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Sensibility of male rats fertility against olive oil, Nigella sativa oil and pomegranate extract

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Objective: To clarify the modulatory effects of daily consumption of pomegranate extract (PE), olive oil (OO) and Nigella sativa oil (NSO) on antioxidant activity, sperm quality and pituitary-testicular axis of adult male wistar rats.

Methods: Thirty-two adult male Wistar rats were divided into four equal groups, eight rats each. Using rat gastric tube, 1.0 ml distilled water, 1.0 ml PE, 0.4 ml NSO and 0.4 ml OO were orally administered daily for 6 weeks in the first, second, third and fourth groups, respectively. Reproductive organs, body weight, sperm criteria, testosterone, FSH, LH, inhibin-B, lipid peroxidation and antioxidant enzyme activities were investigated. At the end of the study protocol, analyses occurred at the same time. Data were analysed by ANOVA test and $P < 0.05$ was considered to be a significant value.

Results: In all studied groups, malonaldehyde level was significantly decreased accompanied with an increase in glutathione peroxidase and glutathione. Rats treated with PE showed an increase in catalase activities accompanied with an increase in sperm concentration which also was observed in NSO group. In PE treated group, sperm motility was also increased accompanied with decreased abnormal sperm rate. NSO, OO and PE treated groups showed an insignificant effect on testosterone, inhibin-B, FSH and LH in comparison with control group.

Conclusions: These results show that administration of PE, NSO and OO could modify sperm characteristics and antioxidant activity of adult male wistar rats.

Biography

Sherif Wagih Mansour has completed his PhD at the age of 34 years from Zagazig University School of Medicine. He is the head of physiology dept. He has published more than 25 papers in reputed journals and has been serving as an editorial board member of repute.

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