



RESEARCH ARTICLE

Effect of flower extracts of *Hibiscus rosa sinensis* L. on the weights of body, testes and epididymes in male albino rats

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ABSTRACT

Effect of flower extracts of Hibiscus rosa sinensis was studied in male albino rats. The study was divided into three groups of five animals each. Rats of group 'A' were administered the aqueous extract of flowers at a dose of 200 mg/kg body weight on each alternate day for 15 days. Rats of group 'B' were administered with benzene extract of flowers in the same way. Rats of group 'C' received distilled water and served as control. Observations on changes in weights of body, testes and epididymes were recorded. A Significant reduction in weights of these organs was observed. The results suggested that male reproductive organs of rats are affected by the flower extract of Hibiscus rosa sinensis.

Keywords: *Hibiscus rosa sinensis*, Testes, Epididymes

INTRODUCTION

Hibiscus rosa sinensis (family- Malvaceae) commonly known as Chinese Hibiscus, is a native of china. It is used as a potent medicinal plant. It is a common Indian perennial shrub. *Hibiscus rosa sinensis* (L.) flower decoctions are used in India as aphrodisiacs for menorrhagia, uterine hemorrhage and for fertility control. It also shows antihypertension, antioxidant, antiammonemic and hypoglycemic activity (Jadhav *et al.*, 2009).

The present study was undertaken to evaluate the effect on reproductive organs of male albino rats by aqueous and benzene extract of flowers of *Hibiscus rosa sinensis* L. in fixed doses given in combination with distilled water.

MATERIAL AND METHODS

The flowers of *Hibiscus rosa sinensis* (L.) were collected from Botanical garden of D.S. College Aligarh. The flowers were shade dried; crushed and aqueous as well as benzene extracts were prepared. Albino rats of both sexes weighing 150-180 gm body weight, used for the study, were housed under standard laboratory conditions. They were fed with standard rodent pellets and water *adlibitum*. The animals were grouped into three groups of five animals each.

Group A: Rats were administered aqueous extract of flowers at a dose of 200 mg/kg body weight on each alternate day for fifteen days.

Group B: Rats were administered benzene extract of flowers at a dose of 200 mg/kg body weight on each alternate day for fifteen days.

Group C: Control (distilled water).

After the treatment rats were weighed and sacrificed under light ether anesthesia. The testes and epididymes were dissected out, freed from adherent tissues & blood and weighed correctly.

RESULTS AND DISCUSSION

Results are presented in Table 1. This indicates that the body weight and organ weight (Testes and Epididymes) parameters show either significant or highly significant response as a result of aqueous and benzene extract of *Hibiscus rosa sinensis* flower treatment for 15

days. In the present experimental work a decrease in body weight and organ weight (Testes and Epididymes) was noticed after the treatment of both extracts of flower.

EFFECT ON BODY WEIGHT

Body weight reduced significantly in treated rats. The reduction in body weight is more significant in Group B rats in comparison to Group A rats. Both aqueous and benzene extracts of flower decreased the growth of laboratory rats. The decrease caused by benzene extract was higher than the aqueous extract.

EFFECT ON TESTES WEIGHT

Testes weight reduced significantly in both groups of treated rats (Group 'A' and Group 'B'). The reduction in weight of testes is more significant in Group 'B' in comparison to Group 'A' rats.

EFFECT ON EPIDIDYMES WEIGHT

Epididymes weight reduced significantly in both groups of treated rats (Group 'A' and Group 'B'). The reduction in weight of epididymes is more significant in Group 'B' in comparison to Group 'A' rats.

Table 1: Effect of flower extracts of *Hibiscus rosa sinensis* on weights of body, testes and epididymes of albino rats

Treatment	Body wt. (g)		Testes wt. (g)	Epididymes wt. (g)
	Initial	Final		
Aqueous extract	168.4±8.9	158.60±8.9	0.5842 ±0.0193	1.022±0.021
Benzene extract	168.4±8.9	152.00±8.0	0.5034±0.0293	0.986±0.019
Control	168.4±8.9	182.6±8.9	0.7986±0.0131	1.782±0.191

Results are mean + S.E. for 5 observations (n=5). Many workers, Verma *et al.* (1981 & 1982), Chung *et al.* (2005), Chauhan *et al.* (2008), have been reported the reduction in weight and atrophy of male reproductive organs by extracts of various parts of different plants. In the present study, the flower extracts of *Hibiscus rosa sinensis* were used which caused the reduction in weight of these organs. This reduction in weight might be due to some inhibitory changes in the reproductive organs which were caused by these extracts. These extracts somehow inhibit the growth of these organs.

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