

Natural remedy for increasing sperm count: An approach towards tropical medicine

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Madam, infertility is one of the climax diseases amongst the sexual dysfunction. Various parameters such as sexual hormonal secretion, sperm motility, concentration and libido are associated with hereditary, smoking, antidepressant drugs and environmental toxins.¹ Various chemical procedures and drugs are available for fertility

groups (10 rats per group). Group I was control (untreated), group II was given rutin 50 mg/kg bw while group III was given 100 mg/kg bw intragastrically twice a week for four weeks respectively. After the end of the experiment, serum was obtained from the blood. Sperms were analyzed through microscope while hormonal

Table-1: Effect of rutin on the reproductive parameters.

Treatment	Total sperm concentration (million/ml of seminal fluid)	Motile sperm concentration (%)	Percentage of progressive Movement (%)	Percentage of abnormal sperm (%)	Sperm viability (percentage of alive sperm/dead sperm) (%)	Effective movement degree (degree)
Control	82.5 ± 2.9 ^a	69.8 ± 1.7 ^a	30.6 ± 1.2 ^a	2.5 ± 0.01 ^a	20.5 ± 0.6 a	72.5 ± 2.4 ^a
50 mg/kg bw rutin	100.0 ± 3.9 ^b	93.1 ± 1.1 ^b	41.6 ± 0.89 ^a	3.5 ± 0.08 ^b	24.3 ± 1.2 a	85.1 ± 1.6 ^b
100 mg/kg bw rutin	122.5 ± 4.3 ^b	100.4 ± 2.7 ^b	45.2 ± 2.1 ^b	3.7 ± 0.02 ^b	26.3 ± 1.4 a	98.2 ± 2.1 ^b

Each value in the table is represented as mean ± SD (n = 10).

Means not sharing the same letter are significantly different (LSD) at P < 0.01 probability level in each column.

Table-2: Effect of rutin on serum FSH, LH, testosterone, prolactin and estradiol.

Treatment	FSH (mg/dl)	LH (mg/dl)	Testosterone (mg/dl)	Prolactin (mg/dl)	Estradiol (mg/dl)
Control	15.1 ± 0.5 ^a	30.2 ± 1.82 ^a	56.6 ± 2.24 ^a	19.3 ± 3.12 ^a	35.5 ± 3.12 ^a
50 mg/kg bw rutin	18.1 ± 0.74 ^a	41.7 ± 2.3 ^a	71.3 ± 3.29 ^a	24.5 ± 3.09 ^a	41.3 ± 2.4 ^a
100 mg/kg bw rutin	19.6 ± 0.48 ^a	42.4 ± 1.43 ^b	76.2 ± 3.21 ^a	30.7 ± 1.87 ^b	45 ± 3.72 ^b

Each value in the table is represented as mean ± SD (n = 10).

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regulation but having some side effects. On the other hand traditional medicines obtained from natural resources as well as from various medicinal plant extracts are in use since long times for the welfare of humanity and treatment of various diseases including sexual dysfunctions.² Recently researchers are therefore trying to investigate such therapies which have fewer side effects as well as low cost.

The present study was therefore designed to evaluate rutin as a natural tonic for the treatment of infertility and sexual dysfunction. Thirty rats obtained National Institute of Health from Islamabad were randomly divided into 3

analysis was carried out via RIA. Result showed that administration of 50 mg/kg bw and 100 mg/kg bw rutin significantly increased (P < 0.01) sperm motility, percentage, locomotion, viability as well as enhanced the sperm percentage in treated groups compared to normal rats (Table-1). Similar reports were obtained during characterization of medicinal plant extract by Al-Saaidi et al. (2009).³ Pituitary, testis and hypothalamus linkage play a key role in the germ production cycle. Gonadotropins releasing hormones (GnRH) are released by hypothalamus causing stimulation of pituitary gland to discharge Follicle stimulating hormone (FSH) and Luteinizing hormone (LH).⁴ Luteinizing hormone (LH) further stimulates testosterone in Leydig cells which combine with Follicle stimulating hormone thus releasing sperms from Sertoli and peritubular somniferous tubules.⁴

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Findings of the current study revealed that 50 mg/kg and 100 mg/kg bw rutin administration in rats significantly improved ($P < 0.01$) the secretion of various sexual hormones as shown in Table-2. Similar finding has been reported by other studies working on medicinal plant extract and bioactive compounds isolated from natural resources. Finding of current investigation showed that rutin may be recommended as a herbal therapy for sexual dysfunction in males.`

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