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TITLE

LOW-DOSE SKA PREPARATION OF PROGESTERON AND INTERLEUKIN-10 IS EFFECTIVE IN THE MODULATION OF THE INFLAMMATORY RESPONSE IN AN IN VITRO MODEL OF ENDOMETRIOSIS

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ABSTRACT

Context: The oral use of low-dose SKA of Anti-IL-1 antibodies and Interleukin-10 is effective in the modulation of the inflammatory response in models of diseases presenting an important inflammatory component.

Objective: The aim of this pre-clinical study was evaluate the efficacy of low-dose SKA Progesterone (GUNA) and low-dose SKA IL-10 (GUNA) in the modulation of the inflammatory response in endometriotic cell lines.

Methods: Immortalized human endometriotic epithelial (Z-12) cells were derived from peritoneal lesions. For Western blot, cells were lysed in RIPA buffer supplemented with a cocktail of protease inhibitors (Boehringer). Nuclear and cytoplasmic fractions were prepared as follows: Cells were resuspended in hypotonic lysis buffer added with protease inhibitors (Boehringer). After resuspension, NP-40 was added to a final concentration of 0.6% and the nuclei was isolated by centrifugation. NfkB Transcription factor Assay was performed according to manufacturer's instruction (Abcam).

Interventions: Z12 cells were treated with low-dose SKA progesterone (10pg/ml) and with low dose SKA IL-10 (10 fg/ml).

Results: Treatment with low-dose SKA progesterone significantly decreased estradiol 17?-dehydrogenase1 (HSD17B1) protein expression (about 20% of reduction).

Importantly, was observed a significant reduction (about 15-20%) in the levels of nuclear translocation of NF-kB determined by nuclear-cytoplasmic fractionation and NFkB DNA binding assay.

Treating the Z12 cell line with low dose SKA IL-10 resulted in a significant reduction (about 15%) in the levels of nuclear translocation of NF-kB.

Conclusions: These results clearly demonstrate the role of treatment with low-dose SKA Progesterone and SKA IL-10 in modulating the NF-kB inflammatory pathway in endometriosis.

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