Hye Yeon Koo, J Microb Biochem Technol 2018, Volume 10
DOI: 10.4172/1948-5948-C1-038

Factors related to the natural killer cell activity in subjects undergoing routine health screening

Hye Yeon Koo
Seoul National University Bundang Hospital, South Korea

Introduction: Low natural killer (NK) cell activity has been reported in association with several chronic diseases, including cancer and autoimmune disorders. Our study aimed to identify the factors which are related to NK cell activity level.

Materials & Methods: Study subjects were 150 adults who received the health screening examination at the Seoul National University Bundang Hospital in 2017. Serum interferon gamma(IFN-γ) level, which reflects the NK cell activity, was measured in all subjects. The association between NK cell activity and other indexes, including anthropometric, metabolic, and inflammatory factors, were examined. Multivariate logistic regression analysis was performed for factors that showed associations with low NK cell activity(defined as IFN-γ<500 pg/ml) at the level of $p<0.1$.

Results: Mean IFN-γ level was 1786.1±1030.8(pg/ml) in study subjects. When categorizing patients with quartile values of IFN-γ, LDL-cholesterol level showed significant differences according to NK cell activity levels ($p=0.048$). Differences between the first quartile group and other subjectswere also examined, and the total cholesterol level was higher in the first quartile group(210.1±36.2, 192.0±32.2, respectively, $p=0.013$). When comparing the first and the last quartile group, homeostatic model assessment of insulin resistance (HOMA-IR) level was lower in the first quartile group (2.6±1.3, 1.5±0.7, respectively, $p=0.05$). In a multivariate logistic analysis, low HOMA-IR (aOR =7.6, 95% CI: 1.14-51.8, $p=0.036$) was associated with low NK cell activity.

Conclusion: LDL cholesterol, total cholesterol, and HOMA-IR were associated with the level of NK cell activity. Further studies should examine the associations between NK cell activity and various metabolic and inflammatory factors in a larger population.

Biography

Hye Yeon Koo has her expertise in chronic disease care and health promotion of cancer survivors. She has been taking responsibility for long-term cancer survivorship care at the Cancer Center in Seoul National University Bundang Hospital. Her recent research is in long-term survivors of breast cancer shows her passion in behavioral intervention for cancer patients.

tare4645@gmail.com

Notes: