INTISARI

PENGARUH OVARIEKTOMI TERHADAP KADAR PROGESTERON DAN ESTROGEN PADA MONYET EKOR PANJANG (*Macaca fascicularis)* SEBAGAI HEWAN MODEL MENOPAUSE

Annisa Devi Rachmawati

Menopause merupakan suatu keadaan alami berupa berhentinya siklus menstruasi pada wanita secara permanen. Penelitian ini bertujuan untuk mendapatkan hewan model menopause dengan mengukur kadar hormon progesteron dan estrogen dalam serum darah *Macaca fascicularis* betina. Penelitian menggunakan 2 ekor *Macaca fascicularis* betina yang kemudian diovariektomi dan dilakukan pengambilan darah sebanyak 5 kali dalam kurun waktu 7 bulan. Sampel darah yang didapatkan kemudian diambil serumnya dan diolah menggunakan metode ELISA sehingga diperoleh hasil rata-rata kadar hormon progesteron pada pengambilan ke- 1, 2, 3, 4, 5 adalah sebanyak 0,67±0,08 ng/mL , 1,88±2,20 ng/mL , 1,56±1,89 ng/mL, 3,29±3,82 ng/mL, 1,67±1,50 ng/mL. Analisa kadar hormon estrogen pada pengambilan ke- 1, 2, 3, 4, 5 adalah sebanyak 171,79±176,35 pg/mL, 168,77±39,03 pg/mL, 22,29 pg/mL, 126,29±109,29 pg/mL, 23,38 pg/mL. Berdasarkan hasil pengukuran tersebut menunjukkan bahwa terjadi fluktuasi kadar hormon progesteron dan estrogen yang menandakan mulai masuknya hewan ke tahapan sebelum postmenopause (pramenopause atau perimenopause). Melihat dari gambaran hormonal tersebut dapat dikatakan bahwa ovariektomi pada *Macaca fascicularis* betina dapat digunakan sebagai metode artifisial menopause dan menjadikannya sebagai hewan model menopause bagi manusia dengan waktu tunggu pascaovariektomi lebih dari 7 bulan.

Kata kunci : Menopause, *Macaca fascicularis*, ovariektomi, progesteron, estrogen

ABSTRACT

THE EFFECT OF OVARIECTOMY TO THE LEVEL OF PROGESTERONE AND OESTROGEN OF LONG TAILED MACAQUE (*Macaca fascicularis*) AS AN ANIMAL MODEL FOR MENOPAUSE

Annisa Devi Rachmawati

Menopause is a normal phenomenon that happens in woman which characterized by the cessation of menstrual cycle permanently. The purpose of this research is to find the proper animal model for menopause by measuring levels of progesterone and oestrogen within the serum of adult female ovariectomized *Macaca fascicularis*. Two female *Macaca fascicularis* were used in this research. Two adult female Macaca fascicularis were ovariectomized and had their blood taken for five times in 7 months period. The serum of blood then taken and examide using Enzyme-Linked Immunosorbent Assay (ELISA) to obtain the average levels of progesterone and oestrogen. Average levels of measured progesterone were 0.67±0.08 ng/mL , 1.88±2.20 ng/mL , 1.56±1.89 ng/mL, 3.29±3.82 ng/mL, 1.67±1.50 ng/mL. Average levels of measured oestrogen were 171.79±176.35 pg/mL, 168.77±39.03 pg/mL, 22.29 pg/mL, 126.29±109.29 pg/mL, 23.38 pg/mL. The fluctuative result show that the animals were in postmenopousal phase (premenopausal or perimenopausal). Thus, ovariectomy method can be used as a methode to manipulate hormonal status of adult female *Macaca fascicularis* to make it possible to used as animal model for human menopause with waiting time more than 7 months pascaovariectomy.

Keywords: Menopause, *Macaca fascicularis*, ovariectomy, progesteron, oestrogen