

## OA-GE-07

### THE DIFFERENCES IN INTERLEUKIN-6 LEVELS AND MEAN PLATELET VOLUME BETWEEN NON-ALCOHOLIC FATTY LIVER DISEASE AND NON NAFLD GROUPS IN YOUNG SUBJECTS WITH CENTRAL OBESITY

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#### INTRODUCTION

Obesity is one of the major risk factors of metabolic diseases such as NAFLD. Proinflammatory cytokines played specific role in the incidence of NAFLD. IL-6 influences megakaryocyte maturation and platelet size, which is measured as mean platelet volume (MPV). The purpose was to determine the difference in IL-6 and MPV levels between NAFLD and non NAFLD groups in central obesity.

#### METHODOLOGY

This research was a comparative analytic with cross sectional study conducted in May 2018 - July 2018. Samples were taken sequentially based on inclusion criteria. Serum IL-6 was examined by ELISA, reagent kit R&D System Inc. MPV was examined by Sysmex XN-2000-1-fIR. NAFLD was diagnosed by abdominal ultrasound.

#### RESULTS

This study included 40 samples, with mean age 30±5 years old, including 28 people (70%) who experienced NAFLD. Subjects had mean waist circumference of 99.08±8.42 cm and mean BMI of 28.35±3.59 cm. The difference in mean IL-6 levels between NAFLD and non NAFLD groups was 2.27±1.08 pg/mL vs 1.21±0.25 pg/mL (p = 0.002). While the mean difference in MPV in the NAFLD and non-NAFLD groups was 10.19±0.82 fL vs 9.39±0.66 fL (p = 0.005). IL-6 plays an important role in the acute inflammatory response, include inducing liver to synthesize other inflammatory mediators. IL-6 affects the maturation of megakaryocytes, causing larger platelets to be released into the blood circulation.

#### CONCLUSION

There was a significant difference between IL-6 and MPV levels in NAFLD group compared with non NAFLD group in central obesity.

#### KEY WORDS

central obesity, NAFLD, IL-6, MPV

## OA-GE-08

### ANGIOPOIETIN-LIKE GROWTH FACTOR CONTROLS APPETITE VIA LEPTIN SIGNALING

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#### INTRODUCTION

Hypothalamic regulation of appetite governs whole-body energy balance. Satiety is regulated by endocrine factors, including leptin, and impaired leptin induction causes obesity. Angiopoietin-like growth factor (AGF) promotes energy expenditure in the periphery, and systemic reconstitution of AGF antagonizes obesity. However, whether hypothalamic AGF plays a role in controlling food intake remains unknown.

#### METHODOLOGY

Immunofluorescence staining was used to identify the intensity of AGF and leptin signaling in the hypothalamus. In addition, to verify the function of AGF in the hypothalamus, we used stereotaxic intracerebroventricular injection with recombinant AGF.