

that NSAIDs, notably: Aspirin, Ibuprofen and Diclofenac could inhibit the growth of some microorganisms including *Staphylococcus aureus*, *Escherichia coli* and *Candida albicans*. These results, although performed in vitro were promising especially with the growing rate of bacterial resistance towards antimicrobial agents.

**Methods:** We used antibiotics: Penicillin, Gentamicin and Ceftriaxone; NSAIDs-non-selective: Aspirin, Diclofenac and Ibuprofen and COX-2 selective: Celecoxib. Samples were taken from the oral cavity of patients with liver diseases. Cultures were made of the samples taken and they were inoculated onto an agar plate. Then three wells were made in the agar plate: in the first well we put an NSAID, second well with an antibiotic and in the third we put the mixture of both NSAID and antibiotic. The agar plates were placed into an incubator for 24 h at a temperature of 37 °C. The experiment was done twice to get accurate results.

**Results:** The analysis of the obtained results shows that in group 1 (antibiotics) was the highest inhibition  $39.3 \pm 3.6$  mm, in the group 2 in which there were NSAIDs gave the results as shown  $31.7 \pm 4.1$  mm, and last investigative group 3 with mixture was  $27.3 \pm 1.8$ .

**Conclusion:** From the obtained results we can conclude that a mixture of NSAIDs and antibiotics does not improve antibacterial effect of antibiotics. In fact, NSAIDs seem to even lower the efficacy of antimicrobial drugs. Special attention should be paid while administering NSAIDs to patients who are on antibiotic therapy since the combination of these two groups of drugs lower the antimicrobial effect.

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### PS003

#### Comparison of metabolic syndrome rates in living-donor and deceased-donor kidney recipients – A three-year follow-up

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**Aim:** Comparison of MS rates in kidney recipients.

**Introduction:** Metabolic syndrome (MS) is characterized by coexistent pro-atherogenic disorders and insulin resistance. MS also increases cardiovascular risk.

**Methods:** A total of 112 living-donor ( $n=54$ ) and deceased-donor ( $n=58$ ) kidney transplant recipients were evaluated for metabolic syndrome (MS) in months 6, 12, and 36. The National Cholesterol Education Program – Adult Treatment Panel III (NCEP-ATP III) criteria were used. Both groups were compared in terms of MS rates. Moreover, correlations between MS and other parameters (age, gender, dialysis type and duration, donor type, immunosuppressant drugs, acute rejection episodes, smoking, levels of triglycerides, uric acid, creatinine, eGFR, and proteinuria) were evaluated. The chi-square, McNemar's test, Student's *t* test, Welch's *t* test, Mann-Whitney *U* test, Fisher's test, and Shapiro-Wilk test were used in the statistical analysis.

**Results:** MS rates following living-donor (LD) and deceased-donor (DD) kidney transplantation (KTx) in months 6, 12, and 36 were 0.148 vs. 0.276; 0.173 vs. 0.316; 0.235 vs. 0.182, respectively. MS rates in LD KTx recipients were lower than those in DD KTx recipients in months 6 and 12, especially in males (0.14 vs.

0.379;  $p=0.0251$ ), but they increased systematically in subsequent months of follow-up. MS was more commonly diagnosed in older recipients ( $p=0.019$ ), with lower MDRD eGFR values ( $p=0.009$ ), who received more anti-hypertensive drugs ( $p=0.046$ ). The dialysis type, donor type and the number of transplantations had no effect. The logistic regression model indicated that the factors contributing to MS were elevated uric acid levels and proteinuria.<sup>1,2</sup>

#### Conclusion:

1. MS rates in LD KTx recipients in month 6 and 12 following transplantation are lower than those in DD KTx recipients.
2. MS rates in LD KTx recipients tended to progressively increase during follow-up.
3. MS was more common in older patients with poorer kidney function, higher uric acid levels and proteinuria.

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### PS073

#### Association between body composition and magnesium level in middle aged women



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**Aim:** Aim of the study was to compare total magnesium serum concentration between subjects with increased fat mass in the body composition and subjects with normal body composition as to determine the association between total magnesium serum level and parameters of the body composition and glucose metabolism.

**Introduction:** Metabolic disorders and chronic diseases may associate alterations in body composition and could be related with disturbances of the magnesium blood level. Obesity is a chronic disease characterized by disturbances of the body composition, commonly associated with disorders of carbohydrate metabolism.

**Methods:** The study included 40 women with body composition disturbances (increased percentage of the total fat mass) and 20 age matched women with normal percentage of the total fat mass. All subjects underwent analysis of the components of body composition [bioelectrical impedance analysis, fat mass percentage (FAT%), fat free mass percentage (FFM%)], laboratory analysis of blood samples (automated analyzer systems) with determining the parameters of glucose metabolism and total magnesium serum concentration. Insulin resistance index (HOMA-IR) was calculated using equation involving fasting insulin and glucose concentration.

**Results:** Women with increased percentage of the total fat mass had significantly lower total magnesium serum concentration compared to control group ( $0.83 \pm 0.07$  vs.  $0.9 \pm 0.06$  mmol/l,  $p=0.00$ ). Moderate correlation was found between serum concentrations of total magnesium and FAT% ( $r=-0.47$ ,  $p=0.00$ ), FFM% ( $r=0.44$ ,  $p=0.00$ ), fasting insulin levels ( $r=-0.43$ ,  $p=0.00$ ) and HOMA-IR ( $r=-0.44$ ,  $p=0.00$ ).

**Conclusion:** Women with increased total fat mass in the body composition have significantly lower total magnesium serum concentration, compared to women with normal body composition.



Additionally to increased fat mass, insulin resistance is associated with total magnesium level in middle aged women.

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### PS137

#### Increased paraoxonase and arylesterase activity in thyroiditis patients compared to healthy individuals



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**Aim:** The aim of this study was to assess whether there is a significant difference in paraoxonase and arylesterase activities and distribution of phenotypes in thyroiditis patients compared to healthy volunteers.

**Introduction:** Human serum paraoxonase 1 (PON1; EC3.1.1.2) is an antioxidant enzyme showing both paraoxonase and arylesterase activities. The PON1-192 polymorphism has two isoforms, namely PON1 Q and PON1 R. PON1 Q contains a glutamine at position 192. PON1 R contains an arginine at position 192. It shows a 6 fold higher activity towards paraoxon hydrolysis compared to Q isoform. Arylesterase activity is similar in both isozymes. The R allozyme shows a greater degree of stimulation of its paraoxon-hydrolyzing activity by 1 M NaCl than does the Q allozyme. The ratio of Salt stimulated PON 1 activity/Arylesterase activity (P/A ratio) is trimodally distributed. The three modes correspond to paraoxonase phenotypes, QQ, QR and RR.

**Methods:** Fifty thyroiditis patients and one hundred and thirty seven apparently healthy individuals were enrolled in this study. Serum samples of both groups were analysed for basal paraoxonase activity, salt stimulated paraoxonase activity (with 1 M NaCl) and arylesterase activity (spectrophotometrically). P/A ratio was used to assess the phenotypes (dual substrate method).

**Results:** Basal PON 1 activity ( $205.27 \pm 115.00$  U/l vs.  $251.1 \pm 129.6$  U/l,  $p=0.002$ ) and arylesterase activity ( $159.53 \pm 37.11$  vs.  $177.59 \pm 46.90$ ,  $p=0.024$ ) was significantly higher in thyroiditis patients compared to healthy volunteers. Percentage of QQ phenotype was significantly higher in thyroiditis patients compared to healthy individuals. Percentage of QR phenotype was significantly lower in thyroiditis patients compared to healthy individuals. There was no difference in percentage of RR phenotype in thyroiditis patients and healthy individuals.

**Conclusion:** Serum PON 1 activity and arylesterase activity was significantly higher in thyroiditis patients compared to healthy individuals. Percentage distribution of phenotypes in thyroiditis patients was significantly different from healthy individuals.

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### PS111

#### The relationship between dyslipidemia and disease activity in Iranian population with systemic lupus erythematosus



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**Aim:** This study was designed for evaluating the relationship between dyslipidemia and diseases activity in systemic lupus erythematosus (SLE) patients.

**Introduction:** In spite of high prevalence of dyslipidemia in SLE patients and its role in patients' cardiovascular events, there was scant study about the relation between dyslipidemia and disease activity in SLE patients in Iran.

**Methods:** This analytical cross-sectional study was conducted during 2014–2016 on SLE patients who referred to the Hasheminejad hospital (Tehran – Iran). The serum levels of triglyceride, cholesterol, LDL, and HDL were measured, then dyslipidemia and correlated factors were evaluated. The activity of disease was determined by SLE disease activity index (SLEDAI).

**Results:** 62 out of 72 patients (87%) were female and the mean age was 34 years. The median disease duration was 1 year and 49% of patients had active disease (SLEDAI  $\geq 6$ ). Proteinuria and nephritis were observed in 18% and 24%, respectively. 62% of patients had at-least one abnormality in their lipid profile. High cholesterol ( $>200$  mg/dL), high triglyceride ( $>150$  mg/dL), high LDL ( $>130$  mg/dL) and low HDL ( $<50$  mg/dL in females and  $<40$  mg/dL in males) levels were observed in 25%, 42%, 20% and 49% of patients, respectively. Patients with active disease had lower age and disease duration in comparison of others ( $P < 0.05$ ), while there were no differences in terms of sex and weight between patients in active and inactive phases ( $P > 0.05$ ). The frequency of proteinuria, nephritis and decreased level of complements were higher in active SLE patients, too. Patients with active disease had also higher levels of serum cholesterol, triglyceride and LDL and lower level of serum HDL. In logistic regression, the odds ratios of patients with high cholesterol, using more than 10 mg/day prednisolone and with low serum HDL level for having active disease were 6.6, 5.6 and 3.4, respectively ( $P < 0.05$ ).

**Conclusion:** Our findings showed that dyslipidemia is prevalent in SLE patients especially in patients with active SLE disease. In addition, patients with high cholesterol, using more than 10 mg/day prednisolone and with low HDL had higher chance for having active disease. Hence, it seems that there is a relation between disease activity and lipid profile abnormalities in SLE patients.

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Neurosciences Paralell Oral Session  
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### PS168

#### Astrocytic A2A receptors: Novel targets to manage brain disorders



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**Aim:** To validate astrocytic adenosine A2A receptors (A2AR) as a novel target to prevent abnormal glutamate overexcitation.

**Introduction:** Astrocytes are responsible for clearance of extracellular glutamate, a process controlled by A2AR, extolling