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PLASMA ADIPONECTIN IS A MARKER OF SEVERITY IN HEART FAILURE

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Purpose. Adiponectin, a 247 aminoacid protein produced mainly by adipose tissue, beside its effects on glucose metabolism, plays important protective function against cardiovascular disease. Adiponectin is inversely correlated with an increased cardiovascular risk and hypo-adiponectinemia is considered an independent cardiovascular risk factor. On the contrary, the role of adiponectin in heart failure (HF) is not fully known. In order to evaluate the prognostic value of circulating adiponectin, we measured total adiponectin plasma levels in patients with HF of different severity.
Methods. Total adiponectin, leptin and interleukin(IL)-6 levels were measured in plasma samples of 159 no diabetic patients with different etiology HF (17 in NYHA class I, 82 in NYHA class II, 46 in NYHA class III and 14 in NYHA class IV, age 62±14 yrs, LEVF% 32.5±0.79, mean±sem) and in 31 healthy subjects as control, by dedicated ELISA (Linco Res-US, DRG Diagnostics-Germany, Diaclone Research-France, respectively). In the same group brain natriuretic peptide (BNP) levels were determined by IRMA (Shionogi, Osaka, Japan).
Results. Our findings indicated that total adiponectin levels increased significantly as a function of disease severity (7.1±0.61 mg/ml vs 10.9±1.4 in NYHA class I vs 12.8±0.95 in NYHA class II vs 15.7±1.3 in NYHA III vs 16.7±1.8 in NYHA class IV; $p<0.001$ NYHA II, III and IV vs controls) and they correlated negatively with LVEF% ($p=0.0009$), positively with cardiac function (BNP levels) ($p<0.0001$) and inflammation (IL-6 levels) ($p<0.0001$). We did not observe any correlation with metabolism (BMI) in patients with HF, while a significant correlation was found between leptin and BMI ($p<0.0001$).
Conclusion. Circulating adiponectin is associated with cardiovascular function and inflammation in HF patients. The increased adiponectin plasma levels in HF is a marker of disease severity, indipendent of metabolism.
Reference
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PROSTATE SPECIFIC ANTIGEN (PSA) TO EVALUATE SEMEN CONTAMINATION OF VAGINAL FLUID

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Objective. Contaminants, such as semen, may affect measurement of vaginal cytokines. We sought to compare detection of semen contamination evaluated by prostate specific antigen (PSA) to other frequently used assays.
Methods. This study is part of a larger nested case control study about microbial and immune parameters associated with preterm birth among women with bacterial vaginosis (BV). At their first prenatal visit, participants were interviewed and their vaginal secretions were obtained. Swabs were Gram stained or inoculated into sterile saline and snap frozen. Among a subset of patients, semen contamination was assessed with: 1) measurement of total PSA, 2) acid phosphatase activity, 3) microscopic measurement of spermatozoa on Gram stain, and 4) self-reported sexual intercourse in the past two days. Sensitivity and specificity were calculated for each technique in comparison to PSA levels.
Results. Of the 802 study participants with BV, a subset of 302 samples were selected. Relevant demographic data were as follows: mean age of 24.1 years, 73.1% non-Hispanic black, 85.5% U.S. born, 76.4% single, 41.8% nulliparous, and 32.0% with less than high school education. The mean gestational age at collection was 11.8 weeks. A total of 119 (39.4%) study participants had any PSA detectable; 75 (28.6%) had PSA levels >1.0 ng/mL and 25 (9.5%) had levels >150 ng/mL. Spermatozoa were identified on Gram stain for 45 (15.2%) women, and 35 (11.6%) had elevated acid phosphatase levels. Sixty-nine (23.3%) women reported having had sexual intercourse in the previous 48 hours. Compared to measurable PSA levels, the sensitivity and specificity for each technique were as follows: acid phosphatase (26.9%, 98.4%), Gram stain (36.1%, 98.4%), and self-report (41.9%, 88.8%).
Conclusion. Compared to PSA levels, commonly used assays for recent semen exposure are inaccurate. This inaccuracy may affect the results of studies which measure vaginal immune factors like cytokines or retrieve DNA from vaginal specimens.
Reference
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