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 well were made in the agar plate: in the first well we put an NSAIDs, 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 ± 3.6 mm, in the group 2 in which there were NSAIDs gave the results as shown 31.7 ± 4.1 mm, and last investigative group 3 with mixture was 27.3 ± 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.

**Acknowledgements:** Assistant professor Marta Panas (our scientific advisor).

References


http://dx.doi.org/10.1016/j.pbj.2017.07.007

PS003

**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 ± 0.07 vs. 0.9 ± 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.