

INTISARI

Tanaman Pacing (*Costus speciosus* (Koen) J.E. Smith) telah dikenal dan digunakan sebagai obat kontrasepsi tradisional. Ekstrak herba pacing (EHP) telah diteliti sebagai antifertilitas berdasarkan pengaruhnya pada jumlah dan motilitas spermatozoa, kadar testosteron, hingga viabilitas serta morfologi sperma. Namun, belum dilakukan penelitian uji pengaruh EHP terhadap kolesterol yang merupakan prekursor testosteron untuk dapat diketahui apakah EHP bersifat hormonal atau non-hormonal. Penelitian ini bertujuan untuk menguji pengaruh EHP terhadap fungsi organ secara umum yang digambarkan dengan purata kenaikan berat badan per hari (PKBP) dan berat organ reproduksi (hepar, testis, epididimis, vesikula seminalis, kelenjar prostat), serta kadar kolesterol darah, hepar juga organ reproduksi.

Penelitian dilakukan secara *in vivo* menggunakan tikus jantan galur *Wistar* yang berumur 1,5 bulan sejumlah 25 ekor tikus yang terdiri dari kelompok kontrol negatif (pelarut Na-CMC 0,5%), kontrol positif (*testosterone undecanoate* 2,16 mg/kgBB), EHP dosis 137,5; 275; dan 550 mg/kgBB. Perlakuan diberikan per oral selama 15 hari. Tikus dikorbankan untuk diambil hepar dan organ reproduksi (testis, epididimis, vesikula seminalis, dan kelenjar prostat). Darah diambil sesaat sebelum perlakuan sebagai *baseline* dan sebelum dikorbankan. Kolesterol organ diisolasi dengan metode ekstraksi cari-cair. Kadar kolesterol diukur dengan *Cholesterol assay kit* metode *Cholesterol Oxidase-Peroxidase Aminoantipyrine Phenol* (CHOD-PAP). Data kolesterol hasil pengukuran spektrofotometer *microlab 300* diolah secara statistika. Berat organ hepar, testis, vesikula seminalis, kelenjar prostat, serta kadar kolesterol darah dan organ testis dianalisis secara parametrik dengan uji ANOVA. PKBP, berat organ epididimis dan kadar kolesterol hepar, epididimis, vesikula seminalis, kelenjar prostat, dianalisis secara non-parametrik dengan uji Kruskal-Wallis.

Hasil penelitian disimpulkan terjadi peningkatan signifikan PKBP setelah pemberian EHP dosis 137,5 dan 550 mg/kgBB. Pemberian EHP selama 15 hari pada dosis 275 mg/kgBB tidak berpengaruh pada PKBP, dan ketiga tingkat dosis (137,5; 275; dan 550 mg/kgBB) tidak mempengaruhi berat dan kadar kolesterol darah, hepar dan organ reproduksi (testis, epididimis, vesikula seminalis, kelenjar prostat).

Kata kunci: ekstrak herba pacing, kadar kolesterol, organ reproduksi

ABSTRACT

Pacing (*Costus speciosus* (Koen) J.E. Smith) has been known and used as traditional contraception. Herb Pacing Extract (HPE) has been investigated as antifertility based on quantity and motility of spermatozoa, testosterone value to viability and morphology of sperm. However, there is none research on effect HPE test to cholesterol which is the precursor of testosterone to be known whether HPE is hormonal or non-hormonal. This study aimed to examine the effect of HPE on organ function generally that described by the mean weight gain per day (MWGD), weight of liver and reproduction organ (testes, epididymis, seminal vesicle, prostate gland), and blood cholesterol levels, liver also reproduction organ.

The study was conducted in vivo using Wistar male rat, aged 1,5 months, a number of 25 rats consisting of negative control group (solvent Na-CMC 0,5%), positive control (testosterone undecanoate 2,16 mg/kgBW), HPE dose of 137,5; 275; and 550 mg/kgBW. Treatment was administered orally for 15 days. Rats were sacrificed to take the liver and reproduction organ (testes, epididymis, seminal vesicle, and gland prostate). The blood was taken just before the treatment as baseline and before sacrificed. Organ cholesterol was isolated with liquid-liquid extraction method. Cholesterol levels were measured by Cholesterol assay kit with Cholesterol Oxidase-Peroxidase Aminoantipyrine Phenol (CHOD-PAP) method. Cholesterol data from microlab 300 spectrophotometer measurement were processed statistically. Weight organs of liver, testes, seminal vesicle, prostate gland, as well as blood cholesterol levels and testes parametric analyzed by ANOVA. MWGD, organ weight of epididymis and cholesterol levels of liver, epididymis, seminal vesicle, prostate gland were analyzed by non-parametric used Kruskal-Wallis.

The results were concluded that there was significant increase of MWGD after administration of HPE dose 137,5 and 550 mg/kgBW. Administration of HPE dose 275 mg/kgBW for 15 days was not have significant effect on MWGD, three of dose (135,5; 275; and 550 mg/kgBW) did not affected the weight and blood cholesterol levels, liver and reproduction organ (testes, epididymis, seminal vesicle, prostate gland).

Keyword: herb pacing extract, cholesterol levels, reproduction organ