Penyuntikan ekstrak biji carica papaya L. varietas Cibinong pada macaca fascicularis L. dan kualitas spermatozoa serta kadar hormon testosteron = Injection of carica papaya L. seed extract of Cibinong variety to macaca fascicularis L. and its effect to quality of spermatozoa and level of testosterone hormone

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Abstrak

Faktor penyebab kurangnya keikutsertaan pria dalam kontrasepsi antara lain adalah kurangnya pilihan jenis kontrasepsi pria yang memenuhi persyaratan. Penelitian ini bertujuan mengkaji efektivitas bahan alam untuk alternatif alat kontrasepsi pria, yaitu dengan penyuntikan ekstrak biji papaya (Carica papaya L.) varietas Cibinong pada monyet ekor panjang (Macaca fascicularis L.).

Penelitian dilakukan di Pusat Studi Satwa Primata Institut Pertanian Bogor dengan jumlah sampel 8 monyet, dibagi dalam 3 kelompok perlakuan dan 1 kelompok kontrol. Penyuntikan ekstrak biji papaya secara intramuskular dilakukan selama 21 hari dengan dosis 40 mg/monyet, 80 mg/monyet, dan 120 mg/monyet. Analisis data kualitas spermatozoa (motilitas, viabilitas, bentuk) sebelum, setelah intervensi, dan pemulihan dilakukan menggunakan uji Cochran, sedangkan untuk data konsentrasi spermatozoa dan kadar hormon testosteron dianalisis menggunakan uji Friedman.

Hasil menunjukkan terjadi penurunan motilitas, viabilitas, dan bentuk spermatozoa setelah penyuntikan ekstrak biji papaya dan meningkat ke arah normal pada tahap pemulihan (p = 0,05). Hasil ini didukung dengan terjadinya aglutinasi semen. Penyuntikan ekstrak biji papaya secara intramuskular yang paling efektif adalah dosis 40 mg/monyet/hari yang dapat menurunkan motilitas spermatozoa dari 87,5% menjadi 40% dan menurunkan kadar hormon testosteron dari 2,35 ng/mL menjadi 1,83 ng/mL. Meskipun menurun, kadar hormon testosteron tersebut masih dikategorikan baik.
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Lack of contraceptive choices which meet the requirements is one of the contributing factors to less participation of man in contraceptive use. This research aimed to study the effectiveness of natural material for alternative male contraception, by injecting papaya seed extract with Cibinong variety (Carica papaya L.) to long tail monkey (Macaca fascicularis L).

The research was conducted at Primates Study Center, Institute of Agriculture, Bogor. Total samples of this research were 8 monkeys, with three intervention groups and one control group. Papaya seed extract was injected via intramuscular in 21 days, with dose for each group were 40 mg/monkey, 80 mg/monkey, and 120 mg/monkey. Data analysis of spermatozoa quality (motility, viability, morfology) was done by using Cochran test before and after intervention stages, and during recovery stage. Meanwhile, data aalysis of spermatozoa concentration and testosterone hormone level was done by using Friedman test.

Result of this reseach demonstrated reduction of motility, viability, and morfology of spermatozoa after

inejction of papaya seed extract and increase to normal level at recovery stage (p ≤ 0.05). These results was supported with cement aglutination. The most effective dose was at 40 mg/monkey/day, with reduction of spermatozoa motility from 87.5 % to 40%, and reduction of testosterone level from 2.35 ng/mL to 1.83 ng/mL. Even though spermatozoa motility and testosterone hormone level reduced, but its conditions were still in good condition category.