ABSTRACT

CORRELATION OF HUMAN CARTILAGE GLYCOPROTEIN-39 (YKL-40) SERUM LEVEL ALTERATION WITH WOMAC SCALE ALTERATION AFTER INTRAARTICULAR TRIAMCINOLONE INJECTION IN KNEE OSTEOARTRHITIS PATIENTS
(The Study at Outpatient of Neurology Departement Dr. Soetomo Teaching Hospital Surabaya)

Background: Knee Osteoarthritis (OA) is a degenerative disease characterized by gradually degradation of cartilage with pain, immobility, muscle weakness and reduced function and ability in daily life. YKL-40 has a protective role in inflammatory environment, degradation of extracellular matrix and control of tissue damage. YKL-40 production is part of the inflammatory response in articular chondrocytes. Intra-articular triamcinolone injection has efficacy to reduce pain and improve physical function Evaluation of therapeutic efficacy in osteoarthritis patients is principally based on the response of subjective rating scale measured with WOMAC scale to assess pain, joint stiffness and physical function capacity in patients with knee OA.
Objectives: The aim of this study was to analyze the effect of intra-articular triamcinolone injection on changes in YKL-40 serum level and WOMAC scale in patients with knee OA.
Method: This study was analytical observational prospectively, eglible patients with knee OA who will intra-articularly injected with triamcinolone. The data collected from July to August 2018. Blood samples were taken before and two weeks after intra-articular triamcinolone injection. YKL-40 serum level was measured with ELISA method, and analyzed by SPSS. Protocol of thi study was approved by Ethical Committee of Dr Soetomo Teaching Hospital Surabaya.
Result: A total of 19 patients were recruited. The mean YKL-40 serum level before injection 21,382±19,065 ng/ml and afer injection 13,272±9,641 ng/ml (p value = 0,033). The mean WOMAC scale before injection 53,58±15,374 and after injection 41,79±11,502 (p value = 0,001). Correlation of YKL-40 serum level alteration with WOMAC scale alteration resulted in statistically is not significant (p value = 0,744).
Conclusion: The results showed thah the administration of intra-articular triamcinolone injection in patients with knee OA can reduce serum YKL-40 level and WOMAC scale, but there no correlation between changes in YKL-40 serum levels and WOMAC scale.

Keyword: Knee Osteoarthritis, Triamcinolone, YKL-40.