

## **Plasma and synovial fluid adipocytokines in patients with rheumatoid arthritis and osteoarthritis**

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Adipocytokines are hormone and cytokine like substances produced mainly from white adipose tissue. A relation between plasma adipocytokines and many inflammatory disorders including rheumatoid arthritis (RA) had been investigated. This work was done to investigate the systemic behavior of the main adipocytokines at the plasma level as well as its local behavior at the synovial fluid level in patients with RA and osteoarthritis (OA). The study had been conducted on 32 patients with RA and 18 patients with OA. Paired blood and synovial fluid samples had been collected from all patients and level of plasma and synovial fluid (SF) leptin, adiponectin and resistin had been quantitated by enzyme linked immunosorbent assay (ELISA). Results had been compared between RA group and OA group. Adipocytokines had also been compared in patients with erosive and non-erosive disease and had been related to clinical and laboratory markers of activity. Plasma resistin and BMI-corrected plasma leptin were significantly higher in RA group. Female patients showed significantly higher plasma leptin, even after correction to BMI. Studied SF adipocytokines were significantly higher in RA group and correlated positively with synovial fluid WBCs. Comparing plasma and SF results showed a significant increase in SF resistin especially in RA group and a significant drop of SF adiponectin especially in OA group. In conclusion, Adipocytokines are probably involved in inflammatory and degenerative articular disease. The different behavior between plasma and SF would suggest a pro-inflammatory role for resistin and chondro-protective role for adiponectin.