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# Lymphocytes subsets in osteoarthritis versus rheumatoid arthritis

**Ola Leheita [1], Nahed Y Abed Elrazek, Soha Younes, Amany Zakareya Mahmoud**

Department of Clinical Pathology, Faculty of Medicine, Suez Canal University, Ismailia, Egypt.

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**It has been suggested that osteoarthritis (OA) is induced by mechanical stress manifested by cartilage destruction with no or minimal involvement of the immune response as compared to that in rheumatoid arthritis (RA). This study is a trial to investigate the hypothesis that the immune response has a critical role in the pathogenesis of OA. This work was performed on 2 groups of patients: the first group included 20 primary OA knee patients and the second group included 18 RA patients as autoimmune controls. Patients of both groups were diagnosed according to the revised criteria of the American college of Rheumatology (ACR). All patients were subjected to complete history taking, clinical examination, degree of severity of OA, disease activity for RA patients and routine laboratory assays. Radiological examinations were done for the wrists, hands and both knees for both RA and OA patients. Flow cytometric assessment of T cell (T helper, T cytotoxic), B cell, Natural killer cells and the CD4/CD8 ratio in the peripheral blood (PB) was carried out for both groups. The results of this study showed no statistical difference between the two studied groups regarding the percentages of the different lymphocyte subsets. These findings reflect the similarity of immune cell profile in both RA and OA patients, and raised the possibility that abnormalities in T cell and its subsets may contribute to the pathogenesis of OA, and predispose to chronic progressive immune response in the synovial membrane (SM) with cartilage destruction. Targeting the cascade that leads to abnormal immune response may open new avenues for treating OA.**