

ABSTRACT

EFFECT OF SEED EXTRACT Papaya (*Carica papaya L.*) ON MORPHOLOGICAL SPERMATOZOA MICE (*Mus musculus*) Balb/c BY IN-VIVO

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Background: The population density is still a problem for developing countries, including Indonesia. The involvement of male participation in the program of Keluarga Berencana (KB) is expected to help lower the population density. So far the participation of men in the program of KB that utilize a lot of condoms, but the method still has a fairly high failure rate. As for the method of vasectomy but its nature irreversible. Papaya seeds are known to have compounds that could inhibit the process of spermatogenesis, it affects the occurrence of abnormal sperm morphology.

Objective: Verifying that the extract of papaya seeds (*Carica papaya L.*) can affect sperm morphology in mice (*Mus musculus*) Balb/c.

Materials and Methods: The subjects are 28 male mice which divided into 4 groups. Terms of research subjects namely, mice (*Mus musculus*) Balb/c male sex who have never been married, weighing 25-30 grams, 8-12 weeks of age and in good health physical. Giving treatment conducted over 34 days, divided into 4 groups: control group, the treatment group a dose of 100 mg/kg bw in mice, the treatment group a dose of 200 mg/kg bw in mice, the treatment group dose of 400 mg/kg bw in mice. On the 35th day surgery and then made observation under the microscope to calculate the number of spermatozoa with abnormal morphology. First, all data must be tested for normality and Analysis of Variance (ANOVA) by Completely Randomized Design (CRD) to determine the effect of treatment, namely the effect of different dosing of the large number of abnormal and normal sperm produced by mice.

Result: The results showed the effects of extracts of papaya seeds (*Carica papaya L.*) towards morphology of mice's spermatozoa (*Mus musculus*) Balb/c. The treatment dose of 400 mg/kg significantly different from the dosage of 100 mg/kg bw, 200 mg/kg bw, and control the dose of 400 mg/kg bw is treated with the optimal dose that produces abnormal sperm.

Conclusion: showing the influence of extracts of papaya seeds (*Carica papaya L.*) towards morphology of mice's spermatozoa (*Mus musculus*) Balb/c.

Keywords: *Carica papaya L.*, *Mus musculus*, morfologi spermatozoa