Ekspresi reseptor GnRH dan Caspase-3 dari sel endometrium macaca nemestrina fase luteal akibat pengaruh stimulasi ovarium terkendali = Expression of GnRH receptor and caspase-3 in luteal phase endometrial cells of macaca nemestrina after controlled ovarian stimulation

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Abstrak

GnRH digunakan dalam program fertilisasi in vitro (FIV) sebagai salah satu regimen stimulasi ovarium. Agonis GnRH memiliki efek langsung maupun tidak langsung terhadap perkembangan endometrium terutama saat fase implantasi. Penggunaan agonis GnRH dapat berefek negatif terhadap perkembangan endometrium setelah pemberian stimulasi ovarium terhadap ekspresi reseptor dan apoptosis sel endometrium. Tujuan dari penelitian ini adalah menganalisis dampak pemberian agonis GnRH terhadap ekspresi reseptor GnRH dan protein apoptosis sel-sel endometrium fase luteal terhadap perkembangan endometrium. Sampel dari penelitian ini menggunakan bahan biologi tersimpan berupa serum dan jaringan endometrium Macaca nemestrina. Total sampel ada 8 yang terbagi atas 2 kelompok, Stimulasi dan Kontrol. Setiap sampel dilakukan 2 pemeriksaan yaitu Enzym-Linked Immunosorebent Assay (ELISA) untuk serum dan Imunohistokimia (IHK) untuk jaringan endometrium. Jaringan IHK diperiksa dengan 2 jenis antibody, reseptor GnRH dan Caspase 3. Consentrasi diukur menggunakan ELISA reader lalu dikonversi dengan Optical Density (OD) menggunakan software SoftMax Pro. Sel pada jaringan IHK dihitung secara kuantitatif berdasarkan pewarnaan menggunakan software ImageJ lalu dinilai menggunakan IHC Optical Density Score. Tidak ada perbedaan signifikan pada serum GnRH, Reseptor GnRH, dan Caspse 3 diantara kedua kelompok (p> 0,05). Terdapat korelasi negatif pada serum GnRH dengan reseptor GnRH (p=0,014; r=-0,762). Tidak terdapat korelasi antara serum GnRH dengan caspase 3 (p>0,05). Tidak ada korelasi antara reseptor GnRH dengan caspase 3 (p>0,05).

.....GnRH is widely used in the embryo fertilization program as one of the ovarian stimulation regimens. At the implantation window, GnRH agonists are known to have an effect on the endometrium directly or indirectly. GnRH estimated has a negative effect on the development of endometrial cells after ovarian stimulation. This study is to analyze the impact of GnRH agonist on ovarian stimulation procedures on receptor expression and endometrial cell apoptosis due to endometrial development. The study sample was a stored biological material (BBT) from serum and the endometrial tissue of Macaca nemestrina. The total sample is 8 and divided into 2 groups, the stimulated and control groups. Each sample will be examined 2 types which are the enzyme-linked immunosorbent assay (ELISA) for serum and immunohistochemistry (IHC) for endometrial tissue. IHC was performed with anti-GnRH receptor and caspase 3 antibody. Serum concentration is measured using an ELISA reader and then converts to a concentration using SoftMax Pro Software. Quantitative data of IHC were performed using the Image-J Analyzer programs and scored by IHC Optical Density Score. There is no significant difference between GnRH serum, GnRH receptors, and Caspase 3 in stimulation or control group (p>0,05). There was a strong negative correlation between serum GnRH levels and GnRH receptors (p=0,14; r=-0,762). There was no correlation between GnRH in serum with activation of caspase 3 (p>0,05). There was no correlation between GnRH receptors with activation of caspase 3 (p>0,05).