POSTERS

INDUCTION OF ACTIVATION MARKERS ON ENDOMETRIOSIS VESICLES.

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RESUMEN

INTRODUCTION: Rat Wistar has been used as a model to study endometriosis. It has not been well described the alterations on immune system associated to the endometriosis. In our experience, treatment with recombinant IL-2 has a clinical benefit on women with endometriosis. The aim of this study is know the effect of IL-2r on implantation and development of ectopic endometrium.

MATERIAL AND METHODS: Fifty Wistar rats were divided into four groups: a) no endometriosis; b) no endometriosis treated with intraperitoneal IL-2r; c) induced endometriosis; d) induced endometriosis treated with IL-2r. After 30 days, the rats were put on sleep and endometriotic vesicles were obtained. The tissue samples were sectioned and analysed by immunohistochemical staining with monoclonal antibodies.

RESULTS: We have observed an expression of CD25+, CD29+, CD80+, activated macrophages and dendritic cells on endometriotic vesicles from rats treated with IL-2r.

CONCLUSION: Treatment with IL-2r on experimental endometriosis induces the presence of activated cells in local lesion. That could explain an elevated production of proinflammatory cytokines observed in women with endometriosis.

Palabras clave: endometriosis | IL-2

IMÁGENES

Figure 1. Expression of activation markers on peritoneal wash and peripheral blood from rats with induced endometriosis.

Figura 1

Figure 2. Antigenic expression on endometriotic vesicles: A) CD29, B) CD25, C) CD80, D) NK, E) Dendritic cells, F) Activated macrophages. These cells were not present on eutopic endometrium.

Figura 2

INTRODUCCIÓN

Endometriosis is classically defined as the growth of endometrial cells at sites outside the uterus. To explain the pathophysiology of endometriosis, abnormalities of peritoneal macrophages, and cellular and humoral elements in peritoneal fluid have been proposed, as well as a decreased NK activity. Cytokines are primary components of intercellular signalling between uterine epithelial and stromal cells, leukocytes, and the developing concepts. IL-6, IL-8 and IFN-? well-placed to play a key role in the extensive tissue remodelling required to accommodate menstruation, implantation and pregnancy. In humans, treatment with interleukins seems to exercise a beneficial effect.

Rat Wistar is a good experimental model to study of endometriosis, but this animal does not present peritoneal fluid. The present study is an approach to analyse the implications of linfoid cells, monocytes and dendritic cells on endometriotic implants.

MATERIAL Y MÉTODOS

ANIMALS. Fifty virgin non-consanguineous female Wistar rats were used. A vaginal smear test was performed to check the oestrus cycle in all rats before use in the experiment. Endometriosis was induced on thirty of them. Twenty of them were used as control of suture.

INDUCTION OF ENDOMETRIOSIS. At the age of 3 months, experimental endometriosis was induced at the prooestrous stage of the oestrus cycle by autotransplantation of endometrium. After laparotomy under anaesthesia with sodium pentobarbital (50 mg/kg i.p.), the left uterine horn was resected, and the endometrium was dissected from the myometrium. Then a 5x5 mm fragment of endometrial tissue was transplanted to a peritoneal vall of the same animal. One month later, a second laparotomy was done to determine the viability of the endometrial implant from the accumulation of fluid. Animals with implants were used in the study.

TREATMENT WITH IL-2. Rats with experimental endometriosis were randomly divided in two groups: placebo and treated with IL-2 (600.000 I.U.) pleased intravesicle at second laparatomy. Rats without endometriosis were randomly divided into three groups: no induction, placebo, and treated with IL- 2 pleased intravesicle at second laparatomy.

HISTOLOGIC ANALYSIS. Each implant was excised and preserved for histologic evaluation.

SAMPLES. The peritoneal wash fluid was obtained by injection and aspiration of 1 mL of physiological serum, previous at induction of the endometriosis and at slaughter. The endometriotic vesicles and peripheral blood were obtained at slaughter.

ANALYSIS OF LEUCOCYTES IN PERITONEAL WASH AND IN PERIPHERAL BLOOD. Cells present in peritoneal wash and in peripheral blood were analysed by flow cytometry (FACS Vantage) using monoclonal antibodies: CD25 (OX-39 PE), CD29 (Ha2/5 FITC), CD80 (B7-1 PE), NK (NKR-P1A FITC), Activated macrophages (RMA) and Dendritic cells (OX-62).

ANALYSIS OF LEUCOCYTES IN ENDOMETRIOTIC VESICLES. The endometriotic vesicles were cryopreserved and cut by cryostat on sections of 5 ?m. Slides were dyed with CD25 (OX-39), CD29 (Ha2/5), CD80 (B7-1), NK (NKR-P1A), Activated macrophages (RMA) and Dendritic cells (OX-62), and visualised with a microscope (ZEISS) with image processor MATROX INTELLICAM 2.0.

RESULTADOS

On peritoneal wash the activated T lymphocytes increased after both treatments. Activated B lymphocytes decreased in all conditions. NK cells, dendritic cells and activated macrophages increased specially on endometriosis treated with IL-2.

On peripheral blood of rats treated with IL-2 showed an increase of dendritic cells and activated macrophages.

Histological analysis of endometriosic vesicles showed increased expression of activated cells.

CONCLUSIONES

In endometriosic vesicles was observed that: activated T lymphocytes and NK cells were presents on basal membrane; B lymphocytes were present on ectopic endometrial tisue, and activated macrophages were accumulated on adyacent places of basal membrane.

2. The treatment with IL-2, dendritic cells and macrophages in periferal blood of patients with endometriosis.

3. The treatment with IL-2 estimulates T lymphocytes, NK cells, dendritic cells and macrophages presents on peritoneal

NOTAS AL PIE DE PÁGINA:

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