

APHRODISIAC EFFECT OF DADHI PUSHPI (MUCUNAMONOSPERMA DC) - AN EXPERIMENTAL STUDY

Savanur Prasanna V.

Professor & HOD P.G. Studies in Dravyaguna, N K Jabshetty Ayurvedic Medical college & P.G. Centre Bidar
Karnataka

ABSTRACT

Review and analysis of the literary survey is very important for the research work. Hence under the literary review almost available information regarding mucuna monosperma DC has been mentioned. Aphrodisiac effect being the objective of the experimental study special references and concepts has been discussed. Experimental studies carried following the Beech and stone (1940) method for the evaluation of aphrodisiac effect of Dadhipsuhpi in Male albino rats, the parameters of copulatory behavior like initial arousal period, peak arousal period mounting behavior, ejaculatory reflex, time interval to mount again are highlighted. The observations were recorded; results obtained were compiled and analyzed statistically

Key words: DadhiPushpi, Experimental study, Albino rats, Copulatory behavior

INTRODUCTION

Since ancient times, human societies have searched for effective drugs to enhance sexual activity and desire. Legendary aphrodisiacs made from rhinoceros horn, the glands of musk deer, sheep or bull testicles, Spanish fly, mandrake root and ginseng have been used throughout history. Here the word aphrodisiac originates from Aphrodite greek-godess of sexual love, fertility and beauty-born from white foam(aphros) produced by the genitals of the god Uranus. An aphrodisiac is defined as any food or drug that arouses and increases pleasure and performance. There are two types of aphrodisiacs-Psycho-Physiological stimuli (visual, tactile, olfactory and aural) preparations and internal preparations (food, alcoholic drinks drug and love potions)

DRUG PROFILE

Habitat-Most commonly found in deciduous forests among countries like in India, Burma, Srilanka and South Malaysia. In Karnataka its growth in Chickmagalur, Coorg, Hassan, North Canara and Shimoga. Botanical name: Mucuna Monosperma DC, Family:Leguminaceae, Sub Family: Papillionate

Kingdom: Phanerogram,
Class:Dicotyledons, Sub-class:Polypetalae,
Series-clayciflorae, Order-Rosales, Genus-Mucuna, Species- Monosperma

Morphology-A large woody perennial twinner, young branches clothed with rusty-brown deciduous tomentum. Leaves-15-23 cms long, petioles 7.55-11.5 cms long, the stipules 4 mm long, linear deciduous, Leaflets-7-10 by 5.75 cms thinly coriaceous, obovate, oblong or elliptic. Shortly acuminate, glabrous above, more or less pubescent be-

neath. Base is rounded. Flowers-6-12 flowered corymbose axillary racemes shorter than the leaves peduncles variable in length, 6.3 cms long. Pedicles-6-12 mm long. Bracts small, triangular 4mm long, deciduous, bracteoles 1.5 cms long, linear lanceolate. Calyx- 1 cm long, clothed at irritants bristles. Teeth about half as long as tube. The upper truncate, the lateral deltoid, the lower linear. Corolla-3.8 cms long purple keel abruptly inflexed at the top. Pods-5-7.5 by 5.75 cms wint on both sutures and obliquely plated on the faces, covered with brown deciduous irritant bristles. Seed-Solitary, nearly circular, in horizontal cross section, slightly compressed, dark brown, smooth shining, hilum linear, extending round 3/4th of edge.

Rasa-Madhura, Guna-Guru, Virya- Ushna, Vipaka-Madhura, doshagnata-Kaphapittahara

PLAN OF STUDY

Selected five young male albino rats of 90 days old, they were isolated from the other rats, weighed and marked with picric acid and kept separately in five cages to avoid pheromonal contact with remaining rats for a period of seven days in a cool dark place under 25°-27° C fed with 15 gms/rat/day recommended standard diet. On 8th day the control group reading on male albino rats were taken. After control group reading the male albino rats again isolated from female rats and administered the drug for seven days, to take observational readings in comparison with the control group.

Male rats were trained individually with normal adult females in estrous. A male rat is considered sexually active when it attempts to mount on any female introduced into the cage. Only such male rats were used

for subsequent experiments by dividing into five groups demonstrating copulatory behavior, to confirm the same vaginal smear method is used. The copulatory behavior is an important parameter for assessing the aphrodisiac activity in this experimental study.

PROCEDURE

From 2 weeks before the screening tests until the end of the study, the rats were housed individually at 22° C, food and water were given ad libitum.

1. Powdered Drug *Mucuna monosperma* DC seeds was taken and made into a suspension with milk and administered to male rats in the dose of 75mg/kg daily where as control group received water only
2. Isolated female rats were given 2mcg/kg estrogen 48 hours before and 500 mcg of progesterone 6 hours before starting of the experiment
3. After 6 hours of administration of the progesterone the female rats were observed for estrous stage by observing vaginal smear of the rat
4. The female rats, which were in estrous stage were employed for the study
5. Such highly receptive female (in estrous stage) introduced into males cage and each male rat was observed for copulatory behavior for 30 minutes under red light

Similar procedure also followed for the control group

The following parameters were used for recording copulatory behavior-

- a. Initial arousal period
- b. Peak arousal period
- c. Mounting behavior
- d. Ejaculatory reflex

e. Time interval to mount again

STATISTICAL OBSERVATIONS

Parameter	Group	N	Mean	S.D	S.E	t	p
Initial arousal period	Control	5	37.0	33.33	21.08		
	Trial	5	8.4			1.35	<0.10
Peak arousal period	Control	5	4.4	3.02	1.91		
	Trial	5	3.4			0.52	<0.10
Mounting behavior	Control	5	2.6	2.01	1.27		
	Trial	5	5.4			2.20	<0.05
Ejaculatory reflex	Control	5	0.06	0.5	0.32		
	Trial	5	1.8			3.75	<0.001
Time interval to mount again	Control	5	3.2	0.84	0.53		
	Trial	5	5.2			3.77	<0.01

Mode of Drug Action:

Mucuna Monsoperma Dc with its kapha pitta hara, guru and *vatavyadhara*, possessing ushna virya, madhura rasa and similar Property of Masha it unveil the affinity of function of aphrodisiac effect of the trial drug making a significant contribution owing to multiple mechanisms of actions of dahipushpi on reproductive system.

DISCUSSION

For evaluation of aphrodisiac activity copulatory behaviors like Initial arousal period, peak arousal period, mounting behavior, ejaculatory reflex and time interval to mount again are the parameters used in the experimental study.

The copulatory behavior of male rate was characterized by series of mount with or without vaginal intermission from the rear of the female, every 30-120 seconds, that eventually culminates in ejaculation. The female rat responds to each mount with lordosis response. Typically the achieved vaginal penetration on 50-80% of mounts. Intromission mounts can be dissitinguished behaviorally from monts without penetration by the presence of deep thrust and springing dismount.

Ejaculation occurred after 6-12 intromissions and was followed by a period of 4-8 minutes. When the male rat was refractory to further copulatoru, the post ejaculatory interval. At first the number of intromission and latency ejaculation decreased and then subsequently increased number of ejaculation.

CONCLUSION

Trial drug has shown arousal facilitating property by significant initial and peak arousal time periods in rat sexual behavioral studies. Markedly increased number of mounting, refractory period of post ejaculatory period. Obviously decreased in time interval to mount again. Control group of experimental rats the sexual behavior observed were marginally less. Thus it unveils the affinity of drug component of erotogenic function in animal experimental study proved an attributed demarked function, which emphasizes a aphrodisiac property.

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CORRESPONDING AUTHOR

Dr. Prasanna V.Savanur
Professor & HOD P.G. Studies in
Dravyaguna, N K Jabshetty Ayurvedic
Medical college & P.G. Centre Bidar
Karnataka, India
