

Evaluation of tumor necrosis factor alpha production in ex vivo short term cultured whole blood from women with polycystic ovary syndrome

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In mammals, the pleiotropic biological functions of tumor necrosis factor alpha (TNF- α) may include important effects on human reproductive physiology. Thus, chronic anovulation, oligo or amenorrhea, infertility, hyperandrogenism, obesity, insulin resistance and increased TNF- α serum levels have been observed in women affected by polycystic ovary syndrome (PCOS). Whole blood short - term cell cultures (WBSC) are simple systems where the capacity to produce TNF- α by circulating leukocytes, mainly of the macrophage/monocyte lineage, can be accurately quantified. Given the relevance of monocytes/macrophages in the production of TNF- α , in this study, in a control-case approach, WBSC from women with PCOS were analyzed in their basal and lipopolysaccharide (LPS)- stimulated capacity to produce the cytokine. These measurements did not correlate with the increased serum levels of the cytokine and the normal levels of cortisol, found in PCOS women. Increased serum TNF- α levels in PCOS women correl