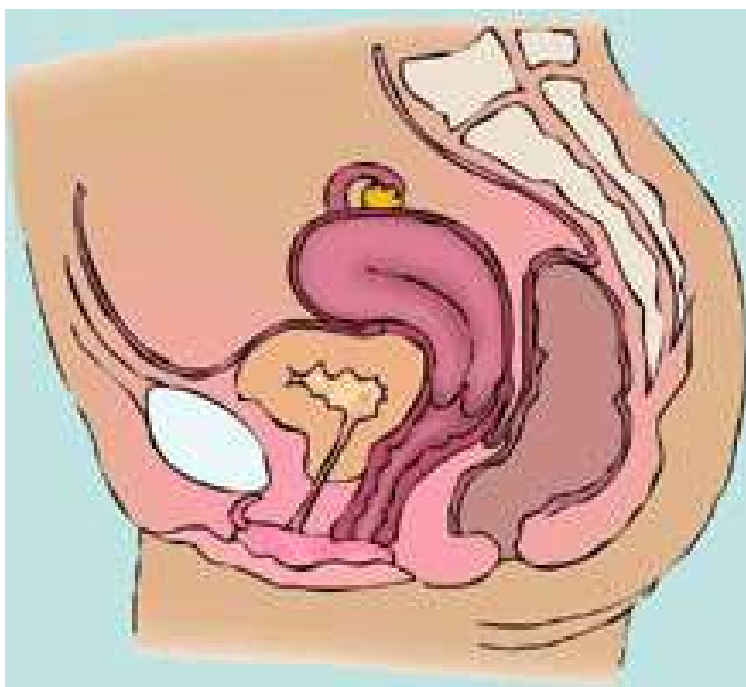


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Which is the cause of female sterility?



A researchers team of the UAB Biomedicine and Biotechnology Institute's Immunology Unity and some european researchers have published an important book about this subject. According to their research, a transformation in proteins' function can cause circulating autoantibodies presence that block some reproductive process.

There are many evidences in favor of how the establishment of a chronic inflammatory response, together with an oxidative environment, plays a very important role in the development of different human diseases. In the female reproductive system, pathologies like endometriosis, polycystic ovary syndrome, obstructions of the Fallopian tubes, preeclampsia and recurrent abortions have been related to the presence of inflammatory cytokines (TNF- α , IFN- γ , IL-1) and to high levels of free radicals that damage biological molecules such as lipids, proteins or DNA. Lipid peroxidation generates metabolites, like the malondialdehyde, acetaldehyde or hidroxinonenal wich are able to modify oxidatively proteins, fact that can also alter its function. These modifications may also cause changes in their immunogenicity generating an autoimmune response against modified autoantigens. The presence of specific circulating autoantibodies to these antigens may block different reproductive processes such as sperm capacitation, fertilization and embryo implantation in the endometrium.

The members of the research team have wide expertise in the research of female sterility related to autoimmune response and participate in an European network, EMBIC. EMBIC is the acronym of the EMBryo Implantation Control and it is an European network of excellence financed partially by the European Commission through the Sixth Framework Program. In this network, researchers in reproduction from 18 different institutions, have developed the investigation on the molecular and cellular mechanisms on embryo implantation in the maternal uterus.

The objectives and results of this project are available in the Internet address <http://www.embic.org>.

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