

혈액투석 환자에서 자연살해세포 활성화도 분석

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Natural Killer Cell Activity in Hemodialysis Patients

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Background: Natural killer (NK) cells are lymphocytes of innate immune system that play a key role in an immune response towards viral infections and tumors. NK cell deficit has been suggested in patients undergoing hemodialysis (HD) with conflicting results regarding their activity. Aim of this study was to determine the NK cell cytotoxic activity in HD patients using a high-throughput assay.

Method: Clinically stable patients who were treated by HD for more than 3 months were enrolled from 3 outpatient HD clinics (n=138). NK cell activity was assessed using NK Vue™ assay (ATGen Co.) that uses serum of ex vivo stimulated whole blood to detect interferon (IFN)- γ secreted from NK cells as an indicator of NK cell activity.

Results: Mean age of the HD patients was 62±13 years (range 25 to 92 years) and mean HD duration was 43±34 months (range 3 to 211 months). Overall HD patients showed lower NK cell activity (538.0±434.0 pg/mL) compared with healthy subjects (867.5±50.2 pg/mL, p value <0.05). Furthermore, 18.1% (n=25) and 20.3% (n=28) of HD patients showed abnormal (less than 100 pg/ml) and borderline (100-250 pg/ml) NK cell activity, respectively. HD patients older than 65 year-old showed lower NK cell activity (601.8±424.6 vs. 455.1±435.6 pg/ml, p=0.029), whereas patients with longer HD duration showed greater NK cell activity.

Conclusion: Our results show that HD patients frequently express lower NK cell activity and high-throughput assay may be used to assess their NK cell activity.

Key Words: 자연살해세포 활성화도, 나이, 투석기간
NK cell activity, Age, Hemodialysis duration