Cytosolic estrogen and progesterone receptor content in the endometriotic tissues and endometrium in women with and without endometriosis

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Abstrak

Guna memperoleh profil reseptor estrogen dan progesteron sitosol baik di dalam jaringan endometriosis maupun endometrium pada pasien dengan atau tanpa endometriosis dilakukan suatu kajian iris-silang yang melibatkan 43 wanita infertil. Ini terdiri dari 31 (72,09%) kasus endometriosis dan 12 (27,91%) kasus nir-endometriosis; umur rerata masing-masing 32 ± 4 tahun dan 32 ± 3 tahun, dengan rerata panjang siklus haid masing-masing 31 ± 8 hari dan 29 ± 1 hari. Jaringan endometriosis diperoleh dengan eksisi selama tindakan laparoskopi operatif, sementara endometrium diperoleh dengan biopsi menyusul tindakan histeroskopi. Tindakan ini dilaksanakan dalam kurun periovulasi (Hari 13-18 siklus haid). Kandungan reseptor steroid seks dalam sitosol diukur secara kuantitatif menggunakan cara tera imunoenzimatik, dan dihitung sebagai reseptor steroid seks/protein sitosol (fmol/ml sitosol). Ditemukan bahwa konsentrasi rerata reseptor estrogen sitosol dalam jaringan terkait adalah: 512.99 fmol/ml di ovarium endometriotik dibandingkan dengan 2369.17 fmol/ml di ovarium normal, dan 601.02 fmol/ml di peritoneum endometriotik dibandingkan dengan 9607.61 fmol/ml di peritoneum normal, serta masing-masing 99.28 fmol/ml dan 608.33 fmol/ml di endometrium wanita dengan dan tanpa endometriosis. Konsentrasi rerata reseptor progesteron sitosol yang ditemukan di masing-masing jaringan adalah 50.64 fmol/ml di ovarium endometriotik dibandingkan 6496.42 fmol/ml di ovarium normal dan 1631.40 fmol/ml di peritoneum endometriotik dibandingkan 12466.99 fmol/ml di peritoneum normal, serta masing-masing 21.26 fmol/ml dan 599.61 fmol/ml di endometrium wanita dengan dan tanpa endometriosis. Tidak terdapat perbedaan bermakna pada konsentrasi reseptor antara masing-masing jaringan menurut asal to-pografiknya. Namun demikian, hasil ini dapat memperkirakan bahwa daya-tanggap terhadap penanganan hormonal pada kasus-kasus endometriosis akan bergantung pada kandungan reseptor steroid seks sitosol pada jaringan yang sakit, dan lesi-lesi peritoneal mungkin akan memberikan tanggapan yang lebih baik daripada yang di sisi lain. Diperlukan uji klinis lebih lanjut. (Med J Indones 2005; 14: 133-41)

<hr><i>In order to have a profile of cytosolic estrogen and progesterone receptors in either endometriotic tissue or endometrium in patients with and without endometriosis a cross-sectional study was performed involving 43 infertile women. They consisted of 31 (72.09%) en-dometriosis and 12 (27.91%) non-endometriosis cases; their average age was 32 ± 4 years and 32 ± 3 years respectively, with the ave-rage length of menstrual cycle 31 ± 8 days and 29 ± 1 days respectively. The endometriotic tissue was obtained by excision during ope-rative laparoscopy procedure, while the endometrium was obtained by biopsy following hysteroscopy procedure. These procedures were conducted within the periovulatory period (on Day 13-18 of the cycle). The sex steroid receptor content in the cytosol was measured quantitatively using enzyme-immunoassay method, and calculated as sex steroid receptor/cytosol protein (fmol/ml cytosol). It was found that the average cytosolic estrogen receptor concentration in the respective tissues were 512.99 fmol/ml in the endometriotic ovary compared with 2369.17 in normal ovary and 632.18 fmol/ml in the endometriotic peritoneum compared with 9607.61 fmol/ml in normal peritoneum; while 99.28 fmol/ml and

608.33 fmol/ml in the endometrium of women with endometriosis and those without endometriosis respectively. The average cytosolic progesterone receptor concentration found in the respective tissues were 50.64 fmol/ml in the endometriotic ovary compared with 6469.42 fmol/ml in normal ovary and 1631.40 fmol/ml in endometriotic peritoneum compared with 12466.99 in normal peritoneum, while 21.26 fmol/ml and 599.61fmol/ml in the endometrium of women with endometriosis and those without endometriosis respectively. There is no significant difference in the receptor concentration between each tissue according to its topographic origin. However, this result may assume that the responsivity on hormonal treatment in endometriosis cases will depend on the cytosolic sex steroid receptor content in the sick tissues, and the peritoneal lesions will possibly give better response than those in other sites. A further clinical trial is necessary. (Med J Indones 2005; 14: 133-41)</i>