

Benign ovarian tumors: Does human beta defensin-2 and oxidative stress act a putative role in its pathogenesis?

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Benign ovarian tumor is a collection of abnormal cells or tissues originating within the ovary. Majority of ovarian masses are benign (80%), there are different types of benign tumors, which may have different causes. Some benign tumors may turn malignant; there is no known cause for the abnormal cell development associated with neoplasm formation.

The present study was conducted to investigate the role of human beta defensin-2 (hBD-2), and oxidative stress (OS) in the pathogenesis of benign ovarian tumors (BOTs).

Serum (hBD-2) and oxidative stress parameters such as superoxide dismutase (SOD), catalase (CAT), reduced glutathione (GSH), lipid peroxidation (MDA), and total antioxidant capacity (TAC) were estimated in the circulation of 44 benign ovarian tumor patients and 15 age-matched normal subjects as control.

A significant lower level of hBD-2 and antioxidant parameters CAT, GSH and TAC were observed in BOTs. On the other hand, significantly increased MDA levels and no change in SOD level were detected in benign ovarian tumors compared with normal subjects.

Conclusion: The results would suggest that lower hBD-2 as well as antioxidant defense may be putative factors in the pathogenesis of benign ovarian tumors.

Keywords: Benign ovarian tumors, hBD-2, Oxidative stress, Antioxidants, Malondialdehyde (MDA).

Biography

A. F. Abdel-Aziz received a B.Sc. in chemistry from the University of Mansoura. He then completed his Ph.D. from Mansoura University. Currently he is professor of biochemistry, Science Faculty and the director of Mansoura University Development Center. He has published more than 35 papers in reputed journals.

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