patient presented to the consultation for a first recurrence of his nephrotic syndrome that is deep to 16 g / l of albumin and 45g / l serum protein associated with proteinuria 6g/24h unclean with HTA at 170/90mmHg and an IRA at 30 ml / min creatinine clearance, the Âoedèmes are associated with mucocutaneous pallor, deep asthenia back pain straight A morphological assessment namely renal ultrasound done which concluded in renal mass lower pole right confirmed by URO-CT: describing a suspicious mass, richly vascularized in development taking exo renal fat mass associated with ADP infracentrimétriques retro peritoneal balance locoregional extension not found metastases except for diverticulosis colonoscopy. Patient candidate to total right nephrectomy.
Discussion and Conclusion:
A MEDLINE literature review of all studies on associations and GEM neoplasia, a cancer solid can be reported years after the initial diagnosis of GEM and staging the systematic search a secondary cause is almost always inefficient and costly, it is only justified in cases where the syndrome nephrotic in association with other signs that they are functional renal or extrarenal during the first episode or recurrent disease.
Systematic monitoring of patients over 50 years of GEM should be regular even if the patient is in remission.
Complete with a request for morphological examinations and biological targeted and guided by clinical symptoms evocative or not associated with recurrence of nephrotic syndrome.

RENAL FAILURE INDUCED ACYCLOVIR

H.BENDRIS, Z.AINOUZ, A.ALLAOUA, A.BENZIANE, M.SAIDANI, M.BENABADJI

Nephrology Service- University Hospital of Beni Messous -Algiers –Algeria

Introduction:
Acyclovir is an antiviral drug widely used, may be involved in the occurrence of acute renal failure by obstruction of the lumen intratubular secondary to precipitation in the crystals.

Observation:
Children 9 years old without special medical history admitted for treatment of acute renal failure. A week before his transfer to our established children presented a table of gastroenteritis on renal function in 52ml/min/1, 73 m2 clearance, or has been on antibiotics type: cefotaxime. Two days later, at the deteriorating state of consciousness viral encephalitis was strongly suspected, antiviral treatment with intravenous aciclovir was started.
48 h later, worsening of renal failure was observed which required the use of hemodialysis and discontinuation of aciclovir. After two weeks of dialysis and no recovery, corticosteroids was initiated and a renal biopsy performed back in favor of a toxic tubulopathy original drug. Two months before and after the non-improved renal function a second renal biopsy was performed finding a slight decrease in tubular lesions but any remaining time with the appearance of severe interstitial fibrosis.

Discussion:
According to some authors, crystalluria is not constant in case of deterioration of renal function in patients receiving acyclovir. This molecule is excreted via the kidneys as the active metabolite (62-91%) and is slightly soluble in urine, with a risk of precipitation tubular particularly when the glomerular filtration rate decreases. Schreiber et al were interested in the pediatric population. In their retrospective study from July 2005 to January 2006, they noted that the two predictors of nephrotoxicity in acyclovir (dosage adapted to the weight of children) were pre-existing impairment of glomerular filtration rate and concomitant use of other nephrotoxic drugs.
In our case the state of dehydration and renal failure prior favored the precipitation of acyclovir crystals in high concentrations in the renal tubules. The practice of renal biopsy s proved to be the only diagnostic to the absence of crystals in urine sediment and the persistence of renal failure after discontinuation of acyclovir.

Conclusion:
The use of acyclovir requires compliance administration and close monitoring of renal function even in patients with a glomerular filtration rate initial normal. The renal biopsy has all his interest in diagnostic research of this tubulopathy obstructive well what is invasive. A more simple, rapid and non-invasive research of crystalluria has great diagnostic value qu'inconstant well.

RENAL IMPAIRMENT IN MULTIPLE MYELOMA YOUNG AT THE TOPIC: ABOUT TWO CASES

BENGHANEM, N.CHIBANE, B.BAHAMIDA, M.SAIDANI, M.BENABADJI

Department of Nephrology-Hemodialysis-CHU-Beni Messous ALGIERS, ALGERIA

Introduction:
Renal involvement in multiple myeloma has an important role in the prognosis and treatment decisions. It is sometimes indicative of the dysglobulinemia, Patients and methods. We report two cases:
The first is a 38 year old patient who presented lumbar pain, gastrointestinal symptoms associated with anorexia in a context, a biological objective blood with severe renal impairment and creatinine clearance 10ml/min to in preserved diuresis associated with microscopic hematuria and proteinuria 2.9g/24h a normochromic normocytic anemia with 8.4g/dl of HB, the rest of the blood count, blood smear, repeated spinal punctures without anomalies, accelerated ESR 3-digit serum protein electrophoresis was normal.
PBR tubulopathy found, but the review found a positive immunofluorescence with anti-kappa light chains. Search of the Bence-Jones protein found kappa light chains.
The diagnosis of myeloma bone biopsy confirmed that the objective presence of bone marrow infiltration by plasma cell population typical mono> 50%. Patients received symptomatic treatment and hemodialysis was at 3 sessions per week 2 months, chemotherapy has unfortunately not been started because the patient died from an infectious syndrome of central catheter.
The second patient is a 28 year old, married mother of a child, without occupation, without pathological antecedents individuals who made a significant weakness with vomiting, no bone pain. The biological assessment found renal insufficiency (serum creatinine at 76 mg / l), severe anemia normocytic normochromic red blood cells with 7g/dl rolls in blood smear, normocalcemia, accelerated erythrocyte sedimentation rate, proteinuria 24 hours of 2g. The ultrasound found normal kidney size dedifferentiated. The Electrophoresis of serum proteins showed a monoclonal component in the gamma position to the concentration of 36 g / l which Immunotyping revealed that he is a Immunologuline G light chains kappa hypogamaglobulinémie with polyclonal search proteinuria of Bence-Jones came back positive kappa type. The médullogramme found a plasmacytosis 12%. The diagnosis of MM was made and the patient was put under conventional chemotherapy (VAD) and proposed a possible bone marrow transplant.

Discussion:
Renal involvement in multiple myeloma is common, its incidence varies from 30 to 50% depending on the series. Tubulopathy myeloma is the most common complication, most often it is an AL amyloidosis or nodular glomerulosclerosis, it may be the only obvious

symptoms but the diagnosis is sometimes wrong when renal histology is not so, especially in young patients like our case, and it was necessary to use a bone biopsy to do.

Conclusion:
Renal involvement is a serious complication of multiple myeloma, often associated with significant morbidity and mortality. It is potentially preventable through the eviction of nephrotoxic drugs, proper rehydration and treatment with alkalizing base adapted early and effective. Involvement of young subjects is usual but must be sought because it is in men, and can be fatal.

TWO HEREDITARY KIDNEY DISEASES IN THE SAME ALGERIAN FAMILY ABOUT A RARE CASE

F.DJEDI, M.BENGHANEM,D.RAS EL KAF, G.KHELLAF, M.BENABADJI

Department of Nephrology-Hemodialysis-CHU-Beni Messous ALGIERS, ALGERIA

INTRODUCTION AND AIMS: Primary hyperoxaluria type 1 (HP1) is the most frequent and most severe sort of primary hyperoxaluria. It is a rare disease, and it is linked to a deficiency of the enzyme alanine glyoxylate aminotransferase (AGT). Polycystic kidney autosomal dominant (PKDAD) is an inherited disorder characterized by the development in adulthood, but in 72% of cases in the 2nd decade, of multiple cysts in the kidneys and often in the liver. It is the most frequent inherited kidney disease in the world.
METHODS: 11 years old MS patient, from a consanguineous marriage of first degree, only son in a family of two children from the northern part of Algeria, with a previous history of mother and sister suffering from PKAD diagnosed at 12 and 20 years respectively. The child Consulted for bilateral renal colic pain associated with recurrent urinary tract infections and expulsion of renal lithiasis which started at age 2. Clinical examination showed a child in good condition, with no failure to thrive weight, a good blood pressure at 110/70mmHg, polyuria> 3L / D, Albustix: morning PH: 5.5 without any abnormalities for the rest. Nothing remarkable for the rest of the physical examination. Blood and urinary laboratory tests: NFS, renal tests, blood chemistry, calcemia and phosphorus, liver function, and lipid tests correct. Urinary calcium at 1.08mmol / d, hyperoxaluria at 449mmol / d. The study of crystals showed a whewellite type (calcium oxalate monohydrate). The morphologic exploration: radiography of abdomen without preparation and abdominopelvic ultrasound are in favor of nephrocalcinosis. The molecular exploration was performed by direct sequencing of exons: 1,4,7 and 10 of the AGXT gene. The proband is homozygous for the mutation c.T853C (p.Ile244Thr) called Maghrebin, both parents are heterozygous for this mutation and sister did not carry the mutation. The child has since been under treatment of diuresis and under PYRIDOXINE at a dose of 500mg / d with a marked improvement rates of oxalemia and oxaluria tested after one year.
RESULTS: This is a first degree consanguineous family who has two hereditary kidney diseases which may lead to dialysis. A detailed literature review aboutthe mutation of the Maghrebin HP1 as well as the populations studied, and a few observations with a combination of two genetic renal disease described in the same family.
CONCLUSIONS: The double hereditary renal disease in this family has raised the issue of genetic counseling and kidney transplantation from related living donnor is impossible for three members of this family. The father remains the only potential donor. The development of transplantation from cadaveric donor in our country remains the only hope for this family.

A CASE OF HYPONATREMIA WITH COMPLEX ETIOLOGY: SIADH OR PITUITARY DYSFUNCTION?

ANNAMARIA BERNARDI, L.P. già Direttore SOC Nefrologia Rovigo
MICHELE PIVA, ENRICO PIVA, SOC Nefrologia Azienda ULSS 18 Rovigo Italy

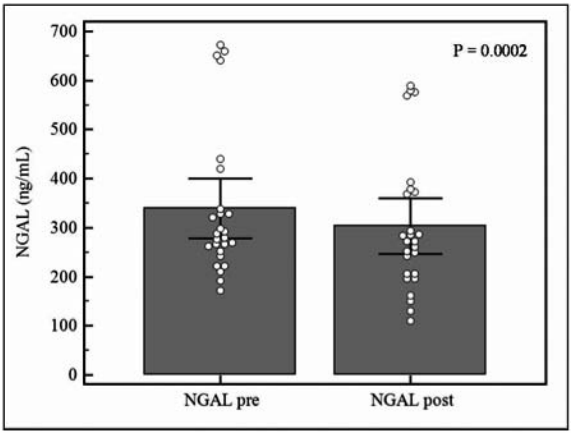
In 2004 were observed a woman, 38 year aged, with severe hyponatemia, anemia, dysmenorrhea and hypothyroidism. As child (3 years) developed acute lymphoblastic leukemia, treated with blood transfusions, chemotherapy and total body radiotherapy, until recovery (1979). Two years after post- transfusional hepatitis B; by 1980 epileptic seizures treated with carbamazepine (1200 mg/day) and Clobazam (30 mg/day).
At first examination (2004) the woman showed: BMI 30, Na 122 mmol/l, Anemia Hb 10,5 g/dl, Leukocytes 3210 mm3, FT3 2,1 pmol/l, TSH 12,5 mUI/l, normal renal function, dysmenorrhea and amenorrhea.
Treatment: cortisone acetate 25 mg/day, EPO beta 10.000 U/week, and iron replacement therapy, light- low-calorie diet with normal protein intake, sodium chloride 10 g /day (without salt in food preparation), water intake settled. E/P for menses regulation, levothyroxine 100-150 mcg/day, carbamazepine lowering doses (from 1200 mg to 800-600 mg/day). In two months: sodium 132 mmol/l, Hb 12,2 g/dl, thyroid hormones within normal range, remarkable reduction of epileptic seizures, moderate weight reduction.
Possible causes of hyponatremia in this patient: Carbamazepine at high doses; Hypothyroidism; previous chemo and radio therapy; Syndrome of inappropriate ADH secretion (SIADH) or pituitary disfunction.

NGAL (NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN) IS A MARKER OF THE CHRONIC INFLAMMATION INDUCED BY METABOLIC ACIDOSIS IN CKD PATIENTS

VALERIA CERNARO, ANTONIO LACQUANITI, VALENTINA DONATO, MARIA ROSARIA FAZIO, SILVIA LUCISANO, ROSARIA LUPICA, DOMENICO TRIMBOLI, MICHELE BUEMI

Chair of Nephrology, Department of Internal Medicine, University of Messina, Italy

INTRODUCTION. Metabolic acidosis (MA) is a common complication of CKD and its prevalence linearly increases with the disease stage. A low pH induces the expression of pro-inflammatory cytokines. We evaluated the changes in plasma NGAL levels determined by MA correction in patients with CKD, stage IV-V, receiving conservative therapy.
METHODS. We enrolled 26 patients with MA (serum bicarbonate<22 mEq/L) not yet treated at hospital admission. We collected blood samples before and two days after i.v. sodium bicarbonate therapy, in order to assess whether NGAL levels changed as a result of the treatment. NGAL assay was performed by Alere Triage® MeterPro Test in whole blood samples.
RESULTS. NGAL significantly decreased after correction of MA (from 339.34 [95%CI,278.62 to 400.07] to 303.42 [95%CI,246.76 to 360.07] ng/mL,p=0.0002).No changes occurred in the other blood or clinical parameters. Our results can be explained by the role of MA in the pathogenesis of chronic inflammation, and NGAL is expression of the inflammatory state commonly observed in moderate-to-severe CKD.
CONCLUSIONS. MA most likely contributes in part to determine the high NGAL levels existing in patients with moderate-to-severe CKD. Bicarbonate administration, in the presence of even mild MA, reducing NGAL can actually slow CKD progression, for which NGAL is an independent marker of risk.
Hence, bicarbonate therapy may be an inexpensive, easy to implement and effective strategy in slowing CKD progression, provided that blood gas parameters are closely monitored. Indeed, metabolic alkalosis is equally harmful and the association between serum bicarbonate levels and mortality is a U-shaped curve.



THE ROLE OF PRETRANSPLANTATION DIALYSIS MODALITY ON KIDNEY TRANSPLANTATION OUTCOME: A SINGLE CENTRE EXPERIENCE

B. OLIVA, B. BUSCEMI, C. ALTIERI, R. MONGIOVÌ, F. CAPUTO

UOC Nefrologia II con Dialisi e Trapianto
Centro trapianti di rene "Leonardo Sciascia" ARNAS Civico - Palermo

Background:
The effect of pre-transplant dialysis modality on graft function is a matter of debate. Although some authors deny the existence of a significant influence, others suggest that peritoneal dialysis (PD) affects early graft function favorably, possibly by contributing to a more physiologic water balance. In the present study, we evaluated the influence of pre-transplant dialysis modality on early and late graft function.
Patients and Methods:
We studied 383 patients who underwent a first renal transplantation during 2000 – 2010,comparing the records of 38 PD patients [23 male; mean age: 48±10.7 years] who received 36 living related and 8 cadaveric renal transplantations with those of a control group of 38 consecutive hemodialysis (HD) patients [19 male; mean age: 48 ± 9.9 years] for the index cases.
Results:
The groups showed no significant differences in donor type, human leukocyte antigen matching, immunosuppressive protocols, and duration of dialysis. Also, neither group differed significantly with regard to incidence of delayed graft function, acute tubular necrosis, wound infection, systemic viral and bacterial infections, or acute rejection in the early post-transplant period. In the late post-transplant period, incidences of chronic rejection, graft failure, and malignancies were also similar. Patients on peritoneal dialysis showed a lower rate of delayed graft function and a similar incidence of acute rejection than patients on hemodialysis. No differences were noted between the groups in the incidences of post-transplant cardiovascular complications, malignancies, and diabetes mellitus.
In the PD group graft survival was 83% versus 85% in the HD group (follow-up: 3 years). The patient survival was similar in the two groups.
Conclusions:
Patients on peritoneal dialysis do well after renal transplantation. The incidence of some complications, particularly delayed graft function, is lower than in patients on hemodialysis. As a pre-transplant dialysis modality, neither HD nor PD affects the long term outcome of renal transplantation.

THE HEPATO RENAL SYNDROME. CURRENT OPTIONS FOR TREATMENT

PIETRO CASTELLINO, IRENE TORRISI, SERGIO NERI

Dipartimento di Scienze Mediche e Pediatriche, Università di Catania, Italy

Hepato Renal Syndrome is a potential fatal complication characterized by a potentially reversible kidney injury resulting from renal vasoconstriction and splanchnic vasodilatation in patients with advanced liver cirrhosis. In a 4 years follow up 8-10% of patients with cirrhosis will present with at least one episode of HRS. There are two distinct form of Hepato renal Syndrome: Type 1 - With a Rapid Creatinine increase (<15 days) and Creatinine doubling or >2,5 mg/dl; Type 2 with a Slow and progressive rise of Creatinine >1,5 mg/dl. In order to make a correct diagnosis of HRS we should refer to the following criteria, as defined by the International Ascites Club: Cirrhotic patients with ascites and Creatinine > 1,5 mg/dl. The following exclusion criteria should also be satisfied: No improvement after 2 days or diuretics withdrawal and Albumin infusion 1g/Kg die, Absence of clinical signs of septic SHOCK, Exclude nephrotoxic drugs administration, Exclude other organic renal diseases, (absence of Proteinuria > 500 mg/dl, Hematuria and Echo abnormalities). In a Large series of patients with advanced cirrhosis and rapid deterioration of renal function, an Italian collaborative Study found that 45% of patients fulfilled the diagnostic criteria for HRS (25% Type 1 and 20% Type 2), with a certain diagnosis in approximately 65 % of them. Elevated CHILD score, encephalopathy and tense ascites were more frequent in HRS syndrome. Spontaneous bacterial peritonitis, bleeding and large paracentesis were the most common precipitating factors. Presence of HRS and no response to treatment were associated with a poor clinical outcome. In addition to the well known splanchnic vasodilatation, physiopathology of HRS is associated to a an impaired rise of cardiac output and marked activation of the renin angiotensin and adrenergic systems. The current treatment of Type 1 HRS is based upon the administration of systemic and splanchnic Vasoconstrictor + Albumin 0.5 – 1 g /kg die. As vasoconstrictor either Terlipressin (0,5-2 mg every 4-8 h up to 12 mg / die or Midodrine + Octreotide (5-15 mg + 100 – 200 ug every 8 hrs) have been proposed. In a recent meta analysis of controlled randomized trials, terlipressin has shown to be superior to control treatment in restoring renal function. However, more data are needed on a direct comparison of terlipressin vs midodrine in the clinical management of HRS. Favorable predictor of response are: Age, Creat < 5 mg, Bilirubin < 8 mg, Rise of MAP > 5 mmHg, Absence of infection. Various area of controversy remain open to future discussion and research, among these: Continuous infusion vs repeated boluses of terlipressin in order to minimize the drug induced Tachycardia the risk of Cardiac and intestinal ischemia and the terlipressin induced ADH like effect with worsening of Hypo natriemia. In addition, the role of the Modulation of cardiac output and blood pressure may deserve further attention.

COMBINED USE OF ULTRASOUND AND GFR PREDICTIVE EQUATIONS FOR THE ESTIMATION OF RENAL FUNCTION IN ELDERLY PATIENTS

LUCA ZANOLI[1], MD, PHD, GIULIA ROMANO[1], MD, STEFANIA RASTELLI[1], MD, FRANCESCO RAPISARDA[1], MD, GAETANO INSERRA[1], MD, PASQUALE FATUZZO[1], MD, MARCELLO ROMANO[2], MD, PIETRO CASTELLINO[1], MD.

Medicina Interna, Scuola di Specializzazione in Nefrologia, Università di Catania, Catania. (2) Geriatria - ARNAS Garibaldi, Catania.

Correspondence to:
Luca Zanoli, Medicina Interna, Scuola di Specializzazione in Nefrologia, Università di Catania, Catania. zanoli.rastelli@gmail.com

Introduction: Assessment of renal function is mandatory for the clinical evaluation of elderly patients. Many formulas are currently available to estimate renal function in adults. Kidney volume and length have been indicated as predictors of renal function in chronic kidney disease. However, their performance for estimation of renal function was not well analysed in elderly patients.
We aimed to evaluate in elderly patients the suitability of equations for renal function estimation and the correlation between ultrasound kidney parameters and function.
Methods: Cockcroft–Gault, MDRD and CKD-EPI equations were compared versus the reference renal function measured with 24h urinary creatinine clearance (24h-CrCl). Renal dysfunction was defined as 24h-CrCl<60ml/min.
Results: A total of 72 elderly patients (age 80±7 years, 44% males) were enrolled; renal dysfunction was detected in 41 patients (57%). Serum creatinine and 24h-CrCl were respectively 0.98±0.42mg/dl and 59±27ml/min. Cockcroft–Gault<52ml/min was highly sensitive in selecting patients with and without renal dysfunction (sensitivity 78%; specificity 94%). The strongest correlation between ultrasound kidney parameters and estimated renal function was observed between Cockcroft–Gault and bilateral kidney volume (R=0.68, P<0.001).
In multivariate analysis, Cockcroft–Gault<52ml/min and kidney sinus section area<28cm^2 had the highest accuracy in the identification of patients with 24h-CrCl<60ml/min (AUC 0.90, 95%CI 0.82-0.97, P<0.001).
Conclusions: In elderly patients, Cockcroft-Gault formula showed a good discrimination in selecting patients without renal dysfunction. The combined use of echographic kidney parameters and equations for renal function estimation improved the prediction of renal dysfunction in elderly patients.

LEFT VENTRICULAR HYPERTROPHY AND ATHEROSCLEROTIC RENOVASCULAR DISEASE ARE RISK FACTORS FOR CONTRAST INDUCED NEPHROPATHY IN PATIENTS WITH ISCHEMIC HEART DISEASE

LUCA ZANOLI[1],STEFANIA RASTELLI[1], CARMELITA MARCANTONI[2], CORRADO TAMBURINO[3], PIETRO CASTELLINO[1].
[1]Internal Medicine and Nephrology, University of Catania, Italy; [2]Div.of Nephrology, Cannizzaro Hospital, Catania, Italy and [3]Div. of Cardiology, University of Catania, Italy.

Correspondence to:
Luca Zanoli, Medicina Interna, Scuola di Specializzazione in Nefrologia, Università di Catania, Catania. zanoli.rastelli@gmail.com

Background: Up to one third of patients with high cardiovascular risk develop contrast-induced nephropathy (CIN) after contrast media exposition in high risk populations. The risk for CIN development in patients with left ventricular hypertrophy (LVH) and atherosclerotic renovascular disease (ARVD) is unknown.
Aim: to look at the risk factors for CIN in high CV risk patients with documented ischemic heart disease.
Methods: Prospective cohort study. A convenience cohort of 293 patients was extracted from the population of the RAS-CAD study (NCT 01173666). CIN was defined as serum creatinine (sCr) ≥25% than baseline within 7 days from angiography. The left ventricular mass was calculated with the Penn convention formula.
Results: The incidence of CIN was 23% in patients with LVH indexed by height$^{2.7}$ and 7% in patients without LVH (P<0.05). sCr increased from 1.06±0.33 to 1.24±0.60mg/dl in the former group and from 1.01±0.30 to 1.06±0.36mg/dl in the latter group. LVH indexed by height$^{2.7}$ (OR 4.8; 95%CI 1.8-12.7; P<0.05), total serum cholesterol>205mg/dl (OR 2.6; 95%CI 1.3-5.1; P<0.05), ARVD (OR 2.4; 95%CI 1.3-4.6; P<0.05) and contrast media dose>250ml (OR 3.7; 95%CI 1.9-7.2; P<0.05) were associated with CIN.
Conclusion: LVH and ARVD are risk factors for CIN in a high cardiovascular risk population.

KIDNEY BIOPSY: A CLINICAL STEP IN MANAGEMENT OF GLOMERULAR LESIONS TAORMINA EXPERIENCE

MESSINA SALVATORE, BUCCA MAURIZIO, CASTELLINO SANTINA

UOC Nefrologia e Dialisi - Ospedale S.Vincenzo Taormina

Background:
Biopsy is a technique widely spread in order to improve knowledge about immune mediated disease regarding kidney a glomerulonephritis (gn) is a relatively rare disease with numerous subtypes. Most regional nephrology centers see only a limited number of patients with each type of GN every year. Information about the prevalence and incidence of GN in the general population is rather scarce; comprehensive epidemiological surveys are difficult to undertake, especially since the onset of most cases of GN is 'silent' so the diagnosis is often incidental, made by urine testing during a routine medical examination.

Methods and Materials
A detailed history and physical evaluation was done and the following examinations were performed in all patients: urine routine examination, urine culture and sensitivity, daily urine protein, blood creatinine, serum albumin, ultrasound imaging of abdomen; the clinical and laboratory conditions observed at the time of renal biopsy were reported as follows: (i) nephrotic proteinuria: _3.5 g/24 h; (ii) urinary abnormalities: persistent low grade proteinuria (<3.5 g/24 h) with or without micro haematuria; (iii) isolated haematuria: presence of micro- or macrohaematuria, without any proteinuria; (iv) nephritic syndrome: combination of haematuria, arterial hypertension and reduced renal function (scr>110 mmol/l); (v) mild renal insufficiency was defined as scr 111–200 mmol/l; and (vi) advanced renal insufficiency was scr>200 mmol/l. Renal biopsy was performed using a medical specimen called biopsy gun; all biopsy samples were evaluated by light microscopy and immunofluorescence. However, immunofluorescence was not performed in the case of the lack of or poor quality of a tissue sample. The number assessed by electron microscopy varied from 15.0 to 75.5% of all samples; electron microscopy was used by discretion of the pathologist.

Discussion:
Over a time of 12 years (2000-2012) renal biopsy were collected; renal diseases were divided in four major categories: (*1*) primary glomerulonephritis (gn); (*2*) secondary gn; (*3*) tubulointerstitial nephropathies (tin); and (*4*) vascular nephropathies (vn). Mesangial glomerulonephritis (both IgA and non IgA mesangial nephropathy), membranous GN(MGN), focal segmental glomerulosclerosis (FSGS), minimal change disease (MCD), mesangiocapillary GN (MCGN), crescentic GN and poststreptococcal GN were considered

as primary GN. Immune-mediated GN (systemic lupus erythematosus, Schonlein-Henoch purpura, amyloidosis, Goodpasture's syndrome, necrotizing vasculitis, connective disease, and sarcoidosis), metabolic and hereditary-disorder-associated GN (MEDAGN) (diabetes mellitus, Alport's syndrome, Fabry disease, Primary GN were more frequent in males (64%) compared to females (36%); similarly true for tubulointerstitial nephropathies (males 57% and females 43%) and vascular nephropathies (males 70% and females 30%). On the contrary, secondary GN were more frequent in females (males 45% and females 55%). Diseases whose frequency was higher in males were IgA nephropathy (IgAN) (males 39.3% and females 27.8%; P <0.0001), benign nephroangiosclerosis (males 75.8% and females 56.1%; P <0.0001), and acute tubular necrosis (males 18.8% and females 11.1%, P <0.01). A significantly higher frequency of immune mediated secondary GN (males 55.9% and females 72.5%; P <0.0001) as well as primary GN, including minimal change disease (males 7.4% and females 10.3%; P <0.0001), focal segmental glomerulosclerosis), (males 12.3% and females 14.7%; P <0.005), and mesangio capillary nephritis (males 6.2% and females 8.0%; P <0.005.

About 65 patients were treated using kidney biopsy; eleven patient s showed a clinical feature by lupus nephritis; 13 patients had a histological evidence resulting in IGA nephropathy; seven patients were classified in membranous nephropathy, 9 patients belonged to the histological criteria used for the diagnosis of focal segmental glomerulosclerosis were: segmental sclerosis of glomerular capillaries with associated hyaline and/or lipid deposition and with variable prominence of overlying visceral epithelial cells and segmental adhesion to a mildly thickened bowman capsule. The collapsing variant of fsgs (cfsgs) was defined by wrinkling and retraction of the glomerular capillary wall, collapse of the underlying tuft with marked hyperplasia and hypertrophy of the overlying visceral epithelial cells, often accompanied by prominent intra-cytoplasmic protein reabsorption droplets; 13 patients were included on the histological classes for lupus nephritis.

Regarding IGA nephropathy, we emphasise the importance of carefully evaluating both clinical and histologic findings in detail; the recent renewed interest in steroids and immunosuppressive agents is also provided; membranous nephropathy is a frequent cause of nephrotic syndrome and, in one third of these patients, leads to end-stage renal disease: the following recommendations: no treatment in absence of nephrotic syndrome ; patients with heavy proteinuria should receive a 6 month treatment with methyl prednisolone pulse therapy for three consecutive days followed by oral prednisolone and chlorambucil.

Conclusion:

We believe collection of data relating to renal biopsies in a national registry is a useful tool for nephrologists in that it meets one of the current challenges facing the clinical research enterprise [1]. The availability of these data will allow epidemiologic studies in health care to treatment of renal diseases.

RENAL PHOSPHATE HANDLING

MASSIMO CIRILLO – Dept. of Medicine and Surgery – University of Salerno

Hyperphosphatemia is pivotal in some complications secondary to kidney dysfunction. Current guidelines suggest that hyperphosphatemia secondary to kidney dysfunction develops only when glomerular filtration rate is reduced well below the threshold of 60 ml/min. This paper deals with the relationship of age with serum phosphorus and with the possible influences of this relationship on hyperphosphatemia secondary to kidney dysfunction. A recent epidemiologic study shows that serum phosphorus decreases over time not only in pediatric age but also during adulthood. This decrease differs between men and women: continuous in men, but not in women, because of a transitory serum phosphorus increase during climacterics. Data show also that age-associated differences in serum phosphorus among adults are explained by differences in the maximal phosphorus reabsorption in the renal proximal tubule (TmP/GFR). Other studies suggest that the opposite influences on TmP/GFR of growth hormone (stimulation) and estrogen (inhibition) are the determinants of the age-associated changes in TmP/GFR and serum phosphorus. The decline of serum phosphorus with age leads to the hypothesis that, in the presence of a disorder inducing phosphorus retention, the prevalence of hyperphosphatemia should be higher in young adults than in the elderly because the healthy elderly have lower serum phosphorus. A large clinical study supports this hypothesis showing that hyperphosphatemia secondary to kidney dysfunction is approximately 4 times higher at age <65 that at age >65. Data suggest that the relation between kidney function and serum phosphorus should be reevaluated considering the possible confounding effect of age.

OXYGEN SATURATION ITALIAN STUDY GROUP: RESULTS OF THE FIRST TRIAL ON THE ROLE OF OXYGEN SATURATION AS A PREDICTIVE MARKER OF INTRADIALYTIC CARDIOVASCULAR INSTABILITY

SANTORO A, MANCINI E, BOLASCO P, SEVERI S, CORAZZA L.

Nephrology, Dialysis and Hypertention, University Policlinin S. orsola Malpighi, Bologna, Territorial Dialysis Service, quartu S. Elena, Biomedical engineering dpt., University of bologna, Cesena, bellCo sr. Mirandola Italy

INTRODUCTION AND AIMS: Arterial hypotension is a frequent problem complicating HD. Hypoxemia is affected by cardiac output, pH, Hb serum level and its affinity to bond to oxygen and may be a further marker of hemodynamic instability. Online, non-invasive monitoring of SO_2 is nowadays possible, by means of optic sensors measuring SO_2 in blood entering the dialyzer. Preliminary data obtained by Santoro A et al. showed an interesting prediction potential of oxygen saturation variability when it comes to intradialytic hypotensive episodes (IDH). The aim of the present multicenter observational trial was to assess the prediction power of IDH by short-term variability of SO_2 in a large number of HD sessions.

METHODS: 51 hypotension-prone patients were enrolled and monitored for 3 months. All of them were on a thrice weekly dialysis schedule and the average dialysis vintage was 60±33 months. The average age was 73±11 years old and 35 out of them were males and 16 were females. The average dry weight was 72±16 kg and the weight loss 3.0±0.8 kg. Blood flow and session duration were, respectively, 292±16 mL/min and 230±10 minutes. SO_2 signal was recorded from the *Hemox* (Formula Therapy, Bellco, Italy). Blood pressure, pre-dialysis (30-min interval), intradialytic symptoms, and onset time were collected. The study treatment was standard hemodialysis for all the enrolled patients and no variation of buffer composition, conductivity set, duration or anticoagulation regimen was done during the whole study length. Sodium or ultrafiltration profiles and biofeedback systems were not allowed during the study. Based on IDH definition (EBPG), sessions with hypotension were counted offline as *positive* (IDH yes) or *negative* (IDH no). SO_2 time series was filtered with a digital low-pass filter (ft = 0.1 Hz) and then standard deviation (SD) was computed on 4 min. length mobile windows. In the *positive* sessions, the SO_2 variability analysis was truncated at hypotension onset. A critical threshold of 1.95% was fixed on the basis of ROC analyses over the whole data set. Overshoot time (OT) was calculated as the time difference between the first oxygen saturation SD value exceeding the threshold and the IDH appearance.

RESULTS: 486 out of 2000 sessions were discarded due to incorrect data collection: a total of 1514 sessions were then analysed. On the basis of hypotension presence, 339 (22%) were classified as *positive* and 1175 (78%) as *negative*.
Average IDH time onset was 133±50 min. The off-line prediction, based on the SO_2 variability, was summarized by means of sensitivity and specificity. Sensitivity was 66% and the specificity was 61% . The average OT was 89±50 min.

CONCLUSIONS: Continuous monitoring of SO_2 variability seems to show, on a large number of sessions, an enough prediction capability of IDH. Results robustness is confirmed by the narrow confidence intervals for both sensitivity and specificity. This study may pave the way to the implementation in a future generation of dialysis monitors of an automatic alarm system including SO_2 variability oscillations as a warning variable, offering the opportunity of preventive manoeuvres to avoid hypotension. A prospective study based on the daily application of the above mentioned alarm system may be designed to further corroborate these promising results.

ACUTE KIDNEY INJURY AFTER HEART TRANSPLANTATION

LUCA SALVATORE DE SANTO[§], GIANPAOLO ROMANO*, CRISTIANO AMARELLI*, MARIANNA BUONOCORE°, CIRO BANCONE°, FEDERICA AGRUSTA°, NICOLA GALDIERI* AND CIRO MAIELLO*

§Chair of Cardiac Surgery, University of Foggia, Foggia, Italy; *Department of Cardiovascular Surgery and Transplants, V. Monaldi Hospital, Naples, Italy; °Department of Cardiothoracic Sciences, Second University of Naples, Naples, Italy

Objectives Data regarding risks and consequences of Acute Kidney Injury (AKI) after cardiac transplantation are dismissingly few and unclear. This study defined the incidence, risk factors and prognostic implication of AKI in a single centre cohort operated on between January 1999 and December 2008.
Methods Data from 307 consecutive recipients (mean age: 47.42±13.58, 20.5% female, 18.9% diabetics, 19.5% with previous cardiac operations, 26.4% hospitalized, 78.4±33.7 ml/min preoperative glomerular filtration rate [eGFR]) were analyzed using multivariable logistic regression modelling. AKI was defined according to RIFLE criteria.
Results RIFLE scores of I or F were detected in 14%, and Continuous Veno-Venous Hemofiltration was needed in 6.1%. Risk factors for AKI were: previous cardiac operation (OR 2.35; 95% CI, 1.11-4.9), blood transfusion (OR 1.08; 95% CI, 1.011– 1.16), Troponin I release>10 (OR 1.031; 95% CI, 1.001– 1.064), length of ischemic time (OR 1.008; 95% CI, 1.011– 1.16). Overall hospital mortality averaged 7.8% and overall one year mortality was 10.4%; both mortality rates increased with each RIFLE stratification (Normal 3.4%, RIFLE R=7.1%; RIFLE I =25.7%; and RIFLE F= 37,5% and Normal 5.6%, RIFLE R =11.8%,RIFLE I =25.7% and F=37.5% respectively). AKI proved independent predictors of both early and one-year mortality. The burden of AKI significantly affected one year kidney function (Δ preoperative GFR – 1-year GFR in AKI vs No AKI = -25.872±22.54 vs -7.968±34.18, p=0.015).
Conclusions Acute Kidney Injury is a highly prevalent and prognostically important complication. Some of the risk factors for AKI identified may be modifiable.

SLEEP DISORDERS IN CKD: PRESENT STATUS

R.M. DE SANTO, Italian Institute for Philosophical Studies, Naples, Italy

In contrast with the huge amount of data on sleep disorders in ESRD little data exists on sleep quality in CKD. The interest in the topic is recent, however the scanty data provide stringent evidence for the existence of a disordered sleep.

Lessons from cross sectional studies. Kimmel et al (1989) diagnosed sleep apnea (SA) in 6 out 6 patients non yet on dialysis. Iliescu et al (2004) in CKD patients with eGFR >21 ml /minx1.73 sq.m. correlated poor sleep with depression but not with eGFR. Kurella et al (2005) in CKD patients with a median eGFR of 25.5 ml/min, disclosed a significant association between scores of the kidney function and quality of life. In a study with polysomnography (PSG) of Markou (2006) in CKD patients (eGFR 28.6±9.2 ml/min) chronic insomnia was present in 17.4%. Parker et al (2005), also using PSG in CKD patients with a mean eGFR< 15 ml/min disclosed a reduced total sleep time. In a series of 6 studies (2005-2008) in 349 patients with eGFR in the range 44.6 to 58.6 ml/min we disclosed a disrupted sleep very early in the natural history of CKD. Complaints were ascertained within 4 weeks of CKD diagnosis.

Restless leg syndrome was disclosed in 10.9% of CKD patients and a mean GFR of 41.6 ml/min (Merlino et al, 2010), and a Sleep Disordered breathing was found in CKD patients with eGFR> 40 ml/min. In the Kaiser Permanente Cohort (Sim JJ, 2009) in 1,102,089 persons the prevalence of sleep apnea was 2.54%, a high risk was however found in persons with eGFR< 60/ml xmin x 1.73 sq.m). In Japan (Sakaguchi Y,2011) disclosed a prevalence of sleep apnea of 65% in CKD people with a mean eGFR of 28.5 ml/minx1.73 sq.m.

Lessons from longitudinal studies. Sabbatini et al (23) in a 3-year longitudinal study did not disclose any relation of PSQI with renal function and blood pressure. In a 4-year longitudinal study (2010) in patients with eGFR of 84.2±21.1 ml/min we disclosed a poor sleep in 85.%% of the patients. Sleep habits under strict blood pressure control improved greatly. Multivariate analysis clearly demonstrated the importance of keeping blood pressure within target. The prevalence of poor sleepers in early CKD was viewed as a marker of the coping process with a chronic disease.

Finally a sleep disordered breathing was demonstrated to represent a risk for CKD (Iseki K, 2009 and Fleischman G, 2010). Thus sleep apnea in CKD may considered a warning (Mahowald MD, 2006).

In conclusion wake and sleep functions, in CKD, should be viewed as vital signs: every patients should be asked about sleep and daytime alertness. Any complaint should be taken seriously and not simply attributed to underlying renal disease and/or medications.

VERY-LOW PROTEIN DIET AND INDOXYL SULPHATE: A POST-HOC ANALYSIS

STEFANIA MARZOCCO, FABRIZIO DAL PIAZA, LUCIA DI MICCO, SERENA TORRACA, MARIA LUISA SIRICO, DOMENICO TARTAGLIA, GIUSEPPINA AUTORE, ANTONIETTA DE BLASIO, BIAGIO DI IORIO

UOC di Nefrologia, Ospedale "A. Landolfi", Solofra (AV), Italy and Dipartimento di Darmacia, Università di Salerno, Italy

Background
Indoxyl sulfate (IS) is a protein-bound uremic toxin derived from dietary tryptophan metabolism. High levels of IS are associated with impairment of renal function and increased mortality risk in chronic kidney disease (CKD) patients. Our aim was to study whether a very low-protein diet (VLPD; 0.3 g/kg bw/day) would reduce IS serum levels compared to a low-protein diet (LPD; 0.6 g/kg bw/day) in CKD patients not yet on dialysis.
Methods
We performed a post-hoc analysis of a cross-over randomized study that compared the effects of VLPD and LPD assessed FGF23 levels variations in patients assuming VLPD. In the study 32 patients were randomized to either a VLPD (0.3 g/kg body weight/day) supplemented with ketoanalogues during the first week and a LPD (0.6 g/kg body weight/day) during the second week (group A, 16 patients), or a LPD during the first week and a VLPD during the second week (group B, 16 patients). IS serum levels were measured at baseline and at the end of each study period. We compared IS levels to those of 24 hemodialysis patients (HD) and 14 healthy subjects (control).
Results
IS serum levels were significantly higher in HD (43.4 ± 12.3 μM) and CKD (11.1 ± 6.6 μM) groups compared to the control group (2.9 ± 1.1 μM; $p < 0.001$). IS levels also correlated with serum creatinine in CKD patients ($R2 = 0.42$; $p < 0.0001$). In both groups, after only 1 week of VLPD, CKD patients showed a significant reduction of IS serum levels (37%).
Conclusions
VLPD supplemented with ketoanalogues reduces IS serum levels in CKD patients not yet treated with dialysis.

BLOOD PRESSURE VARIABILITY AND CLINICAL OUTCOMES IN CHRONIC KIDNEY DISEASE

ANTONIETTA DE BLASIO, ANDREA POTA, MARIA LUISA SIRICO, LUCIA DI MICCO, ROBERTO RUBINO, PASQUALE GUASTAFERRO, BIAGIO DI IORIO

UOC di Nefrologia, Ospedale "A. Landolfi", Solofra (AV), Italy

Background
Hypertension is one of the major causes of cardiovascular disease and impairment of renal function in subjects with chronic renal disease (CKD).
Our aim was to study the effect of visit-to-visit systolic blood pressure variability (SBPV) on mortality and start of dialysis in a cohort of patients with CKD not yet requiring renal replacement therapy (RRT).

Methods
Longitudinal retrospective, observational, multi-centre study of CKD patients with a mean estimated glomerular filtration rate (eGFR) of <60 mL/min/m^2 and free from cardiovascular disease referred to three tertiary care nephrology outpatient clinics from 1 January 2004 to 31 December 2005. Demographic, clinical and laboratory data, medications as well as data on dialysis inception or death were collected. SBPV was defined as the ratio of the SD to the mean SBP of five values recorded during a run-in phase of 4–5 months. Data on dialysis initiation and mortality were recorded through 31 December 2010.

Results
We included 374 patients (mean age 76±11 years); 232 subjects (62%) were male and 103 (29%) had diabetes. The univariate analysis and the adjusted model found a significant association between SBPV and the risk of death (hazard ratio for all-cause mortality per 1% increase in SBPV: 1.05; 95% confidence interval: 1.02–1.09; P = 0.001) but not with initiation of dialysis. No fatal events were recorded after initiation of dialysis.

Conclusions
In CKD patients with eGFR< 60 mL/min/m^2 and without cardiovascular disease SBPV is associated with a higher risk of mortality; therefore, it may be used for risk stratification in CKD patients.

ROLE OF NITRIC OXIDE AND ENDOTHELIN DURING HIGH-FREQUENCY EXTERNAL MUSCLE STIMULATION IN ACUTE KIDNEY FAILURE: A POST-HOC ANALYSIS

STEFANIA MARZOCCO, PASQUALE GUSTAFERRO, SIMONA ADESSO, GIUSEPPINA AUTORE, ANDRÈ KLASSEN, AUGUST HEIDLAND, ANTONIETTA DE BLASIO, BIAGIO DI IORIO

UOC di Nefrologia, Ospedale "A. Landolfi", Solofra (AV), Italy and Dipartimento di Darmacia, Università di Salerno, Italy

Background

The endothelial dysfunction in the course of acute kidney injury (AKI), in particular impaired nitric oxide (NO)-mediated endothelium-dependent vasodilation, can be a critical early event in the development of AKI. High tone external muscle stimulation (HTEMS) treatment of patients with AKI during hemodialysis is associated with improvement of clinical outcomes. The mechanisms underlying the beneficial effects of HTEMS need to be clarified.

The goal of this study is the evaluation of NO, endotelin-1 (ET-1) and Asymmetric dimethylarginine (ADMA) changes during AKI in patients treated with HTEMS.

Methods

We performed a post-hoc analysis of a randomized study of 34 patients with AKI assigned to receive or not one-hour HTEMS during dialysis. All patients were treated with daily dialysis until there was anuria, when diuresis resumed (urine flow> 700 ml / day) they were subjected to dialytic treatment on alternate days. The dialysis treatment was interrupted when renal function returned to pre-episode of AKI. HTMES was performed changing the frequency between 4100 and 33000 Hz in short intervals (3 sec.).

Results

HTMES patients showed shorter duration of oliguria, faster improvement of serum creatinine and urea levels, less need of dialysis treatment and a shorter length of hospitalization compared to the untreated patients.

In HTMES patients, NO serum levels increased more rapidly than in no-HTEMS patients, reaching values not statistically different from those of 20 healthy subjects (controls) 7 days after of AKI onset, while no-HETMS patients normalized their concentration of nitric oxide twentyone days after AKI onset ($p < 0.001$). Similarly, ET-1 levels became normal at the seventh day in HTEMS subjects, while in no-HTEMS group the normalization took place 21 days after AKI onset ($p < 0.001$).

Conclusions

HTEMS treatment of patients with AKI during hemodialysis is associated with an improved endothelial function and a better course of AKI. Greater randomised trials of AKI patients are needed to confirm our data.

SEVELAMER VERSUS CALCIUM CARBONATE IN INCIDENT HEMODIALYSIS PATIENTS: RESULTS OF INDEPENDENT STUDY

BIAGIO DI IORIO[1], DONALD MOLONY[2], CYNTHIA BELL,[3] EMANUELE CUCCINIELLO[1], VINCENZO BELLIZZI[4], DOMENICO RUSSO[5], ANTONIO BELLASI[6], ANTONIETTA DE BLASIO[1]

1. UOC di Nefrologia, PO "A Landolfi" – Solofra (AV), Italy, 2. Division of Renal Dis & Hypertension, Department of Medicine, University of Texas Houston Medical School, Houston, Texas, USA , 3. Division of Pediatric Nephrology, Department of Pediatrics, University of Texas Houston Medical School, Houston, Texas USA, 4. UOC di Nefrologia, AO Ruggi d'Aragona, Salerno, Italy, 5. Department of Nephrology, School of Medicine, University "FEDERICO II" Napoli, Italy, 6. U.O.C. di Nefrologia, Dialisi, Ospedale Sant'Anna, Azienda Ospedaliera Sant'Anna, Como, Italy

Background: Serum phosphorus levels are associated with an excessive cardiovascular (CV) disease risk in incident as well as prevalent dialysis patients. It is not known whether sevelamer (SV) rather than calcium containing (CC) phosphate binder improves cardiovascular (CV) survival in patients receiving dialysis.

Methods: We performed an open label, randomized, controlled trial with parallel groups in 466 incident hemodialysis patients recruited from 18 centers in Italy. Subjects were randomized in 1:1 fashion to either SV or CC for 24 months and were followed until completion of 36 months of follow-up or censoring. Primary endpoint was CV death due to cardiac arrhythmias.

Results: At baseline, patients assigned to SV had higher serum phosphorus [Mean(standard deviation):5.6(1.7) vs 4.8(1.4) mg/dl] and C-reactive protein [8.8(13.4) vs 5.9(6.8) mg/dl] and lower Coronary Artery Calcification scores [median (interquartile range): 19 (0-30) vs 30 (7-180)]. At study end, serum phosphate was lower in the sevelamer group (median dose 4800 and 2000 mg/day for SV and CC). After a mean follow-up of 28 (10) months, 128 deaths were recorded (29 and 88 due to cardiac arrhythmias and all-cause CV death). SV patients had a lower CV mortality risk due to cardiac arrhythmias compared to patients treated with CC (Hazard Ratio: 0.06, 95% Confidence Interval 0.01-0.25; $p<0.001$). Similar results were noted for the all-cause CV mortality and all-cause mortality but not for non-CV mortality. Adjustments for potential confounders did not modify the results.

Conclusions: SV compared to CC phosphate binder improves survival in incident hemodialysis patients. However, the better outcomes in the sevelamer group may be due to better phosphate control rather than reduction in calcium load.

VERY-LOW PROTEIN DIET AND FGF23: A RANDOMIZED STUDY

LUCIA DI MICCO, MARIA LUISA SIRICO, LUIGI RUSSO, ANDREA POTA, FRANCESCO MIRENGHI, DOMENICO RUSSO, ANTONIETTA DE BLASIO, BIAGIO DI IORIO

UOC di Nefrologia, Ospedale "A. Landolfi", Solofra (AV), Italy

Background
Fibroblast growth factor 23 is associated with mortality, impairment of renal function CKD, and calcification in patients with chronic kidney disease (CKD).
Our aim was to study whether a very-low-protein diet (0.3 g/kg per day), and then a low intake of phosphorus would reduce fibroblast growth factor 23 levels compared with a low-protein diet (0.6 g/kg per day) in CKD patients not yet on dialysis.
Methods
Prospective, randomized, controlled crossover study of 32 patients randomized into two groups: Group A (16 patients) assigned to a very-low- protein diet (0.3 g/kg body weight per day) plus ketoanalogues during the first week and a low- protein diet during the second week, and group B (16 patients) assigned a low-protein diet during the first week and a very-low-protein diet during the second week. Fibroblast growth factor 23, seric, and urinary phosphate levels were measured at baseline and the end of each study period.
Results
We registered a reduction of fibroblast growth factor 23 (33.5%), serum phosphate (12%), and urinary phosphate (34%) with the very-low-protein diet compared with the low-protein diet after only one week of dietetic treatment. Serum phosphate (OR=1.11; 95% CI=1.04–1.19), urinary phosphate (OR=1.22; 95% CI=1.12–1.37) and protein intake (OR=1.85; 95% CI=1.51–2.23) were significant determinants of fibroblast growth factor 23 levels.
Conclusions
Very-low-protein diet supplemented with ketoanalogues without using phosphate binders, lowered fibroblast growth factor 23 levels in CKD patients not yet on dialysis treatment.

POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME (PRES) IN A PATIENT WITH SYSTEMIC ERYTEMATODES LUPUS (SLE)

G. SEMINARA, L. INFANTONE, C. MARCANTONI, M. MATALONE, W. MORALE, G. GIANNETTO*, D. DI LANDRO

Nephrology and Dialysis Unit Cannizzaro Hospital - Italy
*U.O.C. Nefrology ane Dialysis P.O. Gravina Caltagirone

Introduction: The use of Cyclophosphamide (CyA), the well known immunosuppressive drug utilized also for immunorelated nephropathies, rarely is associated with neurological complications. Posterior Reversible Encephalopathy Syndrome (PRES) is an oft reversible, clinical picture characterized by a clinical and radiological feature including: headache, confusion, amaurosis, nausea, vomiting and seizures. Diagnosis is mainly performed by encephalic MNR. It is hypothised that Cyclophosphamide could be associated with PRES.

Case Report: A 36 old asiatic women, affected by clinically active Systemic Erytematodes Lupus, underwent polytherapy with Steroids and Azathioprine switched to Mycophenolathe Mophetil (MMF). Two years later for relapsing of SLE patient was submitted to three monthly pulses of cyclophosphamide. After the third pulse she developed severe Herpes Zoster infection and respiratory distress associated with rapid worsening of kidney function requiring renal replacement therapy. In spite of a transient improvement of clinical conditions, the patient developed a severe hypertension associated to amaurosis, mental deterioration and life threatening seizures. For diagnosis of PRES encephalic RNM served for confirmation. Thanks to a prompt diagnosis and intensive hemodialytic and pharmacological treatment the patient experienced a rapid amelioration of blood pressure and a clear improvement of clinical picture associated to a recovery of visual acuity and disappearance of seizures. A complete recovery of renal function was finally observed and the renal replacement therapy was definitely withdrawn.

Conclusions: PRES is a rare syndrome, mainly related to hypertension and to immunosuppressive therapy. The warning arising from this clinical case is to alert the nephrologists on the possible occurrence of this clinical event. The early diagnosis of PRES and its rapid treatment can improve the outcome of this life threatening complication. In the clinical practice early renal replacement therapy, careful reduction of immunosuppressive therapy and aggressive antihypertensive treatment is of paramount importance for the prognosis and outcome if this severe and dramatic complication.

PROJECT WORK: PROJECT FORMATION OF HEALTH-CARE PERSONNEL FOR SELF-CARE OF TUNNELLIZED CENTRAL VENOUS CATHETER IN THE SICILIAN TERRITORY

W. MORALE, L. INFANTONE, C. MARCANTONI, M. MATALONE, D. PULIATTI, G. SEMINARA D. DI LANDRO

Nefrologia e Dialisi Azienda Cannizzaro Catania – Italy

BACKGROUND

The scientific data coming by current literature demonstrate an incidence of bacteraemia developing from tunnellized Central Venous Catheter (tCVC) accounting for 1,6 / 1000 days tCVC, ranging from 1.5 a 1.8. In Sicily no data on incidence of tCVC related bacteraemia are available. In our institution tCVC infection accounts for 2.4 per 1.000 days-CVC. A retrospective analysis carried out from 2006 to 2012 revealed that 650 tunnellized Catheters. Out these subjects 95% were undergoing hemodialytic treatment in private practice out of our hospital.

METHOD

In order to ameliorate the aforementioned outcome, we performed a specific Project-Work. This Project Work (PW) is subdivided into two steps:

1) The first step is furtherly subdivided in other two phases in which the first one concerns principally the implementation of educational courses, conducted directly on the ward and aiming to the carefully nursing of tCVC by health care nurse personnel ***Management of vascular accesses: from do - to theach to do!*** These educational courses will be organized by the Nephrology Department which take care of the management and handling of the major complications of tCVC for maintenance hemodialytic treatment. After this first step the same nurses who participated in the first step become promoter of the second course concerning a development ofn the know-how on an outpatient clinic, exclusively dedicated to nursing and management of tCVC in their own ward.

2)Title of this second phase is ***Therapeutic education: Self-care understanding and managing the venous vascular accesses at home!*** The aim of this step will be the integration with of a correct in-hospital care with the territorial outsourced ambulatory wards. According to this aim this self care can involve also the same patient in a self-care management of the venous central vascular access. In the Project Work. (PW). A more detailed analysis conducted by the **stakeholder** as well as an **swot analysis** on the feasibility of this project determinate the *ad interim* and final targets. The operative planning explains the more detailed steps of this setting with timing and costs of the realization of thie work. One special setting concerns the risk management of the educational event with a strict monitoring of project work progression and its positively correction with continuous overview of the goals reached so far. This intermediate

monitoring can more properly evaluate the progression in the nurses education. The prompt correction of mistakes can more safely reach the outcomes.

CONSIDERATION

The aim of this work is principally to carri out a more adequate training of health care personnel (nurses but not only!) in the management of tunnellized Central Venous Catheter (tCVC). The continuous education of nurses and also of patients and - in some selected cases – of partners looks foreward to spread nad improve the knowledge of the main complication related to a wrong management and a possible contamination of tCVC. A more adequate training of the personnel (also medical staff!!) primarily in the inside setting of the hospital and secondarely in the territorial private practice can promote the an acqured automatism un the correct use and management ov tCVC. A more strict educational contact between nurses and patients – with the primary target of a correct manipulation of tCVC – can promote a more active self-care at . home of patient. This Project Work aiming to continuous educational training can consolidate also the nurse-patient relationship with a more effective humanisation of the intere treatment. A particular attention will be bay to the wrong behaviour in hospital and at home.

CONCLUSION

Looking at this project it is possibile to conclude thath the more accurate management of o tCVC can significantly reduce the morbility and mortality of patients. Considering the cost-benefit of this project it should evaluate the impact of prevention of tCVC infection and other life threathening complication on the cost of hospitalization. In a spending-review projet this goal is strongly to be pursued!

Key words: Catheterism. Cost –benefit analysis. Prevention of infection. Hemodialysis

DIALYSIS AND KIDNEY TRANSPLANTATION IN NORTH AFRICA

AZIZ EL MATRI. Tunis Dialysis Center. Tunis, Tunisia

Introduction and purpose

North Africa is a compound of six countries, 5 of them bathed by the Mediterranean Sea, counting 170 million inhabitants and having in common a language, a cultural Arabic Muslim heritage and a recent history of decolonization. They belong to the developing countries group with low income or middle income economy. As the need for renal healthcare and mainly dialysis and renal transplantation are growing, three surveys were conducted from 2002 to 2012 to assess their development and present state.

Methods

Data were collected by using questionnaires sent to the presidents of national societies and to leading nephrologists in the region in addition to data collected from dialysis and drug companies, besides consulting published papers.

Results

Renal healthcare is more or less available in all these countries where few hospital beds are dedicated to nephrology in 4 countries: Algeria, Egypt, Morocco and Tunisia .The total number of nephrologists is around 1,750, the ratio being 10 pMp, ranging from 1.5 in Mauritania to 12 in Egypt. Renal biopsy is implemented regularly in 4 countries.

Hemodialysis available in all these countries is presently dispensed to 67,000 patients with a prevalence of 394 pMp, ranging from 75 pMp in Mauritania to 750 pMp in Tunisia.

Peritoneal Dialysis is available but scarcely in 5 countries mainly in Algeria and Tunisia.The total number of PD patients are 752, with a ratio of 2.6 pMp, ranging from 0.24 pMp in Egypt to 22 pMp in Tunisia.

Kidney Transplantation is implemented locally with mainly LRD, in 5 countries, and some patients are treated abroad. Except in Egypt where 1,000 transplantations were implemented in 2011

In public as well as private hospitals with an incidence of 12 pMp, all the others countries performed, this year, 372 kidney transplantations i.e. an incidence of less than 2 pMp.

Conclusion

Management of RRT is a major health problem in North Africa .RRT is mainly based on hemodialysis which is the most expensive therapy while peritoneal dialysis and kidney transplantation are not

Well developed. However, during the last decade, several states improved the quality of renal healthcare. It is hoped to see sustained improvement with a greater emphasis on education, prevention and development of transplantation.

RENAL DYSFUNCTION IN PATIENTS WITH THALASSEMIA

J. PIATTONI, G. ZAIRA, A. CARUSO, *V. CARUSO AND G. ENIA

*Centro Talassemie ARNAS Garibaldi Centro-Catania
Unità Operativa Nefrologia e Dialisi ARNAS Garibaldi-Nesima Catania

Improvement in care of thalassemic patients has led to better survival of these patients as well as to the emergence of previously poorly recognized complications. Among the latter, renal dysfunction is now more frequently identified. Specific factors linked to thalassemia, like chronic anemia and iron overload, are believed to underlie the mild tubular dysfunction and abnormalities in glomerular filtration rate (GFR) observed in these patients. Uric acid over-production and infective risk may also contribute to the renal damage. Moreover, with better survival, risk factors common to the general population, like hypertension and diabetes, become also more frequent. The issue is of major clinical relevance because the newer iron chelators can be nephrotoxic.

With this back-ground in mind we started a multidisciplinary clinic to evaluate renal dysfunction in a Mediterranean area with a high prevalence of thalassemia.

About 500 patients were screened for renal damage evaluating e-GFR and urine abnormalities.

The results of this screening will be presented.

HAEMODIALYSIS ADEQUACY AT THE RENAL UNIT

BUTTIGIEG J., FARRUGIA AGIUS J., BUHAGIAR L., VELLA M.P., FARRUGIA E.

Buttigieg Jesmar - Mater Dei Hospital Malta - Email: jesmar_b@yahoo.co.uk

Background: Studies have shown that adequate dialysis is associated with the best patients' survival. Clinical signs and symptoms alone are not sensitive indicators of dialysis adequacy and therefore the delivered dose of HD must be measured on a regular basis.
Aim: To measure the delivered dose of dialysis in patients undergoing Haemodialysis (HD) at the Renal Unit during December 2011 and to study for any difference in the dialysis dose delivered to patients having an arteriovenous fistula (AVF) and patients having a non-autogenous vascular access.
Method: All patients undergoing HD during December 2011 at the Renal Unit MDH were recruited. Pre-dialysis and post-dialysis serum urea samples were collected using standardized methods. Body weight before and after HD together with Ultrafiltration volume (UF) were also measured. The delivered dose of HD was measured using formal urea kinetic modelling and expressed as single pool Kt/V (spKt/V) calculated by the second generation Daugirdas formula. The urea reduction ratio (URR) was calculated using the pre and post serum urea values. The type of vascular access was noted for every patient. The minimally adequate HD dose recommended by international guidelines is a spKt/V $\geq$1.2.
Results: During the study period, 120 patients were undergoing HD at the Renal Unit. Twenty nine patients (24.2%) had incomplete data and were excluded. The mean pre-dialysis and post-dialysis serum urea were 26.89±6.51mmol/l and 10.23±7.42mmol/l respectively. The mean URR was 0.65±0.10 and the mean spKt/V was 1.30±0.34. Of all patients studied; 65.9% (n=60) had a spKt/V $\geq$1.2 and 64.8% (n=59) had a URR $\geq$0.65. Patients undergoing HD via an AVF, arteriovenous graft (AVG) and central venous catheter (CVC) achieved a mean spKt/V of 1.37±0.33, 1.34±0.25 and 1.0±0.36 respectively. The mean spKt/V delivered via an AVF was significantly higher than the mean spKt/V delivered via a CVC (p=0.0018). There was no significant variation between the mean spKt/V delivered via an AVF and that delivered via an AVG. 20% and 73.8% of the patients dialysed via a CVC and AVF respectively achieved the minimally adequate dose of HD (p=0.0019).
Conclusion: The majority of patients (65.9%) undergoing HD at MDH achieved the minimally adequate dose of HD established by international guidelines. In order to improve these results we suggest; regular auditing of the HD dose, targeting a spKt/v of 1.4 and aiming for higher rates of AVFs.
Acknowledgments: We would like to thank all the Renal Unit staff and all the Nephrology consultants for their help.
32.5% of patients were females.

IMPROVEMENT IN KIDNEY FUNCTION AFTER CARDIAC RESYNCHRONIZATION THERAPY

BUTTIGIEG J., CASSAR A., FARRUGIA AGIUS J., FARRUGIA E.

Buttigieg Jesmar
Mater Dei Hospital Malta
Email: jesmar_b@yahoo.co.uk

Aim: To study the effect of Cardiac Resynchronization Therapy (CRT) on kidney function in patients with Chronic Kidney Disease (CKD).
Method: All patients who underwent de-novo implantation of CRT between January 2007 and June 2011 at Mater Dei Hospital were recruited in this study. All patients had NYHA function class III/IV, Left Ventricular Ejection Fraction (LVEF) ≤35%, QRS ≥120 ms and were on optimal medical therapy. Kidney function was expressed as Estimated Glomerular Filtration Rate (eGFR) calculated using the modification of diet in renal disease (MDRD) equation. Serum creatinine and urea values were collected retrospectively both before and 5-7 months after device implantation.
Results: A total of 76 patients underwent de-novo CRT implantation. Twenty seven (27) patients were excluded because of incomplete data and 1 patient was excluded because of end-stage kidney failure on haemodialysis. The rest of the patients (n=46) were divided into Group A (n=28, 58.3%) comprising patients with eGFR ≥60 mL/min/1.73m^2 and Group B (n=20, 41.7%) comprising patients with eGFR <60 mL/min/1.73m^2. 92.9% of patients in Group A and 95% of patients in Group B were males. Mean age of patients in group A was 59.39 (95% confidence interval [CI]: 55.15 to 63.63) while mean age of patients in group B was 66.45 (95% CI: 63.26 to 69.64). Group B patients were significantly older than Group A patients (p=0.0142; 95% CI: 1.49 to 12.63). 28.6% (n=8) of patients in Group A and 45% (n=9) of patients in Group B had Diabetes Mellitus (p=0.36). There was a significant improvement in eGFR after CRT implantation in Group B patients (p=0.028; 95% CI: 0.67 to 10.63), whilst no changes were observed in Group A patients.
Conclusion: Patients with an eGFR <60 mL/min/1.73m^2 showed a significant improvement in their kidney function after CRT implantation despite being significantly older. This may be attributed to enhanced cardiac output and kidney perfusion, decreased central venous pressure and renal venous pressure and various neurohormonal effects.

IONIC DIALYSANCE AND UREA KINETIC MODELLING IN THE MODERN RENAL UNIT

BUTTIGIEG J., FARRUGIA AGIUS J., BUHAGIAR L., VELLA M.P., FARRUGIA E.

Buttigieg Jesmar
Mater Dei Hospital Malta
Email: jesmar_b@yahoo.co.uk

Background: Ionic dialysance (ID) is a real time, non-invasive and automatically computed measurement of haemodialysis (HD) dose (expressed as Kt/V) which can be utilized both as a predictor during the HD session and as a monitor of the delivered dose at the end of the treatment session.
Aim: To compare in-vivo the Kt/V calculated by ID and that calculated by the gold standard urea kinetic modelling (UKM).
Method: All patients undergoing HD during December 2011 at the Renal Unit MDH were recruited. The ionic dialysance Kt/V ($K_{ID}t/V$) was calculated using the DIASCAN™ Monitoring System (Hospal–Gambro®). The dialysate conductivity was measured both at the outlet and inlet of the dialyser, followed by automatic adjustment of the inlet conductivity by 1.0mS/cm for 2min. The $K_{ID}t/V$ was automatically computed by dividing the Depurated Volume by the Volume of Distribution as calculated by the Watson formula. The delivered dose of HD was independently measured by formal UKM using the single pool Kt/V (spKt/V) calculated by the second generation Daugirdas formula. The pre-dialysis and post-dialysis serum urea samples were collected for all patients using standardized methods. Body weight before and after HD together with Ultrafiltration volume were also measured. The minimally adequate HD dose recommended by international guidelines is a spKt/V ≥1.2.
Results: During the study period, 120 patients were undergoing Conventional HD at the Renal Unit. Thirty one patients (25.8%) had incomplete data and were excluded. The correlation coefficient of spKt/V (calculated using UKM) and $K_{ID}t/V$ (calculated using real time ID) was 0.801 (p=<0.0001). The mean spKt/V was 1.31±0.34 and the mean $K_{ID}t/V$ was 1.11±0.32 (p=0.0002). The $K_{ID}t/V$ under-estimates the delivered dose by 15.12% when compared with the gold standard spKt/V. By calculating Kt/V using the ID and the UKM; 36.7% and 66.3% of the patients undergoing HD achieved a Kt/V ≥1.2 respectively.
Conclusion: This study shows a strong correlation between the Kt/V (HD delivered dose) calculated using ID and UKM. Despite this; the Kt/V as calculated using ID and UKM differ significantly and ID under-estimates the real delivered dose by 15.12%. Then again, ID is non-invasive, economical, automatic and relatively easy to use which makes it ideal for routine use. Although international guidelines still recommend the spKt/V as the

preferred method for accurately measuring HD dose, these advantages make ID a useful bio-feedback instrument for monitoring trends in the delivered HD dose and therefore ensuring HD adequacy.

Acknowledgments: We would like to thank all the Renal Unit staff and all the Nephrology consultants for their help.

The association between the two variables was analyzed using Pearson's correlation. This is because conductivity in the dialysate is closely associated with its Sodium content and that Sodium Chloride (NaCl) and urea have very similar molecular masses, 30.8% were females.

PREVALENCE OF SERUM PARATHYROID HORMONE ABNORMALITIES IN MALTESE CHRONIC DIALYSIS PATIENTS

FARRUGIA E., FARRUGIA AGIUS J.

Department of Nephrology, Mater Dei Hospital, Malta
Email: emanuel.farrugia@gov.mt

Background and Aim: Parathyroid hormone (PTH) is the major determinant of rates of bone remodelling and turnover in dialysis patients with chronic kidney disease and mineral bone disorder (CKD-MBD). KDIGO (Kidney Disease: Improving Global Outcomes) evidence based guidelines suggest that the target range for PTH should be between 2 and 9 times the upper limit of normal for the assay used. The prevalence of serum PTH abnormalities in Maltese dialysis patients is unknown. It is also unknown as to whether chronic haemodialysis (HD) and peritoneal dialysis (PD) patients differ with respect to serum PTH levels.

Methods: During 2011 all stable chronic dialysis patients at the Renal Unit, Mater Dei Hospital under the care of the authors, had several serum PTH measurements performed by immunoassay, measuring PTH 1-84. For each patient, the average serum PTH level was computed.

Results: In PD patients, 22.7% were at the high extreme of PTH level and clearly hyperparathyroid, whereas 25% were < 2 times the upper limit of normal PTH reference. Corresponding values for HD patients were 40.6% and 12.5%.

Conclusions: *(i)* There is a surprising and worrying high rate of hyperparathyroid or high turnover bone disease in Maltese dialysis patients; (ii) HD patients have nearly double the prevalence or risk of hyperparathyroidism as opposed to PD patients. Conversely, adynamic or low turnover bone disease is twice as common in PD as in HD patients; (iii) Only 47% and 52% of the prevalent HD and PD patients respectively have serum PTH values within the limits set by the KDIGO and UKRA guidelines. Strategies to tackle CKD-MBD in the local setting include much better control of serum calcium and serum phosphate levels, better and more frequent PTH monitoring, judicious use of Vitamin D analogues and calcimimetics and the appropriate referral for parathyroidectomy.

REFERRAL PRACTICES OF CHRONIC KIDNEY DISEASE PATIENTS WITHIN MATER DEI HOSPITAL IN MALTA

BUTTIGIEG J., MERCIECA L., SALIBA A., AQUILINA S., FARRUGIA E.

Buttigieg Jesmar
Mater Dei Hospital Malta
Email: jesmar_b@yahoo.co.uk

Background: Early referral of Chronic Kidney Disease (CKD) patients to a Nephrology Team is essential in order to identify those patients who are most likely to progress to End Stage Renal Disease (ESRD) and provide these patients with planned Renal Replacement Therapy (RRT).
Aim: To study the referral rate of CKD patients to Nephrology Teams amongst hospital based Non-nephrologist Specialist Doctors and frequency of performing urinalysis in this population.
Methods: All patients admitted to MDH between January and February 2011 under the care of a Consultant Physician and Consultant Surgeon, having ≥16 years of age and an Estimated Glomerular Filtration Rate (eGFR) <60mL/min/1.73m^2 were recruited. These patients were subsequently sub-divided according to their eGFR using the KDIGO CKD staging system.
Results: Of 552 patients recruited; 51.81% had an eGFR 45-59mL/min/1.73m^2 (CKD 3A), 31.34% had an eGFR 30-44mL/min/1.73m^2 (CKD 3B) and 16.85% had an eGFR <30mL/min/1.73m^2 (CKD 4 and 5 altogether). Patients in CKD stage 3A, 3B and 4+5 had a mean age of 77.19, 78.19, 79.41 years; mean creatinine of 110.45umol/l, 150.23umol/l, 234.23umol/l and DM prevalence of 40.86%, 46.07%, 41.67% respectively (p=NS). After excluding all patients already being followed up by a Nephrology Team; 4.85%, 11.19%, 15.49% of the patients in CKD stage 3A, 3B and 4+5 respectively were referred upon discharge. (CKD 3A vs. CKD 3B p=0.025; CKD 3B vs. CKD 4+5 p=NS). A urinalysis was performed during the admission and/or after discharge in 41.26%, 54.91%, 60.22% of patients with CKD stage 3A, 3B and 4+5 (CKD 3A vs. 3B p=0.0051; CKD 3B vs. CKD 4+5 p=NS). Of these patients; 8.53% and 7.37% of patients admitted under a Consultant Physician and Surgeon respectively (p=NS) and 12.35% and 6.25% of patients aged ≤75 and >75 years respectively were referred to a Nephrology Team upon discharge (p=0.035). CKD patients followed up by Nephrology Team were more likely to have a urinalysis when compared to those patients not followed up (60.91% vs. 30.09% p=<0.0001).
Conclusion: The highest rate of referral was seen in the ≤75 year age group and in patients who have reached CKD stage 3B or worse. Only a minority of patients with an eGFR ≤29mL/min/1.73m^2 were referred to a Nephrology Team and 28.33% of the patients not referred were ≤75 years.

THE PREDICTIVE VALUE OF PLASMA AND URINARY NGAL IN AKI AFTER CORONARY ARTERY BYPASS GRAFTING IN ADULT EGYPTIAN PATIENTS

TAREK FAYAD[1,2], HEBA MORAD[1], NOHA CHAHEEN[3], MUSTAFA WAFIK[4]

1- Department of Internal Medicine, Cairo University
2- The Cairo Kidney Centre
3- Department of Clinical Pathology, Cairo University
4- As Salam International Hospital, Cairo, Egypt

Presenting author: Mustafa Wafik
Email: Mustafa Wafik <mustafawafik@ymail.com>

AKI is a serious complication post CABG.
The off-pump technique was developed to avoid the post operative complications of the pump.
NGAL is a biomarker that predicts AKI 48 hours before the rise of s. creatinine.

Objectives: 1- To assess the incidence of AKI post CABG and in both the On-pump versus the Off – pump procedures.
2- Assessment of the impact of plasma and urinary NGAL in predicting AKI.

Methods:
45 patients undergoing CABG were studied, 25 by the off - pump technique and 20 by the on – pump.
Plasma and urinary NGAL were measured 2 hours post operative (by ELISA). S. creatinine, urea and electrolytes were measured daily, urine flow was counted /hour for seven days post operative.
AKI was defined according to AKIN classification.

Results
15 patients (33.3%) had AKI out of 45 patients, who underwent CABG,
11 were classified as Stage I and 4 were classified as stage II (AKIN)
10 patients (40 %) of the 25 patients who underwent off – pump procedure developed AKI, while 5 (33.3%) of the 15 (on – pump) developed AKI (P value >0.05)

NGAL level in ng/ml is higher in cases of AKI

P	Z	AKI No Yes		Variables
<0.001 HS	4.3	419±200	110±80	Plasma NGAL
<0.001 HS	5.2	658±350	97±77	Urinary NGAL

Validity of NGAL in prediction of AKI

Combined	Urinary NGAL	Serum NGAL	Variables
	36	47	Best cut off
	0.90	0.79	Area under the curve (AUC)
95%	93%	80%	Sensitivity
75%	66%	70%	Specificity
94%	95%	75%	PPV
85%	70%	85%	NPV
80%	75%	72%	Accuracy

Conclusion:

AKI developed in 33.3 % of cases who underwent CABG according to AKIN classification, the incidence was not different between the off-pump technique versus the on-pump procedure.

Plasma and urinary NGAL predicted AKI 48 hours before the rise of s.creatinine. Urinary NGAL was more sensitive than plasma NGAL in predicting AKI and is considered a more positive than negative test.

Keywords: CABG, AKI, plasma, urinary NGAL

EIGHT-YEAR OUTCOMES OF "THE CKC SEQUENTIAL PROTOCOL"

TAREK M. FAYAD[1,2], EMAD A. WILLIAM[2], NASR T. ATALLA[2], BOULOS A. HABASHY[2], SAMEH SHOKRY AMIN[2], RASHAD S. BARSOUM[1,2], SOHA S. KHALIL[2]

1. Department of Internal Medicine, Cairo University
2. The Cairo Kidney Center

Presenting Author: Tarek Fayad
The Cairo Kidney Center
3 Hussein El-Memar Street
Cairo, 11513
Egypt
Email: tfayad@yahoo.com

We had previously developed a Sirolimus-based sequential immunosuppression protocol for kidney transplantation comprising two phases: de novo Sirolimus (S)+ cyclosporine A (CyA)+ prednisolone (P) for three months, followed by switching to S+P+ mycophenolate mofetil (MMF). The two-year outcomes of patients on this protocol (Group A) showed a better graft survival compared to those on a conventional protocol comprising CyA+ MMF+ P (Group B) *(Barsoum, et al. Exp Clin Transplant. 2007;2:649-57)*.
In the present study we report the eight-year graft outcomes in the same cohort (76 patients in Group A and 37 in Group B).
The intent to treat five- and eight-year uncensored graft survivals were 77% and 69% for Group A and 60% and 55% for Group for B respectively. The patient survivals were 80% and 74% for Group A and 66% and 60% for Group B. Throughout the study, 28.9% switched from group A to protocol B (mainly for the development of proteinuria) versus 51.3% the other way round (for CNI toxicity or chronic allograft dysfunction). Secondary end-points including patient-on therapy outcomes, graft function, blood-pressure control, new onset diabetes and other drug-related adverse events are being analyzed.
Conclusion: The "CKC sequential protocol" continues to show a better graft survival compared to a CyA+MMF protocol up to 8 post-transplant years and also showed higher patient survival that had not been statistically significant in the earlier two-year analysis. The protocol remains safe, so long as patients are switched off Sirolimus when indicated.

Key words: Kidney transplantation, Sirolimus, Sequential immunosuppression, CNI toxicity.

DESCRIPTION OF A RARE CASE OF MULTICYSTIC RENAL DYSPLASIA AND LEFT POLYCYSTIC KIDNEY IN A CHILD

ROBERTO CHIMENZ, MARIA AUSILIA CATENA, CLAUDIA FEDE, GAETANA GUERRIERA, GIOVANNI CONTI, CARMELO FEDE

Unit of Pediatric Nephrology and Rheumatology, University of Messina, Messina, Italy

The “ciliopathies” are a group of pathologies, concerning liver and kidney especially, characterized by a defect of the proteins of non-motile cilia, that regulate important cell functions, including proliferation and polarity maintenance of cells. V. F. , with negative family history for renal disease, was born at the 35th week of gestation from pregnancies complicated by oligohydramnios. At the birth renal ultrasound documented:” Both kidneys appear to be poorly appreciated in their size and morphology, because it is completely altered by the presence of multiple cysts with a diameters between 5 and 20 mm.” Blood tests documenting: BUN 110 mg / dl, creatinine 2.8 mg/dl, creatinine clearance 7.2 ml / m? (sec. Schwartz). Came to our observation blood tests showed: BUN 98%, creatinine 2.1 mg / dl, creatinine clearance 13 ml / m '(sec. Schwartz), pH 7.37, bicarbonate 18.3, EB 6.4.

The renal ultrasound documented “right kidney size (DL 41 mm) and normal morphology appears hyperechoic, with no differentiation between the breast parenchyma and corticomedullary and has small anechoic areas likely to be referred to minute cysts. The left kidney increased in size (DL 60 mm) and altered morphology due to the presence of multiple cystic formations of various sizes (maximum diameter 2 cm) no communication between them”.

Static renal scintigraphy with DMSA showed “the right kidney in the morphology assumes overall altered (both irregular contour of the medial side even if it remains greater longitudinal axis). Intraparenchymal distribution of the radiopharmaceutical is widely disparate for minor concentration (cyst). In the left kidney is not appreciated concentration of the radiopharmaceutical (organ scintigraphically absent). However, a modest establishment appears to delineate an area of radiocompound ovoid referring to the seat left kidney”.

Based on the results was, therefore, a diagnosis of “renal failure secondary to polycystic renal dysplasia and multicystic left kidney” and initiated drug therapy (sodium bicarbonate) and normal calories and proteins diet according to the criteria LARN for age, also opened intensive monitoring biochemical data with subsequent partial recovery of renal function.

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A SURVEY OF 21 CASES OF STUCK CATHETER: SOONER OR LATER YOU MIGHT FALL IN

*G. FORNERIS, W. MORALE, K. ROSAS, M. LODI, A. GRANATA, C. LOMONTE, G. LEONARDI, M. SPINA, L. TAZZA, D. SASSONE, R. BOERO, L. LUCCHI

*Nephrology and Dialysis S. Giovanni Bosco Hospital, Turin, Italy

Dialysis centers: Torino, Catania, Carbonia, Pescara, Agrigento, Acquaviva delle Fonti, Cagliari, Roma Policlinico Gemelli, Asti, Modena

Retained or stuck catheter is a rare complication of dialysis CVC. Nevertheless, over the last years a mounting report in literature, probably due to increasing use of CVC is seen. Stuck catheter usually takes nephrologists unawares. We report the results of a survey from 12 centers in 21 patients (10M/11F) mean age 66,6 years, in which tunnelled CVC could not be removed with standard technique. As far as we known this is the largest series described. Median time of in situ CVC was 36 months (4-150) and indication of removal were: 9 dysfunction, 6 infection, 4 broken, 2 end of use. In 7 cases previous CVC was inserted in the same vessel and 11 pts had CRBSI in the past. 16 CVC were dual cath, 4 bilumen, 1split; 16 CVC poliurethane/carbothane, 5 silicon. In 4 cases CVCs were buried without further attempts of removal; in 17 cases removal of embedded catheter was attempt: 4 balloon dilatation (3 successful), 2 sheat dilator (1 successful), 5 snare/wire (3 successful), 4 surgical cut down of vein (2 successful) and 2 toracotomy (1 successful). Seven catheters were buried and 1 pts died after toracotomy. None of patients with internalized CVC showed long term complication (up to 89 months after). Conclusion: stuck CVC is a difficult complication to face when occurs; rarely is an emergency and nephrologist should be prepared when occurs. Endovascular technique with interventional radiologist is considered the first line approach to remove thethered CVC. A multidisciplinary team is desirable to schedule treatment and prevent complications.

BIOSIMILARS FOR ANEMIA THERAPY IN CKD

LORETO GESUALDO

Section of Nephrology, Department of Emergengy and Tranplantation, Azienda Ospedaliero-Universitaria Consorziale Policlinico di Bari - Bari University

Professore Ordinario di Nefrologia, Università di Bari
Direttore UOC di Nefrologia, Dialisi e Trapianto

Biosimilar is a copy version of an approved original biologic drug whose patent has expired. Since 2005, several biosimilars including somatropins, filgrastims, and epoetins, have been licensed and become available in the European Union (EU) and will soon be a reality in the United States. Numerous other biosimilars, such as monoclonal antibodies, are in the EU pipeline and will soon be developed. Although legal pathway and detailed regulatory guidance have been established by the European Medicines Agency (EMA), the clinicians are still reluctant to use biosimilars for the treatment of their patients. Quality, safety, efficacy and interchangeability are the major concerns. To overcome these doubts, the clinicians should have a more deep understanding of the scientific principle of biosimilars and gain unbiased information on these biological drugs. Moreover, a better communication among clinicians, scientific societies and regulators are warranted. Today, biosimilars are a reality and an opportunity in EU. Indeed, they have already induced a reduction in health care expenditure and consequently a more equitable access to biotherapeutics.

CARDIOVASCULAR RISK IN HEMODIALYSIS PATIENTS: FLUID OVERLOAD AND HEART RATE VARIABILITY

[1]ANNA CLEMENTI, [1]ANTONIO GRANATA, [2]DINNA N CRUZ, [2]FRANCESCO GARZOTTO, [1]ROSALIA VIVIANA SCARFIA, [1]MONICA INSALACO, CLAUDIO RONCO[2]

[1]Department of Nephrology and Dialysis, San Giovanni di Dio Hospital, Agrigento, Italy
[2]Department of Nephrology, Dialysis and Transplantation, San Bortolo Hospital, Vicenza, Italy

Background: Cardiovascular (CV) disease is the leading cause of morbidity and mortality in hemodialysis (HD) patients. Fluid overload (FO) and abnormalities in the autonomic control of heart rate are important in its pathogenesis. We hypothesized that HD patients with FO would have diminished heart rate variability (HRV), and would experience worse CV outcomes.

Methods: We enrolled 76 stable chronic HD patients. FO was assessed with the Body Composition Monitor (Fresenius) before a mid-week HD session, and 24h ECG recordings were performed for HRV analysis. The indices *SDNN*, *SDANN*, *RMSDD*, *pNN50%, VLF*, *LF*, *HF* e *LF/HF* were computed for the first and last 30 min of HD, the 1st h after HD and at night. Patients were classified into 5 groups based on severity of FO and pre-HD systolic blood pressure (SBP) (Fig 1). The groups were compared using ANOVA for HRV indices, and survival curve analysis for death and hospital admissions.

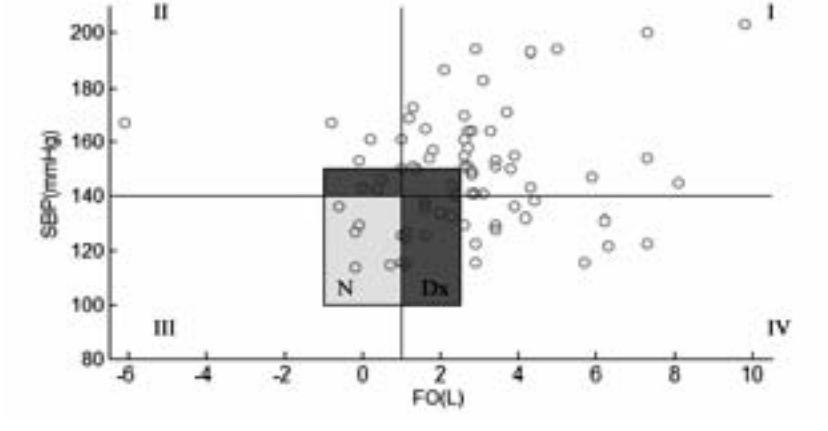

Fig.1 BCM Groups based on FO and SBP

Results: The number of patients in each group were: Group I (n=34), II (n=4), III (n=0), IV (n=15), N+Dx (reference group for HD pts, n=23). Group II was excluded from analysis due to small sample size. Group IV had significantly higher RMSSD, pNN50% and HF during the first 30 min and 1 hr after HD ($p<0.05$), indicating prevalence of the parasympathetic component in heart rate control. They also did worse in terms of all-cause death ($p=0.02$) and CV-related death (Fig 2, $p=0.001$). There was no difference among the groups with regards to all-cause or CV-related hospitalization.

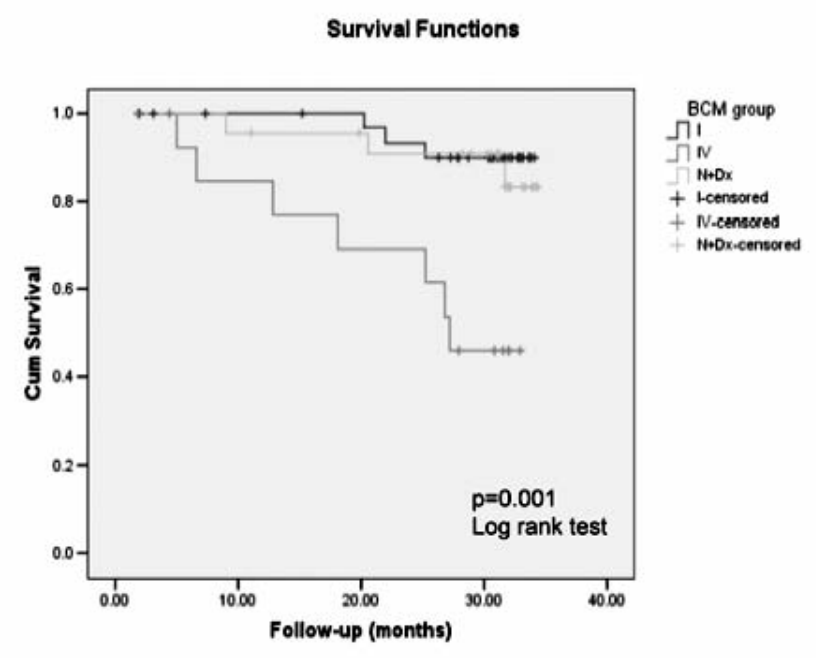

Fig.2 CV-related death

Conclusion: In this study, HD patients with fluid overload but low-normal blood pressure (FO>2.5L, SBP<140mmHg) have evidence of overdrive of parasympathetic system on HRV analysis. This autonomic dysfunction may contribute to higher mortality in these patients. This is the first study to analyze CV outcomes in HD patients considering both FO and HRV analysis.

ECHOCARDIOGRAPHY IN CRITICAL CARE HEMODIALYSIS: WHAT NEPHROLOGISTS CAN OBTAIN PERFORMING IT

LUCA DI LULLO[1], ANTONIO GRANATA[2], RODOLFO RIVERA[3], VINCENZO BARBERA[1], ALBERTO SANTOBONI[1], MORENO MALAGUTI[4], FULVIO FLOCCARI[4]

Departments of Nephrology and Dialysis:
[1] L.Parodi – Delfino Hospital, Colleferro - ITALY
[2] San Giovanni di Dio Hospital, Agrigento – ITALY
[3] S.Gerardo Hospital, Monza – ITALY
[4] San Paolo Hospital, Civitavecchia - ITALY

INTRODUCTION: Acute Renal Failure often presents with sign and symptoms of acute cardiac overload with echocardiographic pattern suggestive for dilatative cardiomiopathy. These patients show left atrial dilation with impairment of left ventricular function. Dialysis treatment can lead to fluid removal with benefits on cardiac performance. Nephrologists who perform echocardiography can check evolution of cardiovascular overload by performing simple 2D and M-mode echocardiography.

PATIENTS AND METHODS: We have evaluated 80 patients (52 males and 28 females) with an age between 56 and 70 years, with no previous cardiovascular comorbidities. Only 42 of them were well – known chronic kidney disease patients underwent fastened renal function decline, while other 38 patients came to our emergency unit without any previous nephrological diagnosis . All patients were screened for echocardiographic pattern, chest ray assessment (only one showed a significant BPCO pattern) and pro – BNP levels were achieved before starting hemodialysis treatment. All patients underwent to standard Bicarbonate Buffer HD.

RESULTS: After nine hemodialysis treatment all patients showed improvement in echocardiographic pattern (with reduction of 12% in left atrium area and 13% in longitudinal diameter and 10% gain in ejection fraction) with reduction of pro – BNP levels (up to 30%) to underline significant improvement in cardiovascular performance. Therefore a mean weight reduction of 10% was observed and dry weight was reached in all patients (such as confirmed by clinical pattern).

DISCUSSION: Echocardiography performed by nephrologist in critical care ARF patients could assume great relevance to assess fluid balance in patients coming to our attention for the first time. We can follow our patients day by day to understand if their fluid overload is completely removed to reach dry weight as soon as possible with great clinical benefits.

ECHOCARDIOGRAPHY, PULMONARY HYPERTENSION AND RIGHT VENTRICULAR FUNCTION IN NKF STAGE III CHRONIC KIDNEY DISEASE

LUCA DI LULLO[1], ANTONIO GRANATA[2], RODOLFO RIVERA[3], VINCENZO BARBERA[1], ALBERTO SANTOBONI[1], MORENO MALAGUTI[4], FULVIO FLOCCARI[4]

Departments of Nephrology and Dialysis:
[1] L.Parodi – Delfino Hospital, Colleferro - ITALY
[2] San Giovanni di Dio Hospital, Agrigento - ITALY
[3] S.Gerardo Hospital, Monza - ITALY
[4] San Paolo Hospital, Civitavecchia - ITALY

TAPSE measurement during echocardiography is a well known measure of right heart sisto-diastolic function. Low TAPSE means reduced cranio-caudal excursion of tricuspidal annulus, sign of both reduced ejection fraction and reduced distensibility of right ventricle. It is a good prognostic index for cardiac mortality risk in CHF patients, adding significant prognostic information to NYHA stadiation.
Nephrologists do not always fully aware of right ventricular function in their patients affected by chronic renal failure (CRF), even if this datum is probably crucial in vascular access policy.
Our study was designed to study right ventricle function and TAPSE on 435 patients affected by moderate chronic renal failure, free from overt pulmonary hypertension. TAPSE, PAPs, right chambers diameters, classical Framingham factors, estimated glomerular filtration rate were recorded.
TAPSE was reduced (<23 mm) in 48% of patients enrolled, while dilated right chambers were present in 24%. PAPs exceeded 30 mmHg in 34% of patients. Echocardiographic signs of left ventricular hypertrophy were found in 42% of patients. The ejection fraction was normal in all patients. Statistical analysis showed a significant indirect correlation between TAPSE and PAPs and between TAPSE and tele-diastolic diameters and volumes of the right ventricle, while a direct correlation was observed between TAPSE and Framingham score.
TAPSE showed a bimodal distribution, with a subpopulation “low TAPSE - high PAPs”, next to a population characterized by normal values for both parameters.
A reduction in compliance and systolic function of the right heart chambers is quite early and frequent in course of CKD, a fact that the nephrologist should take in due consideration, managing blood volume or planning vascular access for hemodialysis.

KEY WORDS: Echocardiography, right ventricle, chronic renal failure, TAPSE

INTRADIALYTIC CYCLING IN CHILDREN AND YOUNG ADULTS ON CHRONIC HEMODIALYSIS

R.V. SCARFIA[1], F.PAGLIALONGA[2], A. EDEFONTI[2], M. INSALACO[1], A. CLEMENTI[1], A. GRANATA[1].

[1]Nephrology and Peritoneal Dialysis Unit, "San Giovanni di Dio" Hospital, Agrigento, Italy;[2]Pediatric Nephrology and Dialysis Unit, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy

Intradialytic exercise has been well investigated in adults on chronic hemodialysis (HD), but very scarce data exist in the pediatric population. Aim of the study was to assess the feasibility, acceptability, safety and efficacy of intradialytic exercise in children and young adults on HD. The program consisted of 30 minute-sessions of intra-HD cycling by means of a cycloergometer, 2 to 3 times per week for 3 months. The following parameters were assessed at the beginning and at the end of the study period: distance at the six-minute walking test (WT), indices of respiratory function (FVC, FEV1, PEF, MEMF), number of stands in 1 minute at the chair sit-to-stand test, lower extremity strength (LES), anthropometry (weight, weight gain/month, height, height velocity, BMI), skinfold thickness (MAMC AMA, AFA), daily energy and protein intake, normalized Protein Catabolic Rate (nPCR), dialysis adequacy (spKt/V. eKt/V), incidence of symptomatic sessions, biochemistry (hemoglobin, albumin, creatinine, BUN, bicarbonate, calcium, phosphate, C-reactive protein, PTH) and left ventricular mass index. Ten patients have been enrolled into the study, median age 15.3 years (range 9.1-26.3). Two of them underwent kidney transplantation during the study period. All the remaining 8 patients completed the protocol and showed a good acceptance of the program. All the patients showed a significant improvement in the WT (median change +27.5m, range 10-87, $p<0.05$), chair test (+7.5 stands, 2-18, $p<0.05$) and LES (+3.5 kg, 0.3-7, $p<0.05$). Among the other parameters, a significant improvement was observed for the following indices of nutritional status: preHD serum albumin (+ 0.3 g/dl, $p<0.05$), preHD and postHD serum creatinine (+ 0.9 mg/dl and +0.3 mg/dl respectively, $p<0.05$), daily energy intake % and nPCR (+36.6% and +0.4 respectively, $p<0.05$). No adverse events occurred; the incidence of symptomatic sessions was not different in the study period and in the 3 months preceding the study (4.5% vs 5.2%, n.s.). In conclusion, a program of 30 minute-intradialytic cycling is feasible, well-accepted and safe in pediatric patients on chronic HD, and lead to a significant improvement of exercise capacity.

ASSOCIATION OF IL-6 -174G/C PROMOTER POLYMORPHISM WITH NEW ONSET DIABETES AFTER RENAL TRANSPLANTATION

E. ZAKARIAH[1], M. AZIZ[1], M. ISHAAK[2], T. FAYAD[1], N. ELSAYED[1], B. HABASHY[3]

1. Department of Internal Medicine, Cairo University
2. Department of Clinical Pathology, Cairo University
3. The Cairo Kidney Center
Presenting Author: Dr. Boulos Habashy
Address: The Cairo Kidney Center, 3 Hussein El-Memar Street, Kasr El-Nil
Cairo 11513, Egypt
Email: boulosantonios@yahoo.com

New-onset diabetes after transplantation (NODAT) is a known long-term complication of renal transplantation. In non transplant patients, IL-6 gene promoter polymorphism at position -174 (G/C), which is associated with different transcription rates, is reported to predict type 2 diabetes. Data on NODAT are inconsistent in different populations, hence this study among Egyptian transplant patients. Forty-two randomly selected patients who received renal transplantation in the Cairo Kidney Center over the period from May 1994 to January 2010 were enrolled. Of these 19 cases developed NODAT and were compared to 23 who did not develop diabetes and thus taken as controls. All cases were retrospectively tested for the presence of IL-6 gene promoter polymorphism at position -174 (G/C) by PCR-RFLP technique, and serum IL-6 levels were measured by enzyme chemiluminescence method.
Results are shown in table.

		No NODAT		NODAT		P value
		No.	%	No.	%	
Genotype	GG	8	34.8	13	68.4	0.03*
	GC –CC	15	65.2	6	31.6	
SIL-6	<9.25 pg/ml	11	47.8	3	15.8	0.048*
	≥9.25 pg/ml	12	52.2	16	84.2	

* P value < 0.05 considered significant.

The GG genotype increased the risk of NODAT by 4.062 (95% CI, 1.115–14.804). The mean values of the s.IL.6 levels in the three different IL-6 gene promoter polymorphisms at position -174 (GG, GC, and CC) were 23.7 pg/ml, 20.21 pg/ml, and 7.51 pg/ml, respectively (p-value = .04).
These results suggest that IL-6 production modifies susceptibility to NODAT. The IL-6 gene promoter polymorphism at position -174 may serve as a genetic marker to help in determining recipient risk profiles, and optimizing pre- and post-transplantation treatment strategies.
Key words: IL-6 – polymorphism – NODAT – BMI.

PROMISING NOVEL PROGNOSTIC MARKERS IN IgA NEPHROPATHY

KVEDER R[1], ŠKOBERNE A[1], LİNDİČ J[1], KOVAČ D[1], ALEŠ-RİGLER A[1], PAJEK J[1], KOTNİK V[2], SREBOTNİK KİRBİŠ I[3], VİZJAK A[3], FERLUGA D[3]

[1]Department of Nephrology, University Medical Centre Ljubljana, [2]Institute of Microbiology and Immunology, Faculty of Medicine, University of Ljubljana, [3]Institute of Pathology, Faculty of Medicine, University of Ljubljana

Objective: Determining the prognosis of individual patients with IgA nephropathy (IgAN) is still frequently difficult, mainly due to a lack of strong and reliable prognostic factors. In many previous and also recent frameworks for risk stratification in IgAN, mainly well established clinical risk factors such as proteinuria more than 1 g, decreased GFR and hypertension, both at presentation and their persistence or declining at follow up were included. Pathohistologic changes did not add much to improve the prognostic validity. This limited ability to predict prognosis in individual patient with IgAN stress upon the need for investigating new markers of disease activity that will assist in the search to individualise therapy.

The aim of our study was to evaluate the role of two, not very extensively investigated markers i. e. urinary C5b-9 and podocyturia as prognostic factors in adult patients with IgAN and to compare it to proteinuria, a well established risk factor for disease progression in IgAN.

Methods: 41 patients with biopsy proven IgA nephropathy in whom we determined urinary C5b-9 in the time period between December 2001 and October 2007 and another group of 45 patients with IgAN, diagnosed in the time period between January 2008 and August 2011, where we assessed podocyte excretion in the urine, were included in our study. The urinary C5b-9 levels were determined with a modified enzyme-linked immunosorbent assay (ELISA) described by Accardo-Palumbo et al. The total number of podocytes was counted under the microscope after membranous filtration of the urine sample through a polycarbonate membrane filter (5 μm pores, Millipore) and immunocytochemical staining using a monoclonal antibody against podocalyxin (PHM5, Chemicon, Australia). The amount of podocytes was quantified as the number per mmol of creatinine.

Results: C5b-9 in the urine was found and 22 patients (53, 7%). The urinary C5b-9 values were significantly higher in patients who had disease progression or persistent disease activity than in those who did not (t test, $p = 0,046$) as was proteinuria (t test, $P = 0,013$). Patients with urinary C5b-9 values $\leq 30, 0$ μg/l had a similar outcome to patients with no

C5b-9 in the urine, with only 1/7 of patients (14, 3%) achieving the composite end-point. The situation was quite the opposite in patients with urinary C5b-9 ≥ 60, 0 μg/l, where the vast majority of patients (7/8, 87, 5 %) experienced either disease progression or persistent disease activity. The majority (86.7%) of patients in the second group had podocytes present in the urine (median 33.9, range 0 – 2384.2 cells/mmol creatinine). The ROC curve analysis in patients treated only with RAAS inhibition revealed a significant correlation between podocyturia and the primary outcome (area 0.857, p=0.032) but no significant correlation between proteinuria and the primary outcome (area 0.762, p=0.116).

Conclusions: Our study shows that urinary C5b-9 seems to be a promising new risk factor for disease progression or persistent disease activity in patients with IgAN. The correlation between podocyturia at the time of biopsy and high proteinuria at follow up of patients treated conservatively with RAAS inhibition might indicate a role for podocyturia in determining patients in need of immunosuppressive therapy. We are aware that further research is needed to more accurately asses the prognostic value of urinary C5b-9 and podocyturia and its possible role in managing patients with IgA nephropathy.

BLOOD PRESSURE MEASUREMENTS IN SICILIAN SCHOOL-CHILDREN

C. CORRADO, F. LO CASCIO, P. CARMINA, F, LEONE, AND S. MARINGHINI

Pediatric Nephrology, G. Di Cristina Hospital. Palermo, Italy

BP is not easy to measure in children and automatic devices would be preferable The recommended method for blood pressure (BP) measurement in children is auscultatory since large studies have been done using sphygmomanometers . Purpose of our study was to evaluate BP in a group of jounior class students, using an oscillometric device already validated in children. In 647 students (320 M/327 F), mean age 12.6 +-1,09 years, we recorded BP values using a sphygmomanometer (A) and an oscillometric OMRON 705 IT (B). In all children were measured: weight, height, bmi, waist circumference, waist-to-height ratio. Two measurements of BP were done with each device at a distance of 2 minutes. Reference values of BP were those published by NHANES. The BP with A were PAS/PAD: 106±11.5/61.9±8.4 mmHg and with B PAS/PAD:112.1±14.2/64.6±12.4 mmHg, being significantly lower using auscultatory compared to oscillometric ($p<0.001$). The percentage of children with hypertension was 4,7% (M:4,6%,F4,8%). BP values were significantly correlated with age, BMI, waist circumference; no correlation was found with birth weight. Overweight children had significantly higher PAS (112.1 vs 105.2 mmHg) and PAD (67.6 vs 61.3 mmHg) values. Dividing our population in two groups in relation to family history of hypertension (FHYT) we found significantly higher ($p <0.001$) PAS (110 vs 105.6 mmHg) and PAD (64.1 vs 61.7 mmHg) values in patients with FHYT while BMI was significantly lower (20.8 vs 25.9) in this group. In conclusion blood pressure values are higher when using a validated oscillometric device: PAS (+5.2 mmHg) and PAD (+ 3 mmHg). PAS and PAD values are higher in children overweight and with FHYT independently of their weight; both conditions represent risk factors for cardiovascular disease in adult life.

UROLITHIASIS IN SICILIAN CHILDREN

M.M. D'ALESSANDRO, V. ZANGARA, C. CORRADO,
R. CUSUMANO AND S. MARINGHINI

U.O. C. Nefrologia Pediatrica. Ospedale dei Bambini "G. Di Cristina",
A.R.N.A.S. Palermo, Italy.

INTRODUCTION

We have observed an increasing incidence of urolithiasis in our children. In order to study the metabolic abnormalities underlining this disease we have done an analysis of patients admitted in the last five years.

MATERIALS AND METHODS

In 86 children (56 M/ 30 F) with age ranging from 3 months to 18 years (mean ± SD = 8,48 ± 4,23 years) we measured Ossaluria (Oss), Citraturia (Cit), Calciuria (Cal) and Creatininuria (Cr) in 24 h urine collections or spot if younger than 3 years.

RESULTS

Isolated metabolic abnormalities were detected in 26 patients (29 %); Hypocitraturia was present in 19 %, Hyperoxaluria in 9 % while Hypercalciuria in only 1 %. In 61 patients (71 %) mixed metabolic abnormalities were present, Hypocitraturia being the most frequent (45%), followed by Hyperoxaluria (37 %) and Hypercalciuria (34%).

DISCUSSION

Our data are different from those reported in the literature from countries of the Mediterranean Area. We suggest to perform a cooperative study in order to reveal the role of genetic and environmental factors in different geographical areas.

DOES A HANDLING PROTOCOL EXIST WHICH REALLY KEEPS TUNNELLED CVC INFECTION AT BAY?

MILONE F. URSO S. LICCIARDELLO D. GAROZZO M. BATTAGLIA G.

U.O.C. Nefrologia e Dialisi. P.O. S.Marta e S.Venera Acireale. ASP3 Catania

Introduction: Infecitons are an important complication of permanent and tunnelled central venous catheter (CVCt) with increased morbidity and mortality.

Objective: This observation study has aimed to look at the occurrence of CVCt infections in hemodialysed patients who were handled following a strictly sterile protocol at our Center.

Patients and Methodologies: Within our UOC, from 2008 to 2012, 45 CVts were positioned against 361 vascoular access (for hemodialysis) operations.

The protocol foresees, in the occurrence of a suspected CVCt infection, immediate hemoculture taking of bloody from CVCt enad peripheral blood. Following, the administering of two antibiotics: 200mg teicoplanin and 150mg tobramycin, followed by the potential administration of thrombolytics.

Administration method and execution:
At the end of the hemodialisis:
CVCt cleansing by physiological solution
Teicoplanin diluted in 2 x 20ml syringes. Apply the Teicoplanin syringes to the two CVCt access points and administer 2ml each side. Leave to stand for 4/5 minutes and continue infusion of additional 2ml until the prepared antibiotic runs out.
Washing of CVCt with physiological solution
Tobramycin diluted in 2 x 10ml syringes and repeat procedure as above.
Washing of CVCt with physiological solution followed by positioning of the anticoagulant.
Repeat procedure for three consecutive days and also at the end of the 4 following dialysis sessions.

Results: From 2008 until this day we had no need to remove any CVCt due to infections or thrombose malfunction.
Conclusions: Bacteria contained in biofilm are resilient to therapeutic concentrations of antibiotics therapeutic doses, but are subsceptible to higher in-vitro dosages. Our protocol allows us to reach CVCt concentrations > 200 times higher normal therapeutic dosages. The rationale behind this procedure is based on the precocity of the operation and on the biofilm eradication while waiting for hemoculture.

EPIDEMIOLOGY OF PRA IN PRETRANSPLANT RENAL RECIPIENTS AND ITS RELATION TO DIFFERENT FACTORS

USAMA MOHAMADY, KARIM MAGDY SOLIMAN

Division of Nephrology, Cairo University, Cairo, Egypt

Background: Previous data indicated that PRA responses in the pre-transplantation and the early post-transplantation periods correlate with kidney allograft rejection and that differences in PRA levels are associated with significant differences in graft rejection (*Lee et al.,2004).*
The aim of this study was to identify possible risk factors for sensitization that affect the PRA results.

Results: The present cross-sectional study was performed in 2010 on fifty ESRD patients (twenty five males and twenty five females) waiting kidney transplantation in King Fahd unit, Cairo university and a private center in Egypt. All clinical and laboratory data were recorded, including PRA using complement dependent cytotoxicity using lymphocytes. We tested the correlation between PRA and different variables. PRA results above 20 % {12 cases (24 %) in our study} were considered positive, while results below 20% {38 cases (76%) in our study} were considered negative. We found highly significant positive correlation between PRA levels and HCV positivity, history of renal transplantation and history of pregnancy. Subanalysis of HCV positive cases showed that blood transfusion was an essential finding in these patients. There was no statistically significant correlation between PRA and age, gender, BMI, etiology of renal failure, duration of renal failure or dialysis, blood group, blood or plasma transfusion, HBV, history of Rheumatoid arthritis, DM, HTN, SLE or history of drug intake.

Conclusion: This study examined all the risk factors that are currently suspected to sensitize ESRD patients. However, only HCV positive cases ($p<0.001$) previous transplantation ($p<0.001$) and pregnancy history ($p<0.001$) were correlated with PRA levels. In our study history of blood transfusion was an essential finding in HCV positive cases, as all cases with no history of blood transfusion were HCV negative (18 cases), while cases with a history of blood transfusion (32 cases) included all the 10 HCV positive and 22 HCV negative cases.

THE ASSOCIATION BETWEEN FIBROBLAST GROWTH FACTOR-23 (FGF-23) AND VASCULAR 15+5 CALCIFICATION IN CKD IS MITIGATED BY MARKERS OF INFLAMMATION

MOHAMED M NASRALLAH[1], NOHA A OSMAN[1], AMAL R EL-SHEHABY[2], TAREK S FAYAD[1], MONA M SALEM[3] AND USAMA AA SHARAF ELDIN[1]

1-Deparment of Nephrology, 2-Department of Clinical Biochemistry, 3-Department of Endocrinology, Kasr Al-Ainy School of Medicine, Cairo University

Background: Fibroblast Growth Factor-23 (FGF-23), a phosphaturic hormone, has been linked to vascular calcification, ventricular hypertrophy and mortality in chronic kidney disease (CKD). Similar grave outcomes were linked to inflammation and oxidative stress in CKD. Slowly accumulating evidence suggests links between components of phosphate homeostasis to inflammation and oxidative stress. Notwithstanding, the only parameter that was uniformly associated with FGF-23 levels in CKD is serum phosphorus whereas its link to inflammation is still under-investigated.

Methods: We studied 65 haemodialysis patients and 15 controls. Serum levels of FGF23, hsCRP, endogenous soluble receptor of advanced glycation end-products (esRAGE), advance oxidation protein products (AOPP), parathormone, lipids, calcium, and phosphorous were measured. Aortic calcification index (ACI) was measured using non-contrast CT of the abdominal aorta.

Results: FGF23 was markedly elevated in CKD patients compared to controls, p= 0.005 and correlated in bivariate analysis with each of: hsCRP (R=0.6, p<0.001); esRAGE (R=-0.6, p <0.001), AOPP (R=0.5, p <0.001) and phosphorus (R=0.5, p <0.001). In multiple regression analysis hsCRP, AOPP and phosphorus, but not esRAGE, were all significantly linked to FGF-23 (R^2=0.7, p<0.001). Aortic calcification index correlated in bivariate analysis with each of: hsCRP (R=0.6, p <0.001), esRAGE (R=-0.6, p<0.001) and FGF-23 (R=0.5, p<0.001). In multiple regression anlaysis (adjusted for markers of inflammation, age, blood pressure and intake of calcium and alpahcalcidol), ACI was associated with hs CRP, systolic blood pressure and esRAGE but not FGF-23 (R^2=0.6, p<0.001)

Conclusion: FGF-23 is strongly correlated with various markers of inflammation in hemodialysis patients. The association between FGF-23 and vascular calcification was mitigated when corrected for markers of inflammation.

BIOMARKERS OF VASCULAR INJURY IN CKD PATIENTS

ALBERTO ORTIZ

Department of Nephrology, IIS - Fundación Jiménez Díaz, Madrid, Spain

Prognosis, risk stratification and monitoring the effects of treatment are fundamental elements in the decision-making process when implementing prevention strategies for chronic kidney disease. The use of biomarkers is increasingly proposed as a method to refine risk stratification and guide therapy. In this Review, we present basic concepts regarding the validation of biomarkers and highlight difficulties inherent to the identification of useful new biomarkers in patients on hemodialysis. We focus on prognostic biomarkers that have been consistently linked to survival in this group of patients. To date, no biomarker has had sufficient full-scale testing to qualify as a useful addition to standard prognostic factors or to guide the prescription of specific treatments in this population. Furthermore, little information exists on the relative strength of various biomarkers for their prediction of mortality. A multimarker approach might refine prognosis in patients on hemodialysis, but this concept needs to be properly evaluated in large longitudinal studies and clinical trials. The potential of proteomics for the identification and study of new biomarkers in the pathophysiology of cardiovascular disease in patients with end-stage renal disease is also discussed.

RELATIVE LONGEVITY OF PTFE THIGH GRAFTS AS VASCULAR ACCESS IN CHRONIC HEMODIALYSIS PATIENTS

R. PONIKVAR

University Medical Center Ljubljana, Slovenia
Department of Nephrology

Introduction. Arterio venous (AV) polytetrafluoroethylene (PTFE) graft is the second best choice for vascular access for hemodialysis patients when native veins are exhausted. Thigh grafts are usually the last option after AV grafts have been placed on the arms, although the cumulative patency rate of thigh grafts is better compared to arm AV grafts and even AV fistulas. The aim of our analysis was to evaluate patency of thigh PTFE AV grafts which have been placed in chronic hemodialysis patients from various slovenian HD centers, by the same interventional nephrologist skilled in access vascular surgery.

Patients and methods. Since 1991 34 thigh PTFE grafts have been placed in 30 chronic hemodialysis patients (in 4 on both thies), in 20 women, median age 57, mean age 58.714.5, range, 26-86 years, having been on dialysis for median time 10, mean time 11.9±7.3, range, 2-26 years. Analysis was ended at the end of january 2013. All surgeries have been performed in the operating room within the dialysis center, local anaesthesia (2% lidocain) was used in majority of patients, magnifying glasses (3.5 magnification) and microsurgery instruments were used. After the surgery patients have been admitted to the department of nephrology for 2-3 days of surveillance.
Result. Thirty four PTFE grafts have been placed in 30 chronic hemodialysis patients (in 4 patients in both thighs), 16 in the right thigh. 2/34 (5.9%) patients were lost of follow up, imediate failure accured in 1/34 (2.9%) patient, thrombosis within 30 days in 2/34 (5.9%) patients. 4/28 patients died with functioning grafts, in 8/28 patients grafts are still patent. In 8/19 graft thrombosis no surgical intervention was performed. In 11/19 thrombosed grafts, 18 thrombectomies (1.6 per graft) were performed to maimtain graft patency. Primary patency (time to first thrombosis) was (days) from 0-3,251, in average 906±898, median 472, cumulative patency (n=32) was (days) from 0-3,251, in average 1,174±954, median 966. Cumulative patency of the grafts which were patent more than 30 days (n=29) was (days) from 153-3,251, in average 1,298±921, median 1,207. One year PTFE graft survival was 78%, 2years 74%, 3 years 66%, 4 years 56%, 5 years 52% and 9 years 13 %. The longest patency was 3,251 days and the graft is still in function without any intervention.

Conclusions. Immediate success rate was excellent (97.1%) , primary patency was high while cumulative patency (for 5 years) was better compared to arm PTFE grafts and at least comparable to native AV fistulae created in our dialysis center.

RENAL REPLACEMENT THERAPY IN SLOVENIA

J. BUTUROVIĆ-PONİKVAR*, J. GUBENŠEK*, M. ARNOL*, C. LIKAR*, T. ADAMLJE, D. BLANUŠA, Z. CEGLAR, S. CIMERMAN-STEKLASA, S. ČERNE, A. ČUFER, A. DROZG, R. EKART, A. GUČEK*, A. KANDUS*, S. KAPUN, S. KRALJ, S. KRALJ LOPERT, N. KUNC-REŠEK, M. MALOVRH*, M. MOČIVNIK, G. NOVLJAN, R. PONIKVAR*, I. RUS, S. SAKSİDA, B. VUJKOVAC

Department of Nephrology*, University Medical Center Ljubljana, Slovenia, and Slovenian Renal Replacement Therapy Registry Group

Objective. To present the summary on renal replacement therapy (RRT) in Slovenia.
Methods. Individual RRT patient dana were collected from 22 renal centers (21 dialysis and one transplant center), referring to December 31, 2010, with 100% response rate. In addition, estimated of the number of RRT patients based on renal center questinnaires on December 31, 2012 was obtained. Population of Slovenia was 2.048.951 and 2.058.193 inhabitants at the end of 2010 and 2012, respectively.
Results. Total number of patients treated by RRT was 2020 (i.e. 994 per million of population (pmp)), a 0.3% increase compared to year 2009. Mean age of prevalent patients was 60.3±15.1 (median 61.0) years, 58.6% were men and 23.7% had diabetes (recorded separately as comorbidity). Of them 1377 (68.1%) were treated by hemodialysis, 64 (3.2%) by peritoneal dialysis, and 579 (28.7%) had a functioning kidney graft. At the end of 2012, based on data from renal centers, there were 2049 prevalent RRT patients, 1354 (66.1%) treated by hemodialysis, 52 (2.5%) by peritoneal dialysis and 643 (31.4%) having functioning kidney graft, with pediatric patients included. A total of 241 incident (day 1) patients (119 pmp) started RRT in 2010. Mean age of incident patients was 66.4±14.3 (median 69) years, 58.5% were men and 39% had diabetes. In 2010 229 patients died (incident patients at day 1 included), their mean age was 72.4±10.4 (median 74) years, 57% were men and their mean cumulative RRT duration was 5.9±7.2 (median 3.3) years. The crude death rate was 15.0% in dialysis patients, 1.8% in transplant recipients, and 11.4% in all RRT patients. Slovenia has been a member of Eurotransplant since 2000; 61 kidney transplantations were performed in 2010, all from deceased donors. Hemodialysis prescription in prevalent patients: mean weekly duration of hemodialysis was 12.9±3.6 hours (median 12 hours), 9% had <3 sessions/week and 1% had >3 sessions/week. Convective methods were used in 55.6% of prevalent patients, ultra-pure water in 82.6% and single-needle mode in 6.8%. Vascular access in prevalent patients were native arteriovenous fistula in 82%, a polytetrafluoroethylene graft in 6%, and a catheter in 12%.
Conclusions. The number of prevalent RRT patients in Slovenia in the last years is stagnating or slightly increasing. The mean age of incident patients is gradually increasing (median 69 years in 2010) as well as percentage of diabetics among among them. The proportion of patients with functioning kidney graft is increasing.

THE INFLUENCE OF VASCULAR ACCESS ON C-REACTIVE PROTEIN (CRP) IN CHRONIC HEMODIALYSIS PATIENTS

K. ROMOZI, R. PONIKVAR

University Medical Center, Ljubljana, Slovenia

Aim. Native arteriovenous (AV) fistulae have the reputation of the best vascular access, concerning longivety and complications rate, having been followed by AV polytetra fluoroethylene (PTFE) grafts and hemodialysis (HD) catheters as the worst. The aim of our cross sectional clinical study was to evaluate the impact of native AV fistulae, AV grafts and HD catheters, as vascular access in chronic HD patients on C- reactive protein (CRP) as marker of inflammation.

Patients and methods. In 160 chronic HD patients of single dialysis center, having been in chronic HD programme for more than 6 months, CRP was determined as marker of inflammation. At the time of laboratory examination the patients had no appearent infectious disease, their body temperature was normal and they did not receive antibiotic therapy for any cause. Their vascular access was AV fistula, AV graft or HD catheter. CRP concentration ≤5 mg/l was estimated as normal.

Results. Out of 160 patients 98 (61.25%) were men, median age (years) 65, mean age 64, range 26-92. AV fistula was vascular access in 110/160 patients (68.8%), AV graft in 17/169 patients (10.6%) and HD catheter in 33/160 patients (20.6%). CRP was normal (≤5 mg/l) in 54.6% (60/110) of patients with AV fistula, in 82.4% (17/17) of patients with AV grafts and in 20.6% (10/33) of patients with HD catheter. CRP was abnormally increased (>5 mg/l) in 50/110 patients (45.4%) with AV fistula, in 3/17 patients (17.7%) with AV graft and in 23/33 patients (69.7%) with HD catheter. Mean CRP concentration was 14.4, 10.3 and 17.8 for AV fistula, AV graft and HD catheter, respectively.

Conclusions. In our cross sectional clinical study the lowest incidence of increased CRP concentration was observed in patients with AV grafts and the highest in patients with HD catheters. Mean CRP concentration was the lowest in AV graft group and the highest in HD catheter group. In terms of inflamation AV grafts were better than AV fistula or HD catheter (having been the worst), however relatively small number of AV grafts and HD catheters should be taken into consideration in the conclusions.

OCULAR INFECTIONS IN KIDNEY TRANSPLANTED PATIENT

REINA A., PATANÈ G., GALEANO D., SAPORITO L.,
RAPISARDA S., FATUZZO P.

Università degli Studi di Catania - Scuola di specializzazione in Nefrologia

Infections in patients who had renal transplant happen very often, however eye infections have a low incidence in transplant population which are subject in immunosuppressive therapy.
Different kinds of etiological agents are due of them: viruses, fungi and bacteria. The most common ocular infections disease is caused by Herpes Simplex, Herpes Zooster, Staphilococcus Pneumoniae. Cytomegalovirus eye infections are rare, they have a higher incidence in immunosuppressed patients, they can cause keratoconjunctivitis and seldom corioretinit.
Now we describe a patient's case who was transplanted 9 years ago and who is affected by Lupus Nephritis and antiphospholipid antibody syndrome with significant reduction of visual acuity without painful symtoms.In collaboration with ophthalmologists colleagues, the patient was subject in OCT and fluorescein angiography and we found injury similar to that caused by ocular CML.
Performed analysis PCR-CMV gave positive results, instead searching aqueous humor was negative; it would be helpful to perform a biopsy vitreous but it was refused by the patient.
We decided to start therapy *ex adiuvantibus* with Valganciclovir and to reduce immunosoppresive therapy.
Now the CMV-PCR test is negative and antiviral therapy has been suspended and patient has a modest improvement in visual acuity.

ASPERGILLOSIS IN HEMODIALYSIS PATIENT

ANTOCI M.G., SCUTO S., ALIOTTA R., D'ANCA A., RAPISARDA S., FATUZZO P.

Università degli Studi di Catania - Scuola di specializzazione in Nefrologia

Aspergillosis is an opportunistic infection caused by a fungus called Aspergillus, it has an incidence of 0,4 % year. Aspergillus are the most common fungi in environment, frequently found in decaying vegetation (manure's heaps) or on the insulating materials (on walls or on ceilings around steel beams), in air conditioning systems or thermoconvectors, in operating rooms and in patient rooms, on hospital equipment or dust. The most common kinds of Aspergillosis are pulmonary aspergillosis, bronchopulmonary aspergillosis and the invasive aspergillosis. Opportunistic pulmonary infections often appear as pulmonary nodules with characteristic very similar to neoplastic lesions. In this study we describe the case of a patient undergoing hemodialysis who is CVC carrier, immunocompromised, and who showed cough and edema in his left arm. Subject to clinical-instrumental examination including TC of the chest, he showed multiple pulmonary nodules similar to pulmonary injury secondary. Considering patient's history and from differential diagnosis, examining the patient from standpoint of infective disease, we have determined as final diagnosis the Aspergillosis.

MANAGEMENT OF THE EXIT-SITE IN PERITONEAL DIALYSIS AND INFECTIOUS COMPLICATIONS

FAILLA A., SCOLLO V., PANI A., LA ROSA S., SAPORITO L., RAPISARDA S., FATUZZO P.

Università degli Studi di Catania - Scuola di specializzazione in Nefrologia

Though the peritoneal dialysis' technique is now well established the exit-site infection is still a serious reason of morbility. One most common etiologic agents is of course the Staphilococcus Aureus, but other pathogens like Serratia, Escherichia Coli, fungi or the Pseudomonas' family are also due to exit-site infection, sometimes very difficult to control. Patient's training and motivating medical and nursing staff in peritoneal dialysis are key point for good peritoneal access. In our center we have performed a retrospective study on eight patients who are affect by chronic kidney disease and undergoing peritoneal dialysis. Consistent with literature's studies the most present opportunistic bacterium has been the Staphylococcus , however topical treatment which has been sometimes associated to systemic therapy was resolutive without necessity of remove catheter.

MEDITERRANEAN SPOTTED FEVER AND ACUTE KIDNEY FAILURE: A CASE REPORT

A. DJAIDJA, N. MAZARI, T. RAYANE, A. REMACH

Department of Nephrology Dialysis and Kidney Transplantation, CHU Bab El Oued, Algiers, Algeria

Mediterranean spotted fever (MSF) is an acute febrile, zoonotic disease caused by Rickettsia conorii transmitted by the brown dog tick Rhipicephalus sanguineus, it is an endemic infectious disease widely distributed through the Mediterranean countries especially during summer-autumn.

We report the case of a 52 year-old man with type 2 Diabetes who presented a maculopapular rash, fever, confusion, convulsion and acute kidney failure wich needed Hemodialysis, the diagnosis of Ricketsiosis was confirmed and the patient did well recovered with Doxycycline treatement.

ANTI-SYNTHETASES SYNDROME REVEALED BY GLOMERULAR SYNDROME: ABOUT A CASE

N. BELLIK, N. MAZARI, T. RAYANE, A. REMACHE

Department of Nephrology Dialysis and Kidney Transplantation, CHU Bab El Oued, Algiers, Algeria

The anti-synthetase syndrome is a rare chronic autoimmune disease of unknown etiology, This syndrome comprises the association of an inflammatory myopathy, interstitial pneumonitis, skin lesions characteristic of “mechanics hands”, Raynaud’s phenomena, inflammatory polyarthritis and, at the biological level, antinuclear antibodies known as anti-synthetases.

A 30-year-woman was admitted for a glomerular syndrome, with extrarenal signs: muscular weakness, Raynaud’s phenomena ,arthralgia, cough, Hyperkeratosis of the hands, and a decline in general health.

The chest x-rays and CT scans visualized bilateral interstitial lung disease.

Lung function tests showed a restrictive syndrome.

At the biological level she presented an inflammatory picture with elevated muscle enzymes and anti-Jo-1 antibodies.

The évolution under immuno-suppressive treatment with cortico-steroids and azathioprine was favorable.

This observation of antisyntetase syndrome revealed by glomerular syndrome reminds that this disease has many modes of revelation.

CHRONIC KIDNEY DISEASE IN ALGERIA. WHAT IS NEW IN 2013

TAHAR RAYANE MD

Department of Nephrology. CHU Bab El Oued, Algiers ALGERIA

Renal replacement therapy(RRT) started in Algeria in 1978,and not more than twenty patients(pts) were treated; and all pts were transplanted in France. Since this time the number of Hemodialysis growth to 302 in January 2013,including 14 departements of Nephrology.

The total number of pts alive on differents forms of RRT on 2013 is 17400, 16000 by Hemodialysis(HD) 400 on CAPD and 1000 were transplanted (90% by living donors).

The total number of all treated pts increased from 5 pmp in 1978 to 480 in 2013. The incidence of Chronic renal failure is 108 pmp,and Diabetic nephropaty with vascular nephropaty are the most important cause of chronic kidney disease (CKD).

SCLERODERMA AND SYNDROME OF GOUGEROT SJÖGREN ASSOCIATION, ABOUT A CASE

A. AGAOUA, N. MAZARI, T. RAYANE, A. REMACHE

Department of Nephrology. CHU Bab El Oued, Algiers ALGERIA

Summary:

Interests:

Association with the scleroderma and other connectivities of the dry syndrome that it is primitive or secondary is frequent. The renal attack often conditions the forecast of the patient. The leading cause of dry syndrome during systemic Scleroderma east appears being the fibrosis of salivary glands, regarded as an intrinsic complication of scleroderma.

Introduction:

Scleroderma is a generalized affection of conjunctive tissue, small arteries and micro-vessels leading to a fibrosis and a vascular obliteration. The diagnosis of this disease is before any private clinic and the results of the complementary examinations do nothing but consolidate the clinician. The clinical picture can then go from the simple localised cutaneous sclerosis to the poly-visceral attack; the factors of bad forecast are the renal attack, the cardiac attack, the pulmonary attack and the fast aggravation of the cutaneous sclerosis.

The Gougerot Sjögren Syndrome (GSS) is a chronic auto-immune exocrinopathy slowly progressive characterized by a lymphocytary infiltration of the glands exocrines and general demonstrations of immuno-inflammatory nature. This infiltration touches salivary and lachrymal glands particularly, in charge then of an oral drought or xerostomia and an ocular drought or xerophthalmia. Association xerostomia and xerophthalmia constitute the dry syndrome, element characteristic of the syndrome of Gougerot Sjögren. The lymphocytary infiltration can interest of other bodies and involves systemic demonstrations of the disease. The renal demonstrations are the example. The glomerular attack is rare; the tubular attack is most frequent in charge generally of a distal tubular acidosis.

Means:

On this subject we propose the case of a patient followed in our service for diffuse cutaneous scleroderma at which one discovers a syndrome of Göugerot Sjogren clinical and biological with renal attack whose analysis anamnestic, clinico-biological, therapeutic and evolutionary highlights the positive impact of an assumption of responsibility adapted well in nephrologic medium.

Keywords: Scleroderma, Gougerot Sjögren syndrome, Xerostomia, Xerophthalmia, Assessment of connectivities, Test of Schirmer, Sclerodermic acute crisis, Distal tubular acidosis, Nephro calcinosis, Secondary, Disseminated, Concomitant disease, Chronic, Systemic disease, Autoimmune disease, Inflammatory joint disease, Connective tissue disease.

TUBEROUS SCLEROSIS OF BOURNEVILLE AND RENAL LOCALISATION ABOUT TWO CASES

K. CHAA, A. HASSANI, N. MAZARI, T. RAYAN, A. REMACHE

Department of Nephrology Dialysis and Kidney Transplantation, CHU Bab El Oued, Algiers, Algeria

Tuberous sclerosis of Bourneville is a hereditary affection characterized by the development of benign hamartomas type involving the skin, brain,kidney, heart and eye. renal disease is the second cause of death after neurological it can occur in three forms: angiomyolipoma, renal cysts, and kidney cancer.

We report two cases of tuberous sclerosis of Bourneville with renal localization.il's about two young patients followed for tuberous sclerosis of Bourneville in whom the renal angiomyolipoma corroborated the diagnosis.

Renal localization should be screened regularly and systematically in patients with tuberous sclerosis of Bourneville because it increases the morbidity and mortality of the various complications that it engenders.

EXERCISE ON HEMODIALYSIS - SINGLE CENTER EXPERIENCE

[1]HALIMA RESIC, [2]NARCISA VAVRA HADZIAHMETOVIC, [1]FAHRUDIN MASNIC

[1]Clinic for Hemodialysis Clinical Center University of Sarajevo, Bosnia and Herzegovina
[2]Clinic for physical medicine and rehabilitation,Clinical Center University of Sarajevo

Background
Exercising on hemodialysis aims to improve prognosis and health related quality of life in patients with end stage kidney disease through exercise training. Exercising and physical fitness was first introduced on our Clinic for Hemodialysis, Clinical Center University of Sarajevo as a pilot study in January 2013.

Aim
Aim of this study was to evaluate improvement in quality of life in hemodialysis patients.

Methods
Fifty three chronic hemodialysis patients were placed on exercise program performed on hemodialysis for 3 times in week. Mean age of patients was 57,40±14,364 years and mean duration of hemodialysis was 4,28±3,494 years. There were 29 (54,7%) male and 24 female (45,2%) patients in the study. Individual program of exercises was made up for each patient, including aerobic, flexibility, and patient education. Patients will be followed up in the study for one year. At that time we will follow up laboratory parameters: serum potassium, phosphate, calcium, alkaline phosphatase (ALP), calcium–phosphorus product (Ca × P product), blood urea nitrogen (BUN), albumin and CRP. Also we will follow up: patients' participation and satisfaction, exercise performance; Duke Activity Status Index (DASI); Timed-up-and-go (TUG). Quality of life: The Illness Intrusiveness Ratings Scale (IIRS); The Kidney Disease Quality of Life questionnaire (KDQOL).Patients are motivated to participate in exercise,and made some exercise at home alone.

Conclusion
Exercising on hemodialysis may have a great impact on health in chronic hemodialysis patients, improving overall health and quality of life. Our study is in its beginnings and we are yet to discover benefits of exercising in our population of hemodialysis patients and do a follow-up after one year of exercises start.

Key words: exercise, hemodialysis, quality of life, physical fitness

CENTRAL VEIN ANGIOPLASTY FOR RESCUE ARTERIOVENOUS FISTULA IN HEMODIALYSIS OUR EXPERIENCE

*CARELLA I., RICCIARDI C.A., F. MONTELEONE,
§CARELLA G., PONTORIERO A., RICCIARDI B.

*Imaging Diagnostic and Interventional Radiology Hospital "Barone Romeo" Patti (Me), Nephrology and Dialysis Hospital Milazzo (Me), §Vascular Surgeon Istituto Clinico Humanitas Milano

For a long term function of arteriovenous fistulas in hemodialysis Patients is required the absence of hemodynamically significant vascular lesions on the arterial side, anasthomosis and the venous outflow.

Central venous stenosis potentially compromises this patency by diminishing flow or by leading to venous hypertension and incapacitating extremity edema, necessitating access ligation for symptom relief. It is consequently becoming a major impediment to dialysis access management. In our experience the more frequent vascular lesion interested subclavian or anonymous vein and superior vena cava. In case of stenosis or occlusion that affects only subclavian vein may have importants symptoms with significant increase in the diameter of the upper limb linked to difficult discharge blood, engagement of the lymphatic system, with succulence and skin edema and reaction of the dermis of the skin and which tends to become making it difficult to access hard to perform dialysis. If the lesion is borne logs anonymous and superior vena cava is associated with edema in the territory of the jugular and succulence of the tissue splacnocranio and difficulties exhaust even the cerebral circulation.

When these central vein lesions are symptomatic or preclude the creation or function of an angio-access for hemodialysis, they should be treated.

In order to correctly address the problem, a careful study with selective arteriography showing the afferent artery, fistula and the efferent system. If there is an occlusion long and inveterate, in most cases, there is no other solution that the closure of the fistula. If you have a critical stenosis can be treated with angioplasty with possible stent placement.

In our experience, angioplasty with optional stenting of the subclavian vein and anonymous trunk resulted in immediate hemodynamic changes with restoration of optimal discharge of efferent system with disappearance of the collateral circulation and reflux. In the short term followed by a progressive reduction of edema and a marked improvement in skin tropism.

Conclusions

In our experience the angioplasty with stent placement possible in the case of critical stenosis of central veins proved safe procedure, well accepted by the patient, and able to restore normal function of the fistula.

RECANALIZATION OF ARTERIOVENOUS FISTULA FOR HEMODIALYSIS THROUGH ENDOVASCULAR PROCEDURES: OUR EXPERIENCE

I. CARELLA, F. MONTELEONE, C.A. RICCIARDI, G. CARELLA, B. RICCIARDI

Division of Nephrology and Dialysis, "Fogliani" Hospital, Milazzo, Italy
Division of Radiology "Barone Romeo" Hospital Patti, Italy

The life expectancy of patients with chronic renal failure requiring hemodialysis has increased significantly and therefore it is essential to careful maintenance of arteriovenous fistulas for hemodialysis and endovascular treatments central of venous access, in many cases, can make a significant contribution to the solution of problems with minimally invasive procedures under local anesthesia.
The diseases that can affect the AVF susceptible to endovascular treatment are:

a) Stenosis
These may affect the afferent artery, the anastomosis and the efferent vein. There is a reduction of the volume of fluid less than 300 ml/min and at duplex a peak systolic velocity (PSV) greater than 4 m/sec. They can be treated with Percutaneous Transluminal Angioplasty (PTA The access can be carried out on the arterial side or the venous and in case of recoil, dissection or significant residual stenosis is desirable to use a stent balloon expandable or self expandable. Must be balloons high pressure (up to 20 atm.) to win the high resistance related to the fibrosis and hyperplasia almost always present. The P.T.A. presents a technical success in 90% of cases, it is repeatable and has, at one year, a primary patency of 50% and 80% of secondary.

b) Thrombosis
The recent onset of thrombosis can be treated with thrombolysis loco-regioanle pharmacological or mechanical. The pharmacological involves the infusion through the catheter, with the tip positioned at the inside of the thrombus, thrombolytic agents (Urokinase, recombinat tissue Plasminogen Activator) which arrange to lyse the thrombus in many cases must be completed with angioplasty. The contraindications are related to bleeding or recent episodes of bleeding. The mechanical thrombolysis is based on the Venturi effect. Its limitations are related to the diameter of the device is not always compatible with the size of the vessels to be treated.

c) Aneurysms
They are more common on the venous side of the fistula to wearing out of the vein wall due to stress puncture for multiple dialysis sessions. Can be treated with covered stents (covered stent) even if the treatment is surgical in the first instance.

The central venous catheters for dialysis, placed via jugular, subclavian or femoral may undergo stenosis and thrombosis can be treated as the AVF with the procedures described above.

CONCLUSIONS

Interventional radiology in the maintenance of access for dialysis, in our experience, is to consider method of first instance. The chances of success are closely related to early intervention.

These procedures are well tolerated by the patient, allow the rapid recovery of the use of access, while maintaining an active fistula and allow a cost reduction. For best results it is essential to close collaboration between professionals with different experiences which Nephrologist, Interventional Radiologist and Vascular Surgeon.

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HYPERTENSION AND PROTEINURIA IN 18 YEARS OLD STUDENTS IN THE TERRITORY OF MILAZZO

A. PONTORIERO, A.SARANITI, F. GITTO, P. FAVAZZI, L. EMANUELE*, A. DABBICCO#, B. RICCIARDI

Division of Nephrology and Dialysis,*Hospital Direction,
#Division of Clinical Pathology of "Fogliani" Hospital Milazzo,

INTRODUCTION

The end of Military Conscription, deprived the male population, in adulthood, mass screening for kidney disease and for prevention of cardiovascular disease hypertensive based.

Our experience of mass screening was organized with the collaboration of the ASP 5 of Messina, of the Department of Laboratory Medicine PO Milazzo and all schools in the second degree of Milazzo, in order to refer to clinical evaluation, all boys 18 years of age.

MATERIALS AND METHODS

Prior acquisition of informed consent on the part of the boys were found, blood pressure, body weight, height, and was taken a urine sample spot, immediately subjected to physical and chemical examination of the sediment standard.

RESULTS

Took part in the screening of 250 boys fifth classes of the Higher Colleges of Milazzo, 120 males, 130 females, mean age of 18 ± 1, BMI: 15% of children screened is in the range of underweight, 60% of boys within the range of normal weight, 20% is in the range of overweight, 5% in the range of mild obesity media.

The blood pressure was found in 65% in the optimal range of 120/60 mmHg, 25% in the normal range of 130/70 mmHg, 9% in the high normal range of 139/80 mmHg, 1% in range of the first stage of hypertension with values between 142/80 mmHg and 150/90 mmHg.

Urinalysis for 75% was detected in the normal range, 20% of the samples exhibited an increased PS, 20% had leucocyturia with a percentage of leukocytes rediscounted in urinary sediment greater than 20 cells, 10% of the samples exhibited microhematuria with the presence of red blood cells to sediment volume is higher than 15 red blood cells, 2% had proteinuria greater than 20 mg / dl, 1% of the samples showed the presence of protein in the sediment border line, however, to be reassessed.

CONCLUSIONS

The screening was an opportunity to evaluate a homogeneous sample of boys at the end of their school age.

Some of the children due to screening revealed that they have never been subjected to the detection of blood pressure, the guys who showed abnormalities in the urinary sediment were recalled for re-examination of the urine in the department, and then continued in DH screening of children with hematuria and proteinuria significantly.

LAPAROSCOPIC MAINTENANCE OF PERITONEAL CATHETER: OUR EXPERIENCE

A. SARANITI, G. SFERLAZZAS*, G. CIMINO*, A. PONTORIERO, F. MONTELEONE, A. SAPORITA, B. RICCIARDI

Division of Nephrology, and Dialysis "Fogliani" Hospital, Milazzo, Italy
*Division of General Surgery "Fogliani" Hospital Milazzo Italy

The most frequent cause of failure of peritoneal catheter (P.C.) is the mechanical obstruction of the outflow for omental imprisonment of the device. In our Unit, apart from the initial laparoscopic experience for the placement of catheters, lately Laparoscopic surgery has gradually played an ever larger role for proper treatment of complications in order to save the P.C. maintening the patients in the peritoneal program.
In February 2013 came to our attention two male patients with a mean age of 55 + / -5 years. undergoing regular peritoneal dialysis.
One of the patients had to discontinue the treatment for malfunction of the catheter.
The second one, had to stop the treatment for the presence of bilateral inguinal hernia, for which he was subjected to surgical reduction first at right and after 15 days at left. After about 2weeks from the second intervention the pts restarted with peritoneal dialysis, restopped again in few days for the onset of acute peritonitis due to microbreaking of the Catheter, treated with targeted antibiotic therapy after repair of the P.C.
In both cases the patients were submitted under surgical laparoscopic procedure . In our experience, the surgery begins in open laparoscopy after a small subumbilical incision and subsequent placement of a trocar of 10-12mm. Through this way was introduced the camera to explore the peritoneal cavity allowing to highlight the cause of the malfunction. In a second time was positioned a second trocar to introduce surgical instruments like grasping, forceps, ultrasound scalpels etc. In both cases the obstruction was determined by an omental reaction that completely incarcerate the catheter to the anterior abdominal wall. In both patients was performed an omentectomy to expose the P.C. with a final correct repositioned and surgical elimination of the organizing wraparound sleeve first cause of obstruction. In one of the two cases was identified a collection of pus that was drained, cleaned and washed with antibiotic solution. Functionality testing of the catheter have been verified under direct vision in the course of laparoscopic surgery, with optimum loading and drainage.

Results: one patient was discharged on the second day without complications and was reintroduced in short time in his peritoneal program. The other patient instead underwent peritoneal washings with medicated bags with cephalosporin, presented optimal functioning of the peritoneal catheter, with normalization of WBC count.
After about 7 days, however, a recurrence of inguinal-scrotal hernia was observed and

was therefore discontinued the peritoneal dialysis program, shifting in hemodialysis after removal of the P.C.

Conclusions: The most frequent cause of failure of the peritoneal catheter is the mechanical obstruction of the outflow caused by omental entrapment. These complication can occur early or many months after the insertion and the miniinvasive videolaparoscopic technique can recover the pts to the treatment avoid the shift them to haemodialysis.
The video laparoscopic technique of insertion, according to our experience, could be used in pts from time subjected to abdominal surgery in order to reclaim the peritoneal cavity

THE ECHOSCOPIC TECHNIQUE IN POSITIONING OF CENTRAL VENOUS CATHETERS OF HEMODIALYSIS. 24 YEARS OF EXPERIENCE

BIAGIO RICCIARDI

Division of Nephrology, Milazzo General Hospital, Milazzo, Italy

The necessity to perform an easy and surgically rapid vascular access for hemodialysis, was immediately perceived after few years of a large scale use of the Quinton Scribner shunt. The issues related, like rejection of the tip anymore in diabetics people, thromobosis, inflammation, repeated surgeries, led to adapt the central veins catheterism to the haemodialysis for emergency vascular access, according to the classic percutaneous technique developed by Aubagnac- Seldinger, Erben-Uldall, Broviac between 1953/1973. The limit of these "blind" techniques were a good quantity of collateral effects, some of them characteristics of succlavean venipuncture like mediastinal hematoma, pneumothorax, lesion of thoracic duct, lesion of subclavian artery, other of jugular venipuncture like lesion of carotid, hematoma of the neck, other connected with femorals in which the worst problem could be represented by a serious injury of the femoral artery. All these considerations and the issues related to an abnormal and anymore "unknown" path of the guide wire in the intracorporeal trip, suggested to the author since 1989 to draw up a different protocol of implant in which the patients, blindly venipuntured, during all the procedure were constantly controlled under intensifier to verify the guidewire path .
This technique, constantly pursued for 10 years, allowed to perform **1500** implants (84,68% right subclavia, 12,86% left subclavia, 1,58 % femoral and only 0,87% the jugulars) with the result of an important reduction of classic collateral effects if compared with literature data, particularly evident with a presence of pneumothorax of only 0,95% in spite of the large use of subclavian way.
In 1999 with the diffusion of the echografy and the possibility to work with the Site Rite II and after Site Rite IV, vascular portable echograph, the echoscopic technique was the natural evolution for the author, coupling the echographic venipunture with the continuous control of the guidewire path under intensifier.
Since June 1999 until today always with echoscopic technique either implanting temporary catheters or long term in all usual sites, were performed **1819** catheterisms of which 462 subclavians more presents between 1999>2004, and 1357 between right or left jugular and femorals with a progressive abandonment of subclavian today very rare.
The easiness of implant, the continuous documented control of all the steps, the practically absence of side effects characteristic of this technique, would recommend a wide use for the sureness either for the patients or for the operator.

IMPACT OF FGF23 AND KLOTHO ON VASCULAR CALCIFICATION

JUAN MARIANO RODRIGUEZ PORTILLO

University Hospital Reina Sofia, Unidad de Investigacion, Cordoba Spain

FGF23 is produce by osteocytes and osteoblasts in response to phosphate load and 1,25(OH)2D3. The main function of FGF23 is to decrease phosphate reabsorption of phosphate and reduce renal synthesis of 1,25(OH)2D3. In patients with decreased renal function, FGF23 increases as an attempt to promote phosphaturia however it also decreases the synthesis of 1,25(OH)2D3. Experiments in uremic animals show that administration of anti-FGF23 improves vitamin D deficiency but results in worsening of hyperphosphatemia and vascular calcifications. The cell effect of FGF23 requires the presence of FGF receptor plus klotho. Klotho can be released into the blood stream and modulate the production of FGF23 by bone cells; and it is likely that circulating Klotho may enable FGF23 to act at the cardiovascular level and be associated with vascular calcifications. In addition clinical studies have shown that high FGF23 is associated with higher mortality, left ventricular hypertrophy and accelerated progression of renal disease. The relationship FGF23 and vascular calcification may be direct through its action on the vascular wall and indirect through modification of phosphate and vitamin D in patients with CKD.

AN UNUSUAL ASSOCIATION: FAHR'S SYNDROME AND CHRONIC KIDNEY DISEASE

B. POCOROBBA, I. LAURETTA, P. SANTANGELO,
G. PORTALE, S. RAPISARDA, P. FATUZZO

Scuola di Specializzazione di Nefrologia-Università degli Studi di Catania

Fahr's syndrome, medical condition characterized by bilateral calcifications of the basal ganglia and subsequent neurological and neuropsychiatric disorders, are frequently associated with calcium-phosphorus metabolism in the absence of biochemical abnormalities suggestive of mitochondrial disease.
The etiology is still unclear, however, have been described in the literature several familial cases apparently linked to a gene located on chromosome 14 called IBGC1.
We present the case of a man of 62 years, in complete physical up to six years before being hospitalized because of the sudden onset of seizures, loss of consciousness and bowel control. The investigations carried out during hospitalization were suggestive of hypoparathyroidism and Fahr's disease. In particular, in-depth laboratory showed high levels of phosphorus and low levels of calcium, magnesium and PTH and therefore a condition of hypoparathyroidism, but it would be more appropriate to define this framework one pseudohypoparathyroidism as it detects a failure despite the body's response to parathyroid hormone physiological presence of paratirotidi with possible alterations receptor.
In a few months, the picture is complicated by the occurrence of hypertensive heart disease, atrial fibrillation, thyroid nodules, high cholesterol, osteoarthritis and chronic kidney disease. The imaging used by us have highlighted the presence of calcific deposits at the level of the cited organs in addition to the vascular level, such as to make us suppose that the primum movens of the rapid loss of their functionality is basically the involvement of parenchymal vascularization, therefore calcified parenchymal and vascular alterations are responsible for the secondary impaired renal function (stage IIIB according to the guidelines KDIGO). This association is not reported in the literature.

RENAL DISEASE IN ADULT PATIENTS WITH CYSTIC FIBROSIS

DOMENICO SANTORO, ADELE POSTORINO, STEFANO COSTA, SIMONA CRISTADORO, GIUSEPPE MAGAZZÙ, CARLO ALBERTO RICCIARDI, VINCENZO SAVICA, MICHELE BUEMI, GUIDO BELLINGHIERI

UOC Nefrologia e Dialisi, UOS Dip. Gastroenterologia Pediatrica e Fibrosi Cistica

Introduction: Cystic fibrosis is the most common autosomal recessive disease affecting the caucasian population, with a birth incidence ranging between 1:2500 and 1:1800. It is caused by mutations in the CFTR [cystic fibrosis transmembrane regulator] gene which is localized on 7 chromosome. Renal disease is reported as a relatively rare complication in adult patient with CF. We evaluated proteinuria and chronic renal failure in a population of patients with CF

Methods: A retrospective study was carried out in a referral center for CF at University of Messina in Italy. We identified all patients with renal disease, characterized by proteinuria and/or chronic renal failure (CRF), during the period 2007-2012 and reviewed their medical records. To assess the correlation between genotype and proteinuria, genetic mutations were evaluated.

Results: From a population of 77 adult patients with CF, we identified 9 patients with proteinuria (11.7%), and 11 patients (14,28%) with chronic renal failure. Mean age was 35.6 (+5.1 SD) years, 55% were female and 33% had diabetes mellitus. Renal biopsy was performed in three patients because of nephrotic syndrome in one patient and proteinuria with renal failure in the other two patients. Renal amyloidosis was disclosed in two whilst IgAN in one patient. The ΔF508 mutation in homozygosis was present in 44% of patients with proteinuria(versus 27% of our CF population, Relative Risk 2.07), while genotype ΔF508/N1303K in 22%. ΔF508 allele mutation was present in 77.7% of proteinuric patients.

Conclusions: Our study shows an higher prevalence of renal disease in patients with CF, than was previously described. The main reason may be related to increased life expectancy due to better management. Moreover patients with ΔF508 homozygosis had higher risk of proteinuria.

ERYTHROPOIESIS-STIMULATING AGENTS: DOSE AND MORTALITY RISK AMONG INCIDENT HEMODIALYSIS PATIENTS

DOMENICO SANTORO, CARMELA GIUSEPPINA CONDEMI, °SALVATORE SAITTA, *GIANLUCA TRIFIRO', °SEBASTIANO GANGEMI, VINCENZO SAVICA, CARLO ALBERTO RICCIARDI, MICHELE BUEMI, GUIDO BELLINGHIERI

Unit of Nephrology, ° Unit of Immunology, *Unit of Pharmacology

Hypo-Responsiveness to erythropoiesis-stimulating agents (ESAs) has been associated with increased mortality in end stage renal disease (ESRD) patients. It is not clear if this effect is related to the elevated ESAs dosage for targeting haemoglobin levels or underlying morbid conditions that lead to ESA resistance .

We retrospectively evaluated from 2008 to death or December 2011, 28 patients consecutive incident hemodialysis patients. We identified 2 cohort of patients based on their mean annual ESAs dosage. The correlation between data was evaluated with the Spearman's rho test. Kaplan-Meier curves were generated to assess survival in subjects with high and low ESAs mean dose.

Median ESAs dosage, used as a cutoff point between patients at high and low ESAs dose was at 11.000 IU/week for epoetin alfa and beta, 55 mcg/week for darbopoietin and 220 mcg/month for cera. Mean hemoglobin (Hb) level was 10.58±0.13 g/dL.. Of 28 patients during follow-up, 6 (21,4%) died of all causes. High-dose ESA therapy was associated with increased all-cause mortality ($P = 0.047$). Moreover, there was a negative correlation between ESAs dose and Hb levels ($rho = - 0.825$; $P < 0.001$).

Higher ESAs dose for the treatment of anemia in incident hemodialysis patients was associated with higher mortality risk. ESAs and Hb serum levels were inversely correlated with mortality. Together, these findings suggest that ESAs dosage and Hb level may play a role through an independent manner or an interactive effect that adversely affects mortality.

SOCIO-ECONOMIC FACTORS, FOOD HABITS AND PHOSPHORUS LEVELS IN PATIENTS ON HEMODIALYSIS

DOMENICO SANTORO, MARIATERESA INGEGNIERI, °GIUSEPPE VITA, ANDREA PISACANE, CARLO ALBERTO RICCIARDI, GUIDO BELLINGHIERI, VINCENZO SAVICA

Unit of Nephrology, °Unit of Clinical Pathology

Hyperphosphoremia is one of the most important risk factors for morbidity and mortality not only for CKD but also for general population. Excessive dietary intake of phosphate (P) is one of the key factors. In particular, P in its inorganic form, which is contained in food additives, is more readily absorbed. Unfortunately, these food additives are mostly present in convenience fast foods, soft drinks, which is the typical food consumed by our hemodialysis population, composed by elderly people, mostly low-socio economic class, who often live alone.

To explore the association between socio-economic factors and serum phosphorus levels, we enrolled 100 patients on periodic hemodialysis treatment from 3 different units. Information, on social, cultural, economic, diet habits, therapy for hyperphosphoremia and haematological and clinical parameters had been collected through specific questionnaires administered by a physician. Statistical analysis was performed using correlation between variables with the linear regression analysis, and the stepwise logistic regression analysis, either analysis preceded by log-10 transformation if the distribution of the variables was non-gaussian. The level of statistical significance was always set at P o 0.05 Results showed serum phosphorus level was reduced in patients who live alone compared to patients in family (P 1⁄4 0,04), in self-sufficient (P 1⁄4 0,05) and in patients belonging to medium-higher versus lower socio-economic groups (P 1⁄4 0,003). Fast foods intakes correlates with increase in phosphorus serum levels (P1⁄40,002), whilst the same correlation was not found for cheese intake. Our data show that socio-economic status and food habits are useful predictors of phosphorus serum levels . In conclusion, dietary counselling of patients on hemodialysis is mandatory. Interventions that consider the socio-economic situation allow to deliver important messages on foods with the least amount of phosphates, and adequate protein content, and they may be a successful strategy in targeting patients at a higher risk of hyperphosphoremia.

THERAPY OF HYPERPHOSPHATEMIA IN UREMIA

VINCENZO SAVICA, DOMENICO SANTORO, PAOLO MONARDO,
CARLO ALBERTO RICCIARDI, GUIDO BELLINGHIERI

Chair of Nephrology University of Messina and Division of
Nephrology,Papardo Hospital,Messina,Italy

Hyperphosphatemia is a common finding in Chronic Kidney Disease(CKD). It is a well recognized risk factor for cardiovascular mortality in dialysis patients. Despite the regular and efficient dialysis and the therapy treatment the prevalence of hyperphosphatemia is still high.The dietary restriction in protein is emphasized as the cardinal aspect for the treatment of CKD patient hyperphosphatemia, but dialysis treatment, phosphate binders, administration vitamin D analogs and calcimimetics therapy are recognized as other important aspects of the management of hyperphosphatemia. To-day other important therapy aspect are evidenced: In fact it was reported that CKD patients daily ingest beverages and that some of these contain an high quantity of phosphate. So it is important to revisit the nutritional aspect of CKD patients. We are convinced that it is important to define precisely the role of the phosphate binders therapy and their characteristic. At the same time we are convinced that it is important to individualize the phosphate binders therapy and on this purpose we followed a mathematical and computerized method. Appying this method we obtained good and promising results in the treatment of hyperphosphatemia of CKD patients.

HYPOGLYCEMIA ISSUES IN UNORDINARY NEPHROLOGICAL SCENE: NON-ISLET CELL TUMOR-INDUCED HYPOGLYCEMIA

C. SESSA, V. VENTURA, R. MARCHESE,
B. POCOROBBA, S. RAPISARDA, P. FATUZZO

Università degli Studi di Catania - Scuola di specializzazione in Nefrologia
Email: nefrouniversitaria@policlinico.unict.it

Hypoglycemia is a common medical emergency depending on a too low blood's glucose level to garantee body survival. It isn't a disease itself but a conseguence of many pathological conditions and the expression of loss of the homeostatic mechanism of glucose mtabolism.
In everyday medical practice, hypoglycemia is thought to be caused by hypoglycemic therapies, particularly in advanced CKD patients.
Uremic environment interferes with normal procedures to valutate metabolic and insuline balances.
However, Nefrologist should remember hypoglycemia could be a paraneoplastic onset in oncologic pathologies.
Three neoplastic families are mainly involved with hypoglycemia:
Insuline secretive tumors;
Infiltrative tumors determinig distruption of the epatic parenchyma and adrenergic cells;
Very rare secretive tumors interfering with glucose methabolism as cytokines, interleukines, TNF, catecholamines, IGF I.
That last condition defined by the acronym NICTH, Non-islet cell tumor-induced hypoglycemia, today is the object of our attention thanks to an unusual case of hypoglycemia who led us to a not easy diagnosys of hemangioperycitoma. It is a malignant vascular tumor originating from mesenchimal cells with pericytic differentiation. Our interest in this pathology is due to rarity of observation (very few cases reported to date), insiudios growning, late diagnosys and uncertain clinical-biological evolution, often fatal.

SURGICAL REOPERATIONS IN KIDNEY TRANSPLANT

E.M. SI AHMED
F. ELMOKRETAR, R. BENHIZIA, D. OULBANI, B. BOUKHATEM, A. AZOUAOU, S. OULD ARBI, M. ZEGGANE, K. DEHIL, K. BENANI, F. CHATER

University of Blida, Department of Surgery - 09000 BLIDA - ALGERIA

Introduction:
The authors analyze surgical reoperations occurring after renal transplantation. The ethological investigation aims, for better surgical performance, to report the main causes leading to reoperations.

Methods
The study was performed for the period ranging from 2003 to 2012. 109 kidney transplants, from living donors, were performed with 16 surgical reoperations (14.7%).

The reasons for reoperation were:
- A ureteral stenosis 3.6% of patients.
- A urinary fistula 4.5% of patients.
- Bleeding 0. 9% of patients.
- A lymphocele 0.9% of patients.
- A digestive fistula 0.9%
- An evisceration 0.9% of patients.
- incisional hernia 2.8%.

The identified prognostic factors were:
overweight
The absence of residual diuresis
the time delay between dialysis and transplantation
} associated to the occurrence of urinary fistula

The donor ages as well as the operative duration, even though not being statistically significant, are often found associated to the occurrence of a surgical complication. Vascular, digestive and bleeding complications, to the opposite of urological complications, can be life-threatening.

Concluding remarks
Surgery reoperations are usually due to urological complications (stenosis and fistula) without jeopardizing in our investigation the renal function.
However, vascular complications would not lead necessary to the same conclusion. The absence of residual diuresis, age, overweight as well as surgical technique are factors that are often found to be associated with the development of a major surgical complication.

COMPLEX VASCULAR ACCESS FOR DIALYSIS: COOPERATION BETWEEN NEPHROLOGIST AND INTERVENTIONAL RADIOLOGIST

FERRARA D.*, SCAMARDA S.*, VALENZA F.#, D'AMATO F.#, BERNARDINO L.*, AMICO L.*, LORITO M.C.*, VISCONTI L.*, VISCONTI G.*

*Nephrology and dialysis Unit, # Radiology Unit, Hospital Villa Sofia-Cervello, Palermo, Sicily (Italy).

Introduction

The vascular access for hemodialysis is necessary for dialysis therapy, but sometimes the permanence of the same is difficult. Several factors can affect its functionality and patency. Cases of breakdown of vascular access are being more frequent, due to the increase in average age of the dialysis population and the increased survival of patients. In some cases, as it appears from medical literature, it is necessary to select insertion sites for access tunneled CVC that are usually unfamiliar to the nephrologist, as for instance femoral veins, iliac veins, inferior vena cava.

Methods and Results

In a few patients referred to our center over the past two years, vascular accesses became worn out, for several reasons (intra-access thrombosis, thrombosis proximal - superior vena cava and its branches, femoral vein - thrombosis of CVC permanent), causing huge problems for the performance of the dialysis care. This condition brought us to select sites for tunneled CVC approach with large-caliber veins. Nephrologists usually do not not used such sites.

Between 2011 and 2012, we experienced such a procedure with four (4) patients, which had necessarily to undergo the insertion of CVC tunneled into the abdominal vessels, the external iliac vein and the lumbar vein.

Patient 1: Woman, 59 years old, time on dialysis 2 years, Site: right iliac vein. Follow-up 10 months.

Patient 2: Woman, 65 years old, time on dialyss 4 years. Site: right lumbar vein. Follow-up 6 months.

Patient 3: Woman, 70 years old, time on dialysis 3 years. Site: right iliac vein. Follow-up 14 months.

Patient 4: Woman, 86 years old, time on dialysis 5 years. Site: right iliac vein. Follow-up 12 months.

The option of these vascular access was required because of the impossibility of switching to peritoneal dialysis, and for the repeated thrombosis of previous accesses.

These procedures, performed in the angiography suite with the collaboration of interventional radiologists, have allowed to ensure a good vascular access, that even after

ten (10) months of follow-up is well-functioning and does not show complications such as thrombosis and infection.

Conclusions

These data confirm that the collaboration between nephrologist and interventional radiologist is important in complex cases, in order to obtain a good and lasting vascular access for dialysis.

SPONDYLODISCITIS: A SERIOUS INFECTIOUS COMPLICATION IN DIALYSIS PATIENTS

FERRARA D., BERNARDINO L., LORITO M.C., AMICO L., VISCONTI L., SCAMARDA S., INCALCATERRA F., VISCONTI G.

Nephrology and Dialysis Unit, Hospital Villa Sofia-Cervello, Palermo, Sicily (ItalY).

Introduction

The spondylodiscitis is an infection of the spinal disc and adjoining vertebrae, which can have different origins – mainly from infectious diseases – and actually is a serious complication of sepsis.

This severe disease, with high mortality in the general population, is being more common in recent years depending on several factors, some of wh9ch are related to the endovascular surgical procedures, and the average age of patients undergoing invasive procedures and surgery.

Nowadays, episodes of spondylodiscitis are widespread among people on dialysis, representing a severe infectious complication. Risk factors are associated with the spread on one side of venous catheterization, and on the other of endovascular surgery as a consequence of thrombosis of vascular accesses, and mainly with the rise in the average age of people on dialysis.

Materials and results

Today we present the data collected in our center in the past 24 months.

The cases of spondylodiscitis were four (Women: 2; Men: 2); average age of patients: 76 ±8,3; time on dialysis 24 Months.

The distribution of vascular access was the same (AVF: 2; CVC tunneled: 2).

All episodes of spondilodiscitis followed sepsis polimicrobic, both in patients with AVF and CVC.

All the patient had undergone endovascular surgery shortly before (insertion of CVC tunneled or vascular FAV surgery).

Analysis of data shows that the spondylodiscitis is more widespread in elderly subjects, regardless of age and hemodialysis vascular access type. It is a serious complication, characterized by very high mortality and severe debilitation. The pain in the spine and the fever are always present.

Conclusions

These data demonstrate that the presence of fever and pain in the column in elderly patients on dialysis, regardless of age and time on dialysis, should lead us to take care of this serious complication, because earlier the diagnosis and treatment the greater the chance of resolution.

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