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Quantity and quality of wistar and Sprague-Dawley rat spermatozoa

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Abstract: This study aims to quantity analysis (quantity) as well as quality (morphology, motility and viability) of spermatozoa from cauda epididymis in Wistar and Sprague-Dawley strains. The calculation of a hundred male rats (Rattus norvegicus) is obtained from power statistical analysis with software (G * Power version 3.1.9.2). Each group consisted of 50 Wistar strains and 50 Sprague-Dawley strains aged four months. At the age of three months all mice were adapted for 30 days inside the cage and fed CP551 (Pt. Charoen Pokphand Indonesia Tbk, Medan) and drinks ad libitum. After the adaptation period has been completed, each of the five Wistar and Sprague-Dawley strains are taken daily to be sacrificed and the spermatozoa from the cauda epididymis. Then made cement removal preparations to calculate the number of spermatozoa, morphology, motility and viability of spermatozoa. The preparations were observed under a microscope with 5 field of view. The data obtained were analyzed using independent T test. The results showed that there was no significant difference in the number and morphology of unstable spermatozoa ($p > 0.05$) between Wistar rat strains (230.04 ± 14.80 and 81.76 ± 6.13) and Sprague-Dawley (222.25 ± 17.01 and 79.52 ± 5.52) and the difference in mean motility and viability of spermatozoa among Wistar rats (85.44 ± 4.59 and 82.46 ± 2.85) and Sprague-Dawley (90.10 ± 3.22 and 88.68 ± 3.51) were significantly different ($p < 0.05$). It was concluded that the number of spermatozoa per mL of cement, the percentage of spermatozoa morphology, and the percentage of spermatonoia motility and viability of live spermatozoa in Wistar rats were higher than in Sprague-Dawley rats.

Keywords : amount, morphology, motility, viability, spermatozoa.

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