

associated with a higher risk of infections ( $p=0.035$ ) than basiliximab ( $p=0.026$ ).

**Conclusions:** Renal transplantation is an effective treatment for an end-stage kidney disease, however, post-transplant complications remain its major challenge. A deeper understanding of the function and composition of microbiota can help clinic to connect the microbiota features with the organ outcomes, including graft survival, inflammation, infection, rejection, alloreactivity and fibrosis.

## POSTER SESSION: CLINICAL GLOMERULONEPHRITIS - 3 (MODERATED)

POS47

29/03/2020

Hall 3 and 4 – Exhibition/Poster Area

12:00–13:15

### SUN-364

#### SERUM LEVELS OF SECRETORY IGA WERE NOT ELEVATED IN JAPANESE PATIENTS WITH IGA NEPHROPATHY



MUTO, M<sup>\*1</sup>, Kato, R<sup>1</sup>, Suzuki, H<sup>1</sup>, Suzuki, Y<sup>1</sup>

<sup>1</sup>Juntendo University Division of Nephrology- Department of Internal Medicine Tokyo Japan

**Introduction:** There are increasing evidences that galactose-deficient IgA1 (Gd-IgA1) and Gd-IgA1-containing immune complexes are essential effector molecules in IgAN. Dysregulation of mucosal immune system is considered as a major cause of development of IgAN. Secretory IgA (SIgA), which is dominant in external mucosal secretions, is characterized as the 'first line defense' in mucosae. Previous studies suggested that the serum levels of SIgA are elevated in patients with IgAN, and higher serum SIgA is associated with low GFR and proteinuria. In addition, mesangial deposits of SIgA were detected in about 15% of patients with IgAN. However, pathogenic role of SIgA and its glycosylation pattern are not clarified.

**Methods:** We measured the serum levels of SIgA in patients with IgAN ( $n=37$ ) and healthy controls (HC,  $n=4$ ) by ELISA. Serum levels of SIgA before and after tonsillectomy were also measured. We analyzed the association between serum levels of SIgA and eGFR, proteinuria and histological severity in patients with IgAN. Furthermore, we analyzed whether serum levels of SIgA correlated with those of Gd-IgA1 and Gd-IgA1-containing immune complexes.

**Results:** There was no significant difference in serum levels of SIgA between patients with IgAN and HC. Serum levels of SIgA were not correlated with any clinical parameters such as eGFR, proteinuria and histological severity. Importantly, there were no significant associations between serum levels of SIgA and Gd-IgA1 or Gd-IgA1-containing immune complexes. In addition, serum levels of SIgA did not change before and after tonsillectomy.

**Conclusions:** Serum levels of SIgA were not elevated in Japanese patients with IgAN. We need further investigations at cellular and molecular levels to understand the production site of SIgA and its role in the pathogenesis of IgAN.

### SUN-365

#### LUPUS NEPHRITIS: EPIDEMIOLOGICAL, CLINICAL, BIOLOGICAL, PATHOLOGICAL FINDINGS, OUTCOMES AND PROGNOSTIC FACTORS



Omrane MSN, M<sup>\*1</sup>, Aoudia, R<sup>1</sup>, Amiri, L<sup>1</sup>, Ghabi, H<sup>1</sup>, Gaied, H<sup>2</sup>, Jerbi, M<sup>2</sup>, Barbouch, S<sup>1</sup>, Kaaroud, H<sup>1</sup>, Ben Abdallah, T<sup>1</sup>, Goucha, R<sup>2</sup>

<sup>1</sup>Charles Nicolle Hospital Internal medicine A Tunis Tunisia, <sup>2</sup>Mongi Slim Hospital Nephrology Tunis Tunisia

**Introduction:** Systemic lupus erythematosus is a multi-visceral autoimmune disease. Renal involvement is one of the most common and serious manifestations of this disease. The histological lesions are highly polymorphic and the renal biopsy remains crucial for the therapeutic management of lupus nephritis (LN). The aim of our investigation was to study the epidemiological, clinical, biological and histological characteristics, outcomes and to evaluate the therapeutic protocols used for lupus nephritis' treatment and to

identify predictive factors of renal prognosis in patients with lupus nephritis.

**Methods:** It was a retrospective study including patients over 16 years old with lupus nephritis proved by kidney biopsy and followed up over a period of 17 years (1998 - 2015) in Internal Medicine Department of Charles Nicolle Hospital of Tunis.

**Results:** We collected 155 women and 19 men with a sex ratio F / H of 8.2. The mean age at the time of the discovery of LN was 32.6 years with a maximum between 15 years and 45 years. The most frequent extra-renal manifestations were articular and dermatological manifestations (79%). Renal symptomatology was dominated by proteinuria noted in all patients, associated to a nephrotic syndrome in 68% of patients. At the time of diagnosis of LN, hematuria was present in 69% of patients and renal failure was present in half of cases. Immunologically, antinuclear antibody were positive in 89.1% of cases, anti DNA positive in 73.4% of cases, anti Sm positive in 79.8% of cases and Antiphospholipids were positive in 50% of cases, associated with an antiphospholipid syndrome in 14.9% of cases. We performed 243 renal biopsies with 174 initial and 69 iterative biopsies. The histological lesions were polymorphic dominated by LN class IV (36.6%) isolated or associated with LN class V (17.7%). All patients received a corticosteroid for induction or maintenance treatment. It was associated with immunosuppressive treatment according to different treatment regimens. The median duration of follow-up was 81.2 months. Renal outcome was marked by complete and sustained remission in 36.7% of cases, incomplete remission with chronic kidney disease in 34.5% of cases, chronic renal failure in 28.7% of cases. At univariate analysis, we identified the young age below 35 years at the time of the discovery of LN, the male sex, increased serum creatinine at the time of biopsy, proliferative forms, the presence of histological signs of chronicity and lesions of thrombotic microangiopathy as predictive factors of poor renal outcomes.

**Conclusions:** Lupus nephritis is one of the most common and serious manifestations of Systemic lupus erythematosus. The generalization of renal biopsy, the use of early codified therapeutic protocols and regular monitoring and evaluation of disease activity according to the appropriate scores can improve management and survival of patients with renal impairment.

### SUN-366

#### MYCOPHENOLATE MOFETIL VERSUS CYCLOPHOSPHAMIDE AS INDUCTION TREATMENT AND MORTALITY IN A SERIES OF CASES WITH LUPUS NEPHRITIS IN THE CARIBBEAN COLOMBIAN REGION



Aroca, G<sup>1,2</sup>, PEÑA-VARGAS, WA<sup>\*3</sup>, Gonzalez-Torres, HJ<sup>3</sup>, Iglesias-Gamarra, A<sup>4</sup>, Garcia-Tolosa, R<sup>2</sup>, Conde-Manotas, JC<sup>5</sup>, Acosta-Almanza, A<sup>6</sup>, Musso, CG<sup>7</sup>, Cadena-Bonfanti, A<sup>2,5</sup>

<sup>1</sup>Universidad Simón Bolívar Medicine Barranquilla Colombia, <sup>2</sup>Clinica de la Costa Nephrology Barranquilla Colombia, <sup>3</sup>Universidad Simón Bolívar Medicine Barranquilla Colombia, <sup>4</sup>Universidad Nacional de Colombia Medicina Bogotá Colombia, <sup>5</sup>Universidad Simón Bolívar Nephrology Barranquilla Colombia, <sup>6</sup>Universidad del Sinú Spcs Medicina Interna Barranquilla Colombia, <sup>7</sup>Hospital Italiano de BsAs Nephrology Barranquilla Colombia

**Introduction:** Systemic lupus erythematosus (SLE) is an autoimmune disease characterized by the production of autoantibodies directed against nuclear and cytoplasmic antigens that lead to chronic systemic inflammation that can affect multiple major organs. The current treatment consists of two phases: an initial induction and a maintenance phase, typically steroids have been used in combination with one of two immunosuppressive agents for therapeutic induction: cyclophosphamide (CYC) or mycophenolate mofetil (MMF). In the Colombian Caribbean region [7] it is necessary to determine which immunomodulatory agent generates the best response when performing therapeutic induction in patients with LN who attend to the Clinical de la Costa, Colombia, Barranquilla with the purpose of having better results in terms of remission of the disease.

**Methods:** Analytical study. Were include in the study 409 patients with LN diagnosis classes III, IV and V treated between the years 2008-2018. The diagnosis was confirmed by renal biopsy. Two immunosuppressive treatment were compared: MMF and CYC. The patients were classified according to the clinical response criteria by the American College of Rheumatology (ACR) in complete remission (CR), partial remission (PR) and no remission (NR). In addition, mortality

associated with MMF vs CYC was calculated at 500 weeks (9 years) through the Kaplan-Meier estimator.

**Results:** The total patients, 79.6% were women, the average age was  $37 \pm 13$  years. Of the 409 patients  $n=314$  were treated with MMF and  $n=95$  CYC during the induction treatment. The predominant histological class was proliferative class IV (66%), followed by class III (23%). Statistically significant differences were found when comparing 24-hour proteinuria and creatinine in both treatment groups ( $p < 0.05$ ). Regarding the response to the induction treatment 225 (49%) were NR, 123 (29%) CR and 91 (22%) PR. Mortality rate CYC (5%) vs MMF (17%). There were no statistically significant differences in clinical response and mortality between patient groups. The propensity score matching (PSM) analysis showed no coincidence attributable to the effect of the co-variables on the treatment, that means, the difference was given by the effect of the treatments whether it is MMF or CYC.

**Conclusions:** No significant difference was found between the survival rate of patients treated with MMF and CYC. The infection rate, as well as, the response (partial or complete) to induction therapy inclined the balance to the MMF. Further studies are needed in our patients, since it has been shown that MMF is an effective and safe drug in the treatment of NL.

### SUN-367

#### TEN-YEAR OUTCOME DIFFERENCES IN LUPUS NEPHRITIS PATIENTS TREATED WITH CYCLOPHOSPHAMIDE AND MYCOPHENOLATE MOFETIL-BASED TREATMENT REGIMEN

Prasad, N<sup>1</sup>, Kurian, J<sup>2</sup>, Gupta, A<sup>2</sup>, Bhadauria, D<sup>2</sup>, Kaul, A<sup>2</sup>, Behera, MR<sup>2</sup>

<sup>1</sup>Sanjay Gandhi Post Graduate Institute of Medical Sciences Nephrology Lucknow India, <sup>2</sup>SGPGIMS Nephrology Lucknow India

**Introduction:** Lupus nephritis (LN) poses a considerable impact on the morbidity and mortality of SLE patients. Long term comparative outcome data with cyclophosphamide (CYP) and mycophenolate mofetil (MMF) based regimen from the Indian subcontinent is sparse.

We assessed the renal and patient survival of these patients with respect to the types of induction CYP or MMF and the two maintenance therapies – MMF or Azathioprine and determined the predictors of death and dialysis dependency in the study population.

**Methods:** In this study, we analyzed outcomes of 100 LN patients (26 class III, 25 class IV, 6 class III+V, and 10 class IV+V) treated with CYP (total 67, euro lupus-40 and NIH-27) and MMF-33 based regimen with the steroid between July 2008 to June 2018. Class distribution of the patients in the two groups was similar. The data were archived regarding demography, clinical, histopathological features and the treatment given of all 100 biopsy proven LN patients. Outcomes between two regimens CYP and MMF in terms of remission, dialysis dependency and patient survival were compared. The renal survival and patient survival at the end of follow-up between two groups were also compared.

**Results:** The clinical characteristics were similar in both groups, except the activity index was high in CYP patients ( $6.13 \pm 4.48$  Vs  $4.61 \pm 2.80$ ), however, the chronicity index was similar. The overall remission was 70% at the end of induction. The CR, PR, and NR in the CYP group was 46.2%, 23.9%, 29.9% respectively however in the MMF group was 57.6%, 12.1%, and 30.3% respectively. More patients died in CYP (14.9%) than those in MMF (9.1%) group patients. The 1-, 2-, 3-, 4-, 5- and 10-years patient survival in the CYP induction was 89.5%, 86.2%, 86.2%, 83.8%, 83.8% and 83.8% however in MMF was 93.9%, 93.9%, 89%, 89%, 89% and 89% respectively. The most common cause of death was sepsis 9/13 (69.2%) followed by uremia. The high serum creatinine, low Hb, male, thrombocytopenia, microscopic haematuria, leucocyturia, nephrotic proteinuria, lack of remission in 12 months, dialysis, doubling of creatinine on follow-up were significant predictors of mortality. The 1-, 2-, 3-, 4-, 5- and 10- years renal survival (event death-censored, but dialysis dependency) in CP group was 98.5%, 96.7%, 94.7%, 92.4%, 92.4% and 84% respectively however in the MMF was 96.8%, 96.8%, 91.9%, 91.9%, 91.9%, and 78.8% respectively. At the end of the study, dialysis dependency in the MMF group and CYP group was 7.5% and 12.1% respectively (NS). In the maintenance therapy, 3/56 (5.3%) had a doubling of creatinine in MMF, and 7/34 (20.5%) in the AZA group ( $p=0.03$ ).

**Conclusions:** Long term outcomes in terms of patient and renal survival of LN patients treated with CP and MMF based induction is similar. Serum creatinine doubling was more with MMF than AZA based

maintenance. The majority of death occurred during induction and sepsis was the most common cause of death.

### SUN-368

#### KIDNEY DISEASES IN ELDERLY: RENAL BIOPSY DATA FROM ONE SINGLE CHINESE CENTER OVER 30 YEARS

PU, C<sup>\*1</sup>, Xiangmei, C<sup>2</sup>

<sup>1</sup>Chinese PLA GENERAL HOSPITAL Nephrology Department Beijing China, <sup>2</sup>Chinese PLA General Hospital Nephrology Department Beijing China

**Introduction:** As for now, China is the only country in the world with an aging population ( $\geq 60$  years) of over 200 million. With the rapid development of economy and aging population, the spectrum of kidney disease has been changing in recent years. However, data regarding changes of renal histopathology spectrum in elderly population is lacking. The aim of the study was to explore the changes of spectrum of biopsy-proven kidney disease in the elderly Chinese patients during the past three decades.

**Methods:** We retrospectively analyzed renal biopsy data of the elderly patients ( $\geq 60$  years) from Dec 1987 to Nov 2017. Pathological diagnosis was classified according to the Revised Protocol of WHO (1982 and 1995). Study period was divided at an interval of 10 years (P1=Dec 1987-Nov 1997, P2=Dec 1997-Nov 2007, P3=Dec 2007-Nov 2017).

**Results:** Among 17380 patients receiving renal biopsies during the same period, 1567 (9.0%) were elderly ( $\geq 60$  years). The ratio of male to female was 1.56:1, with an age of  $66.01 \pm 5.17$  (range 60~88) years at the time of biopsy. The prevalence of pathological types in elderly cases of renal biopsy was as follows: primary glomerulonephritis (PGN, 71.2%), secondary glomerulonephritis (SGN, 22.0%), tubular-interstitial nephropathy (TIN, 5.7%), unclassified renal disease (0.6%), end-stage renal disease (ESRD, 0.3%), Hereditary and congenital kidney disease (0.1%) and renal diseases associated with kidney transplantation. Among the elderly, the most common renal disease was idiopathic membranous nephropathy (iMN, 36.2%), followed by IgA nephropathy (IgAN, 13.1%), Diabetic nephropathy (DN, 7.4%) minimal change disease (MCD, 6.3%) and mesangial proliferative glomerulonephritis (MsPGN, 5.3%). Among PGN in elderly, the most common renal disease was iMN (50.9%), IgAN (18.5%), MCD (8.8%), MsPGN (7.4%) and focal segmental glomerulosclerosis (FSGS, 6.1%). DN (33.6%) was the leading secondary glomerular disease, followed by ANCA-associated vasculitis (AAV, 14.8%), amyloidosis (14.2%), Henoch-Schönlein purpura glomerulonephritis (PN, 10.7%), hypertension/malignant hypertension-associated nephropathy (HTN, 6.7%) and HBV-related glomerulonephritis (HBV-GN, 5.5%). The spectrum of biopsy-proven kidney disease in the elderly patients varied between three different periods ( $P=0.000$ ). The prevalence of iMN has exploded during the past 10 years, nearly double that of previous 20 years (P1-23.2% vs. P2-22.8% vs. P3-40.7%,  $P=0.000$ ), and that of MCD almost doubled every 10 years (P1-1.8% vs. P2-3.8% vs. P3-7.2%,  $P=0.032$ ). However, the prevalence of MsPGN (21.4% vs. 9.5% vs. 3.3%,  $P=0.000$ ) and HTN (1.8% vs. 3.6% vs. 0.9%,  $P=0.001$ ) dropped significantly. The prevalence of IgAN (8.3% vs. 13.2% vs. 11.4%,  $P=0.765$ ) and DN (10.7% vs. 5.0% vs. 7.9%,  $P=0.126$ ) remained stable.

**Conclusions:** In elderly Chinese patients, the most common kidney disease was membranous nephropathy in primary glomerulonephritis and diabetic nephropathy in secondary glomerular disease. The prevalence of iMN and MCD has exploded during the past 10 years.

### SUN-369

#### MANAGEMENT OF NEPHROTIC SYNDROME THROUGH THE USE OF ACTH: A SYSTEMATIC REVIEW

Raina, R<sup>\*1</sup>, CHAKRABORTY, R<sup>1</sup>, Nair, N<sup>2</sup>, Nemer, L<sup>3</sup>, Joshi, J<sup>4</sup>

<sup>1</sup>Cleveland Clinic Akron General Medical Center Nephrology Akron USA, <sup>2</sup>Case Western Reserve University Chemistry Cleveland USA, <sup>3</sup>Firestone High School Chemistry Akron USA, <sup>4</sup>Cleveland Clinic Quantitative Health Sciences Cleveland USA

**Introduction:** In recent years, the use of adrenocorticotrophic hormone (ACTH) therapy for the treatment of proteinuria due to nephrotic syndrome (NS) has been heavily explored. ACTH therapy, which comes in the natural (H.P. Acthar Gel) or synthetic (Tetracosactide) form, has resulted in remission in patients with immunosuppressive and steroid-resistant NS. However, the exact efficacy of ACTH therapy in the