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Oral Presentation

NK Cells as Surrogate Marker for Predicting Treatment Efficacy in Chronic Inflammatory Demyelinating Polyneuropathy

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Abstract

Natural Killer (NK) cells are part of our innate immune system with regulatory and effector functions. Different s tudies suggest that treatment with intravenous immunoglobulins (IVIg) has an immunomodulatory effect on NK cells. IVIg is a first-line treatment for various autoimmune diseases in particular in chronic inflammatory demyelinating polyneuropathy (CIDP). The lack of predictive markers for IVIg responsiveness in CIDP avoids the early preservation of non-responding patients. Using semi-quantitative PCR and flow cytometry in the peripheral blood of patients with CIDP, we analysed the effects of IVIg on the NK cells and correlated changes with the IVIg reponsiveness. IVIg administrations induced a reduction in the expression of several typical NK cell genes. Flow cytometry data revealed that IVIg reduced the cytotoxic CD56dim NK cell population, while regulatory CD56bright NK cells remained almost unaffected or were even increased. Interestingly, the observed effects on NK cells almost exclusively occurred in IVIg responding CIDP patients. Correlation between changes in the NK cell population and treatment efficiency sugges ts a crucial role for NK cells in the immunomodulatory mechanism of IVIg. Further studies will investigate whether differences in the NK cell status of CIDP patients represent a reliable surrogate marker predicting the outcome of IVIg therapy.

Keywords: NK Cells, Chronic Inflammatory, Demyelinating Polyneuropathy

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