

THE EFFECTS OF ABHRAKA BHASMA ON SERUM TESTOSTERONE LEVELS AND EPIDIDYMAL SPERM QUALITY IN HEAT-STROKE WISTAR RATS

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ABSTRACT

Context: Abhraka Bhasma is a popular herbo-mineral formulation but there is no documentation of its aphrodisiac properties. Heat causes degenerative changes in the reproductive endpoints.

Aims: To elaborate the possible role of Abhraka Bhasma to alleviate this drawbacks of heat stress in heat stroke rats.

Settings and Design: Thirty two male Wistar rats were divided into four groups. G1 acted as control, G2 comprised dosed-only group, G3 as heat-treated group and G4 were treated with heat-cum-Abhraka Bhasma.

Methods and Material: Sahastraputi Abhraka Bhasma was used as the test drug. G1 were fed with honey, G2 were administered orally with Abhraka Bhasma with honey, G3 were subjected to heat stress at 43°C for 1 h daily for thirty days; were also given honey and Group G4 animals were resorted to heat stress-cum-Abhraka Bhasma administration with honey as vehicle. The rats were euthanized on day 31 and serum was analysed for testosterone levels and cauda semen for sperm count, motility and morphology.

Statistical Analysis Used: Statistix software 9.0 was used to obtain descriptive statistics and one-way ANOVA calculator was used to take out the significance of the data.

Results: Comprehensive analysis showed that there were no significant effects ($p=0.393$) of heating on testosterone status of hypothermic G3 animals as compared to control rats. However G2 and G4 animals, as compared to G3 and control rats, showed significant increases ($P=0.111$, $P=0.146$ respectively) in the serum testosterone levels. Heat stress significantly reduced sperm concentration, sperm motility and resulted in abnormal sperm morphology as compared to dosed animals.

Conclusions: In conclusion, Abhraka Bhasma, due to its androgen increasing property, can be prescribed as aphrodisiac with properties enough to suffice as an anti-impotency fecundity drug for males suffering from sexual insufficiency in tropical and subtropical countries.

KEYWORDS: Aphrodisiac, Sahastraputi, Statistix, ANOVA, Hypothermic, Anti-Impotency, Fecundity

Key Messages: Administration of Abhraka Bhasma following heat treatment could completely compensate the effects of heat on reproductive endpoints encompassing testosterone levels too. Prolonged administration of this formulation will ameliorate fertility in the males, especially those who are exposed to heat. Abhraka Bhasma appears to possess aphrodisiac activity due to its androgen increasing property.