

## Role of Interlukin-18 in Primary Knee Osteoarthritis: Clinical, Laboratory and Radiological Study

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**Abstract :** Osteoarthritis (OA) is a multifactorial disease characterized by a progressive degradation of articular cartilage and is the leading cause of disability in elderly persons. IL-18 contributes to the destruction of cartilage and bone in the disease process of arthritis. The aim of the study was to investigate the role of IL-18 in primary knee OA patients. Serum level of IL-18 was assessed by enzyme-linked immunosorbent assay in 30 primary knee OA patients and compared to 20 age and gender-matched healthy volunteers as a control group. Radiographic severity of OA was assessed by Kellgren and Lawrence (KL) global scale. Pain, stiffness and functional assessment were done using Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC). OA patients had significantly higher serum IL-18 level than in control group ( $420.93 \pm 345.4$  versus  $151.03 \pm 144.16$  pg/ml,  $P=0.001$ ). Serum level of IL-18 was positively correlated with KL global scale ( $P=0.001$ ). There were no statistically significant correlations between serum level of IL-18 and pain, stiffness, function subscales and total WOMAC index scores among the studied patients. In conclusions, IL-18 has a role in the pathogenesis of OA and it is positively correlated with the radiographic damage of OA.

**Keywords :** Interlukin-18, knee osteoarthritis, primary osteoarthritis, WOMAC scale

**Conference Title :** ICOR 2016 : International Conference on Orthopedics and Rheumatology

**Conference Location :** Singapore, Singapore

**Conference Dates :** March 03-04, 2016