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P22

Positive Association between blood C3 Level and Liver Fat Content Quantified by 1H Magnetic Resonance Spectroscopy in Japanese Men

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Objective: We aimed to determine whether complement 3 (C3) is positively related to the degree of liver fat content in healthy Japanese adults.
Method: Middle-aged male subjects who drank less than 46 g/day alcohol (n=40) were studied. H1 magnetic resonance spectroscopy was used to quantify liver fat content, (3T, Siemens MR, TE=30 ms). Volume of interest was selected in the right liver lobe with a size of 4×4×4 cm. The spectrogram was analyzed by LCModel.
Results: Mean age and body mass index were 62.5 years and 24.5 kg/m^2. The geometric mean and 95% confidence interval of C3 (mg/dl) in the lowest, medium, and highest liver fat tertile were 96.5 (92.8, 100.5), 111.1 (104.6, 115.6), 112.2 (106.7, 117.9), respectively after adjustment for age, body mass index, smoking status, alcohol intake and blood FFA level (one-way ANCOVA p=0.008, linear p=0.010).
Conclusion: We found a linear and positive relationship between C3 and liver fat content. Present findings may implicate hepatocyte injury already present with accumulation of triacylglycerol.

P23

Correlation and Multiple Regression Analysis between Blood Pressure and the Mass and Distribution of Body Fats in The Elderly

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Objective: To explore the relationship of blood pressure and body fat mass and distribution in the elderly.
Methods: The subjects contain 6799 elderly persons in Shandong who participated in the National Physical Fitness Monitoring in 2005. The correlation and multiple regression analysis between blood pressure and the anthropometric measures were done.
Results: Their systolic blood pressure (SBP) were significant positive correlation with all measures while were negative with height, chest-waist ratio. Their diastolic blood pressure (DBP) were significant positive correlation with all measures except triceps skinfold, while were negative with chest-waist ratio. The blood pressure multiple regression equations were developed as follows: SBP male=144.891+0.334X3-0.232X1-0.166X4; SBP female=172.928+20.756X8-0.516X1+0.367X2; DBP male=67.704+0.163X3; DBP female=43.026+0.044X9-0.079X5+14.964X8+8.866X7-0.046X6, (Where the unit of blood pressure was mmHg, and X1 representing body height (cm), X2 representing body weight (kg), X3 representing waist circumference (mm), X4 representing triceps skinfold (mm), X5 representing scapula skinfold (mm), X6 representing abdominal skinfold (mm), X7 representing chest-waist ratio, X8 representing waist-hip ratio, X9 representing klein torsten index (g·cm^{-1})).
Conclusion: The correlation of blood pressure with the mass and distribution of body fat were close. The elderly could control their blood pressure by reducing body fat mass especially abdominal ones.

P24

Adult Fat Distribution and Bone Mineral Density of Han Nationality in Liaoning Province

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Objective: To study adult body composition and changes in the bone mineral density (BMD) of Han Nationality in Liaoning Province, so as to provide basis for the prevention, initial screening, diagnosis, and assessment of the treatment of osteoporosis.
Methods: With informed consent, randomly selected 501 Han adults (men 216, women 285) aged 20 to 59 in Liaoning Province. Body composition and bone density were measured by bioelectrical impedance analysis (TanitaMC-180) and Ultrasonic BMD apparatus, respectively. We compared the difference of fat distribution between men and women, as well as the difference of BMD in their left and right heels.
Results: With the increase in age, the fat ratio of the lower limbs of those women with increasing weight was more than that of their upper limbs (p<0.01), while their BMD (p<0.01) tended to decrease. The fat distribution of men was as follows: the fat ratio of their body was more than that of their lower limbs, while the fat ratio of their lower limbs was more than that of their upper limbs. The change in their body weight and fat has no significant correlation for their BMD.
Conclusion: The woman's fat of the Han nationality in Liaoning increases together with their age and body weight, whereas their BMD decreases; the man's fat locates in the middle of their body, while their BMD has no correlation with their age or the changes in their body weight.

P25

The Role of Calf Circumference among Sarcopenic and Non-sarcopenic Brazilian Elderly: the SABE Study

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Objective: To compare and determine the protective role of CC in Brazilian sarcopenic (SP) and non-sarcopenic (NSP) elderly, of different gender and age groups.
Methods: Height, weight, CC, handgrip strength, and gait speed were evaluated in a representative sample of men

(456) and women (740) aged 60 and older, participating in the 2006 cohort of the SABE Survey, in the city of São Paulo, Brazil. Sarcopenia was identified according to the European Working Group on Sarcopenia in Older People definition, based on measures of speed, strength and predicted muscle mass. The sample was subdivided in age groups <80 and ≥80 yrs.
Results: Prevalence of sarcopenia was 9.2% (men: 10.3%; women: 8.5%). Significant differences in CC between SP and NSP groups were observed for men <80 yrs (SP: 31.6±0.4 cm; NSP: 36.2±0.2 cm) and ≥80 yrs (SP: 32.0±0.4 cm; NSP: 35.2±0.3 cm) and also for women <80 yrs (SP: 31.1±0.5 cm; NSP: 36.0±0.2 cm) and ≥80 yrs (SP: 31.4±0.5 cm; NSP: 34.2±0.3 cm). Independently of gender and age groups, CC was negatively associated with sarcopenia risk (Odds Ratio: 0.67; IC 95%: 0.62–0.73).
Conclusion: These findings revealed that Brazilian elderly, who presented lower values of calf circumferences, are at a higher risk of having sarcopenia.

P26
Sleep Duration Associated with a Higher Risk of Metabolic Syndrome in Chinese Men
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Objective: Both short and long sleep duration were associated with a various risk factors for cardiovascular disease. In this study, we aimed to test the relationships between sleep duration and metabolic syndrome (MS).
Methods: A total of 404 men aged from 18 to 80 years old were recruited from 2008 to 2009. Subjects under medication and without sleep information were excluded. Participants were divided into 4 groups based upon their reported sleep duration: 6 hours or less, 7 hours, 8 hours and 9 hours or more. MS was diagnosed based on the International Diabetes Federation definition. Logistic regression was used to examine the associations between sleep duration and MS adjusting for potential confounding factors.
Results: The prevalence of MS were 20.4%, 15.8%, 12.2% and 21.9% in the category of 6 hours or less, 7 hours, 8 hours and 9 hours or more, respectively. Compared with those slept 8 hours per night, subjects who slept more than 9 hours (odds ratio [OR] 5.59 [95%CI 1.69-18.48]) and 6 hours or less (5.11 [1.27-20.66]) were at a higher risk for having MS.
Conclusion: Our study suggested that both short (≤6 hours) and long sleep duration (≥9 hours) were associated with an elevated risk of having MS in Chinese men. Further studies using a larger sample size are needed to confirm our results.