

Abstract

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Female infertility and free radicals: potential role in adhesions and endometriosis.

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BACKGROUND: Free radicals are highly reactive molecules produced in the cell either as part of, or as end-products of, biochemical reactions that have crucial roles in the homeostasis of the organism. Thus, excess production or impaired elimination of free radicals leads to increased oxidative stress, which has been implicated in the development of several different disease states, including hypoxia-reperfusion injury, cancer, and aging. **Peritoneal adhesions and endometriosis** are relatively commonly identified in women, and are known to be associated with infertility without clearly understood pathophysiology.

DISCUSSION: The prevention and treatment strategies of these conditions, both of which have tremendous propensity to recur, have not been completely established. **The development of both disorders has been shown to be closely related to the presence of increased oxidative stress in the tissues.** In this article, we review this relationship with reference to the mechanistic steps involved and their regulation.

CONCLUSION: As our knowledge of both conditions expands, we believe there will be opportunities for specific steps to intervention in free radical metabolism to reduce and/or prevent further development of endometriosis and adhesions.

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