THE LIVER X RECEPTOR IS HIGHLY UPREGULATED IN MONOCYTE DERIVED MACROPHAGE AND POTENTIATES TLR-DRIVEN CYTOKINE RELEASE ACCORDING TO GENOTYPE OF -1830 T > C POLYMORPHISM

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Background and aims Liver X receptors (LXRs) are originally identified as ligand-dependent transcriptional activators and induce target genes involved in lipid metabolism. Also, LXRs have emerged as important regulators of inflammatory gene expression in several diseases. We previously reported that LXRα gene (NR1H3) promoter polymorphism (−1830 T > C) is associated with systemic lupus erythematosus (SLE) in Koreans. Therefore, we assessed cytokine expressions according to the LXRs polymorphism in monocyte-derived macrophages from SLE patients.

Methods Macrophages were obtained after 72 hour of culture of human monocytes (U937 and THP-1) supplemented with PMA (80 nM). Cells were transfected with LXRα promoter constructs. Supernatants were evaluated by enzyme-linked immunosorbent assay for proinflammatory cytokines. Also, peripheral blood mononuclear cells (PBMCs)-derived macrophages from SLE patients were evaluated for proinflammatory cytokines according to genotypes of LXRα −1830T>C.

Results The expression of LXRα is increased in human monocyte-derived macrophages. Proinflammatory cytokines, such as IL-1β and TNF-α decrease in expression of LXRα. Production of proinflammatory cytokines in cytokines are different according to expression of genotypes of LXRα −1830T>C. Especially, expression of LXRx is decreased and proinflammatory cytokines are increased in TC type of LXRα −1830T>C compared to TT type. These data are consistent in human PBMCs-derived macrophages from SLE patients according to genotypes. Increased expression of proinflammatory cytokines is related to TLR7 and TLR9 expression with LXRα.

Conclusions These data suggest that expression of LXRx according to genotypes of LXRα −1830T>C may contribute to the inflammatory response by induction of inflammatory cytokines in SLE.

A LIFE LIVED WITH LUPUS: AN INTEGRATIVE REVIEW OF THE LITERATURE

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Background and aims The many manifestations of Lupus can jeopardise aspects of daily living in those with the disease. The aim of this study was to synthesise findings of primary and secondary studies that had investigated the psychosocial impacts that living with Lupus has on people.

Methods Integrative review methodology assists extraction of data from primary research and other secondary studies, to enable new or conceptualisation of knowledge around a topic. A systematic process of searching CINHAL, Medline and other databases resulted in 91 papers that met the inclusion and critical appraisal criteria. Findings were qualitatively coded and narratively described.

Results The research revealed that people find that ‘Lupus is a scary disease’ and that living with the disease has ‘psychosocial impacts’. Three key features of the scary disease were: ‘it takes time to be diagnosed’, ‘living with the variations in clinical manifestations’ and ‘the uncertainty of where lupus may take their lives’. Living with the ‘psychosocial impacts of lupus’ revealed the categories: ‘living with physical dysfunction and daily impediments’, ‘living with physical dysfunction and daily impediments’, ‘dealing with stress, depression and anxiety’ and ‘impacts on personal and work relations and situations’.

Conclusions Synthesised findings about a life lived with lupus revealed the important features of ‘lupus as a scary disease’ and ‘psychosocial impacts of lupus’. This generation of concepts informs nurses other health professionals, and is likely to assist future provision of Lupus health education and person-centred care.